Compilation of Information about Successful State and Institutional Efforts that Promote Timely and Affordable Completion of Postsecondary Education: An Annotated Bibliography

Provided in response to Executive Order 13864
Improving Free Inquiry, Transparency and Accountability at Colleges and Universities

March 31, 2020

Background

American postsecondary education has expanded economic opportunity, improved quality of life, fostered economic advances, and driven scientific and technological innovation in American society. However, rising college costs and student loan debt, coupled with stagnant completion rates, raise serious questions about whether or not higher education is fulfilling the promises made to students from low income who invest time and money hoping for a better life.

As explained in Education Secretary Betsy DeVos's 2018 whitepaper, *Rethinking Higher Education*, a significant proportion of the currently available jobs require more than a high school diploma but less than a four-year degree.[1] Yet even the nation's community colleges are falling short in providing adequate career and technical education to meet workforce needs. Instead, community colleges are focusing on preparing students to enter a four-year institution. The majority of degrees conferred by community colleges are in liberal arts, general studies, and humanities – not programs that directly prepare students for workplace success.[2] Unfortunately, the vast majority of students in such programs never complete a four-year degree, and many fail to complete any degree at all. They are often left with debt and few skills or prospects for upward mobility.[3]

While college is not and should not be the only pathway to a rewarding career, for those students who do make the choice to enroll in college, it is important that they have the necessary educational opportunities and support services to improve the odds that they will complete their program. Institutions should leverage existing research and employ best practices to improve the odds for higher-risk students. Yet it can be difficult for institutions to identify practices that have been proven effective through rigorous experimentation.

On March 21, 2019, President Donald J. Trump issued Executive Order (EO) 13864, *Improving Free Inquiry, Transparency, and Accountability at Colleges and Universities* which, among other things, required the Secretary of Education to compile information about successful State and institutional efforts that promote students' timely and affordable completion of a postsecondary program of study. Additionally, the EO asked that the Secretary publish a compilation of research results that addresses:

   i.   how some States and institutions have better facilitated successful transfer of credits and degree completion by transfer students;
   ii. how States and institutions can increase access to dual enrollment programs; and
   iii. other strategies for increasing student success, especially among students at high risk of not completing a postsecondary program of study.

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[1] Carnevale A., Smith N. & Strohl J. (June 2013). Recovery: Job Growth and Education Requirements through 2020, Executive Summary (p. 5). Retrieved from https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES_.Web_.pdf. (10 million [18%] of job openings between 2010 and 2020 will require some college, no degree.)

[2] National Center for Education Statistics (March 2018). Undergraduate Degree Fields. Retrieved from https://nces.ed.gov/programs/coe/indicator_cta.asp

[3] Holzer, H. J., & Baum, S. (2017). Making College Work: Pathways to Success Beyond High School. Washington, D.C.: Brookings Institution Press.

What follows is an annotated bibliography of studies that have examined state efforts to improve postsecondary outcomes. This compilation includes resources on effective practices in the following areas:

1. Improving College Completion
2. Dual Enrollment Programs
3. <u>Performance - Based Funding Models</u>
4. <u>Improving Transfer of Credit Opportunities</u>

This document also includes Additional Resources and Links to Other Annotated Bibliographies produced by well-respected organizations and authors who study postsecondary education outcomes.

Improving College Completion

Adelman, C. 2006. The Toolbox Revisited: Paths to Degree Completion from High School Through College. U.S. Department of Education. (The Oregon Diploma).

- The Toolbox Revisited project follows a nationally representative cohort of students from high school through postsecondary education and seeks to determine what aspects of a student's formal education contribute to bachelor's degree completion by their mid-20s. This cohort included students who began their postsecondary education at two-year and four-year institutions. The study finds that, for students in the study cohort, the most important factor in predicting bachelor's degree completion is the intensity of the student's high school curriculum.

Closing the Expectations Gap 2006. (February 2006). American Diploma Project Network. Washington, DC: Achieve, Inc. (Minnesota Campus Connect).

- This report examines the gap between the skills many students have when they leave high school, and the entry level requirements success in higher education or the work force. A summit in 2005 sponsored by the National Governors Association brought together governors and leaders in education to discuss how high schools can better prepare students for college level work, especially as our nation's demographics are changing. In response, a survey was sent to 50 states to understand how these states work to align high school graduation requirements with college admissions requirements. Students who are better prepared academically for the demands of college were found to be more likely to persist and obtain a post-secondary degree. Through the American Diploma Project, 22 states are bringing together governors, state education officials, business executives and higher education leaders to raise high school standards, strengthen the rigor of curriculum and assessments, and align college expectations with high school graduation requirements to ensure that high schools are graduating students who will succeed in college and/or the workforce.

Complete College America. (2012, Winter). Guided pathways to success: Boosting college completion. Retrieved from https://files.eric.ed.gov/fulltext/ED594314.pdf ; https://completecollege.org/wp-content/uploads/2017/11/GPS-BOOKLET-06-14-FINAL.pdf (Center for Community College Student Engagement).

- This resource serves as a guide to states and institutions interested in implementing the organization's Guided Pathways to Success (GPS) program. GPS is built upon the foundational belief that to improve persistence and completion rates, students must have more information to make informed enrollment decisions, and they must receive continuing support and guidance throughout their program. The GPS program recommends that institutions couple proactive and intrusive advising with pre-determined academic plans, intentional course sequencing, embedded developmental education, mandatory attendance, and innovative scheduling options

Dounay, J. 2006. Ensuring Rigor in the High School Curriculum: What States are Doing. Education Commission of the States. (https://www.ecs.org/clearinghouse/66/67/6667.pdf).

- This policy brief reviews current policies aimed at increasing the rigor of high school graduation requirements and identifies those that have had a positive effect on student achievement. Some policies intended to increase rigor do not necessarily translate into a more challenging curriculum. The author recommends the use of formative and end-of-course exams and assessments, increased proficiency requirements, providing teacher professional development activities, and raising academic standards in order to improve college readiness.

Horn, L. (2006). Placing college graduation rates in context: How 4-year college graduation rates vary with selectivity and the size of low-income enrollment (NCES 2007-161). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 24, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007161. (The Completion Arch: Measuring Community College Student Success).

- Author abstract: This report uses data primarily from the 2004 Graduation Rate Survey (GRS), a component of the Integrated Postsecondary Education Data System (IPEDS), to provide a systemwide overview of how graduation rates of comparable 4-year institutions vary with institution selectivity and the size of the low-income population enrolled. The report clearly shows that graduation rates dropped systematically as the proportion of students from low-income families increased, even within the same Carnegie classification and selectivity levels. Variations by gender and race/ethnicity also were evident. Women graduated at higher rates than men, and in general, as the proportion of low-income students increased, so did the gap between female and male graduation rates. The gap in graduation rates between White and Black students and between White and Hispanic students, on the other hand, typically narrowed as the as the proportion of low-income students increased. In the end, the results indicate that serving large numbers of low-income students does not necessarily lead to low graduation rates.

Jobs for the Future. (2013, October). Cornerstones of completion: State policy support for accelerated structured pathways to college credentials and transfer. Retrieved from https://jfforg-prod-prime.s3.amazonaws.com/media/documents/CBD_CornerstonesOfCompletion_111612.pdf (Center for Community College Student Engagement).

- In this study, Jobs for the Future focused on ten "high-leverage policies that can accelerate institutional change toward systemic, student-focused structured pathways." These policies included creating more structured transfer pathways and redesigning Career and Technical Education (CTE) programs to be aligned with labor market needs; building direct routes to college through strategies such as dual enrollment, early college, and contextualized basic skills instruction; improving assessment and placement policies for students beginning their postsecondary education; reducing, accelerating, and contextualizing developmental education; supporting strong college advising, orientation, and student success courses; investing in professional development to prepare faculty for changes and reform; leveraging technology to support individualized student planning and tracking; and designing financial aid programs that encourage and reward student progress. Each policy recommendation includes a description of the policy, suggestions for implementation, and research that supports the recommendation.

Lass, L. (25 February 2014). Right from the Start: An Institutional Perspective on Developmental Education Reform. Achieving the Dream. https://www.achievingthedream.org/resource/12625/right-from-the-start-an-institutional-perspective-on-developmental-education-reform

- This paper highlights two specific programs designed to support postsecondary success by working with students before they begin their postsecondary education. These programs were developed and implemented by community colleges in Maryland and Ohio that serve large numbers of "at-risk" students. Despite serving a higher risk student population, these institutions saw dramatic increases in student retention, completion and performance throughout their postsecondary education. The author emphasizes that students fail to complete college for myriad reasons that go well beyond being academically prepared for college level work. The programs in Maryland and Ohio that were the focus of this study achieved higher results by helping students develop the social, environmental and tactical skills necessary to succeed in college. These programs also worked with students to help ensure that they were academically prepared, that they had basic budgeting and financial management skills, that they were prepared to engage with diverse groups of students and that they have mastered basic writing and math skills.

Long, B.T. (25 May 2018). The College Completion Landscape: Trends, Challenges, and Why it Matters. American Enterprise Institute (AEI). Third Way. (http://www.aei.org/wp-content/uploads/2018/05/The-College-Completion-Landscape.pdf)

- In this paper, the author raises concerns about the lack of progress in improving college completion rates, despite the investment of considerable financial resources. The author notes that in 2016, only 49.6% of full-time, first-time students at four-year institutions and 38.6% of students at two-year institutions completed an educational credential. This is especially troubling considering non-completion is associated with lower earnings, even among students who completed some college. For example, graduates between ages 25 and 29 with a bachelor's degree earn roughly $15,500 more per year on average than individuals who are the same age and have only a high school diploma. The paper also fails to distinguish between correlation and causality, meaning that individuals with a bachelor's degree may earn more because the attributes and habits that lead to college success are also the attributes and habits that lead to workplace success. Nonetheless, the study highlights that when students drop out of college without completing a credential, the costs to students and taxpayers – including through lost opportunities - are high.

Pathways to College Network. (2007). Academic Rigor at the Heart of College Access and Success. Boston, MA: Pathways to College Network: College Readiness Issue Brief. Retrieved on August 1, 2008 from: http://www.ihep.org/sites/default/files/uploads/docs/pubs/roadblocks.pdf ; https://files.eric.ed.gov/fulltext/ED509541.pdf (Jager-Hymen & Savitz-Romer).

- This policy brief emphasizes the importance of providing students with a rigorous secondary curriculum in order to prepare them for more advanced postsecondary coursework. According to the Pathways to College Network, a well-designed, coherent, and rigorous curriculum allows all students to achieve mastery of core academic skills and opens the door to both college and skilled workforce success. The report outlines curricular components that have been identified by

various educational stakeholders, such as the State Scholars Initiative, High Schools That Work, the College Board, and the ACT, as key components of a pre-college curriculum that may lead to successful postsecondary outcomes. These include: 1) four years of English; 2) four years of mathematics (including Algebra I and II, geometry, and preferably at least one other advanced mathematics course such as trigonometry, pre-calculus, calculus, or statistics; 3) three years of laboratory science such as biology, chemistry, and physics; 4) three years of social studies; and 5) two years of a world language. Action-steps for states, superintendents and principals, and teachers/counselors are also presented.

Tafel, J., & Eberhart, N. (1999). Statewide School-College (K-16) Partnerships to Improve Student Performance. Denver, CO: State Higher Education Executive Officers.
https://eric.ed.gov/?id=ED434611

- This report presents findings from a 50state survey of state higher education coordinating and governing boards. The survey asked about existing efforts to prepare K-12 students for college and to help underprepared students succeed in college. The report also includes findings from site visits performed in Colorado, Georgia, Maryland, Ohio, Washington, and Wisconsin to assess the alignment of K-12 reform efforts to college admissions criteria and the success of efforts designed to reduce the need for remedial coursework and better prepare students for the college experience. The authors reported that intentional statewide focus appeared to reduce postsecondary remediation rates and improve college success on these areas reduced postsecondary remediation rates and improved college success. The authors also found that more than two-thirds of states have some type of pre-college outreach program designed to prepare students for college level work. Based on their work, the authors make the following recommendations for state policy-makers who wish to implement effective P-16 programs: 1) establish goals and build consensus; 2) create a statewide organizational framework; 3) find incentives to sustain partnerships; 4) develop comprehensive data systems to identify gaps and inform new policy; 5) establish a communication system to disseminate information and encourage public engagement; and 6) identify substantive issues that require immediate attention.

Turner, S. (30 May 2018). The Policy Imperative: Policy Tool Should Create Incentives for College Completion. American Enterprise Institute (AEI). Third Way.
(http://www.aei.org/wp-content/uploads/2018/05/The-Policy-Imperative.pdf)

- In this study, Turner reminds the reader that low college completion rates are a persistent problem rather than a new one. She examines the potential for policy decisions made at the state or federal level to improve outcomes, but cautions that using policy to raise completion rates can have unintended consequences that add no benefit for students and can actually do more harm than good. For example, when too much emphasis is placed on completion, college administrators may be incentivized to "game the system" by churning out degrees that have little to no value in the workforce and can leave students short of the skills they need to be competitive and successful in potential careers. She offers suggestions for policies that could result in improved outcomes, such as improving college choice, boosting market information, and enhancing data analysis. Throughout her paper, she emphasizes how both state and federal

policymakers should ensure that appropriate guardrails are in place for any policies that claim to be focused on improving completion rates. These guardrails would prevent or at least reduce the temptation of institutions to reduce rigor in order to beat completion odds.

Schneider, M. & Clark, K. (30 May 2018). Completion Reforms That Work: How Leading Colleges are Improving the Attainment of High-Value Degrees. American Enterprise Institute (AEI). Third Way. (http://www.aei.org/wp-content/uploads/2018/05/Completion-Reforms-That-Work.pdf)

- This study examines various institution-level practices geared toward improving college completion rates. The researchers identified more than 600 "failure factories," which they define as schools that graduate less than a third of their students within six years, producing students that often struggle in the job market. They also identify "success factories" which are schools that are graduating high percentages of its students and ushering them into promising careers. The authors recommend the following practices as ways to improve college completion rates, especially among low-income students: (1) provide more seats for historically-disadvantaged students at colleges with a history of producing successful graduates; (2) provide comprehensive support to all types of students, especially those facing financial or academic challenges; (3) provide completion (or emergency) grants to junior and seniors who need a little additional financial help to reach the finish line; (4) use data-gathering and analysis techniques to provide better and more useful guidance to students; and (5) use evidence-based teaching methods to improve instruction.

Commission on the Future of Undergraduate Education. (2017). The Future of Undergraduate Education: The Future of America. American Academy of Arts & Sciences. Cambridge, Massachusetts. https://www.amacad.org/sites/default/files/publication/downloads/Future-of-Undergraduate-Education.pdf

- This report from the Commission on the Future of Undergraduate Education provides a general overview of American higher education, what the future looks like, and strategies we must utilize to maximize the future of America. The Commission recommends three different elements to help achieve this goal which include: ensuring that all students have high-quality educational experiences; increasing overall completion rates and reducing inequities among different student populations at every level of undergraduate education; and managing college costs and improving the affordability of undergraduate education. The report provides examples of institutions that have strong policies in place designated to maximize the value a student realizes from higher education.

Dual Enrollment Programs

Mercer, W. & Fraire, J. (June 2018). Dual Credit: Where College Meets High School. The University of Texas System and The Texas Association of Community Colleges. https://www.utsystem.edu/sites/default/files/offices/academic-affairs/FINAL%20Dual%20Credit%20Task%20Force%20Report.22.2018.pdf

- This report looks at dual credit policies in Texas and discusses how the transition from high school to college has changed over time. Dual enrollment policies vary widely from state to

state, differing in scope, requirements, and resources. Texas has seen significant increases in the percentage of high school students who are also enrolled at postsecondary institutions. Texas does not mandate that school districts provide dual enrollment programs, but since 2006, the state has required schools offer at least 12 college credits to students, beginning in the 8th grade. This policy appears to have resulted in steady increases in college participation across all demographics. The Texas task force that compiled the data and completed the review noted a significant increase in college readiness and completion among students who earned college credits through dual-enrollment programs. However, they caution that for dual-enrollment programs to be success, there needs to be strong communication between all stakeholders, including k-12 schools, institutions of higher education, and state policy makers.

Zinth, J. & Barnett E. (May 20180. Rethinking Dual Enrollment to Reach More Students. Education Commission of the States. https://www.ecs.org/wp-content/uploads/Rethinking_Dual_Enrollment_to_Reach_More_Students.pdf

- Authors Barnett and Zinth discuss the changing academic needs for high school students and how dual enrollment programs are quickly being reshaped to meet those needs. Originally, dual enrollment programs were created to serve higher achieving students. However, more recent studies have shown that the primary benefactors of these programs are middle-achieving high school students. These students have been successful in completing dual enrollment courses, and their success has carried forward as they matriculate in college. The report encourages states to expand their dual enrollment programs to include a larger diversity of students. Doing so may provide more students with an opportunity to enter and succeed in college.

Zinth, J. & Sisneros, L. (June 2018) Increasing the Supply of Qualified High School Teachers for Dual Enrollment Programs: An Overview of State and Regional Accreditor Policies. Midwestern Higher Education Compact and Education Commission of the Sates. Minneapolis, Minnesota. https://www.ecs.org/wp-content/uploads/Increasing-the-Supply-of-Qualified-High-School-Teachers-for-Dual-Enrollment-Programs.pdf

- This report analyzed the qualifications of teachers of dual enrollment classes and found that there is a great degree of variability from one state to the next. Since dual enrollment is still relatively new, many states have not put effective processes in place to develop appropriate teaching standards or lack adequate resources to hire faculty who meet those standards. There are also gaps between teaching credentials required by states and those required by some accreditors for classes that will result in college credit. This could make it too difficult to find teachers who meet accreditor qualifications to teach dual enrollment classes on high school campuses. Given the disparate goals regarding the use of dual enrollment across the states, and variability in teaching credentials required for dual enrollment instructors, it is difficult to evaluate the effectiveness of the national effort. Zinth and Sisneros urge states and accrediting agencies to resolve differences in their respective teaching credential requirements and they urge states to increase the number of eligible teachers to allow high schools to meet growing student and policy-maker demand.

Performance - Based Funding (PBF) Models

Bell, E., Fryar, A.H., and Hillman, N. (May 2017). When Intuition Misfires: A Meta-Analysis of Research on Performance-Based Funding in Higher Education.
https://www.researchgate.net/publication/327057285_When_Intuition_Misfires_A_Meta-Analysis_of_Performance-Based_Funding_Literature_in_Higher_Education

- These authors conducted a meta-analysis of PBF policies and their impact on student outcomes at public two- and four-year institutions. With more than thirty states having some form of performance-based funding system in place, there are opportunities to compare and contrast their effectiveness. The authors found that the average effect of performance funding on completion rates is minimal – nearly null. Furthermore, the authors show that PBF has been associated with small effects on improved outcomes among disadvantaged students. The authors emphasize that a better understanding of the underlying barriers to graduation can assist policymakers in developing policies better aligned at improving student performance at public universities.

Dougherty, K.J & Reddy , V. (December 2011). The Impacts of State Performance Funding Systems on Higher Education Institutions: Research Literature Review and Policy Recommendations. Community College Research Center (CCRC). New York, New York.
https://ccrc.tc.columbia.edu/media/k2/attachments/impacts-state-funding-higher-education.pdf

- Authors Dougherty and Reddy provide an in-depth analysis of the benefits and limitations of performance-based funding, as implemented in Florida, North Carolina, Ohio, South Carolina, Tennessee and Washington. Their research showed that while there have been some positive results achieved as a result of performance-based funding over the last 20 years, these programs were often difficult to implement and showed only limited effect. While they did not find significant improvements in program quality as a result of performance-based funding models, they argued that rather than dismiss the potential benefits of performance-based funding, policy makers should focus on improving performance-funding models to address the challenges that limit their effectiveness. For example, they suggest that performance-based funding models expand the number and type of indicators used to measure success beyond traditional measures such as degree completion and credit hours attempted; that states increase the amount of funding distributed to high-performing institutions; by including performance-based funding in determining the base allocation formula used by states to allocate funding to public institutions as opposed to current models that use performance-based models to allocate funding in addition to base funding. They also urge policy-makers to put safeguards in place to prevent performance-based funding models from adding regulatory cost and burden, or from incentivizing institutions to narrow their mission, lower their academic standards or use selective admissions policies to reduce the number of higher-risk students served. They conclude that performance-based models have promise, but need to be carefully designed and implemented in order to drive quality improvements.

Favero, N., Rutherford, A., (March 2019). Will the Tide Lift All Boats? Examining the Equity Effects of Performance Funding Policies in U.S. Higher Education, Washington, D.C.
https://link.springer.com/article/10.1007/s11162-019-09551-1

- The report provides an historical overview of the origin and evolution of PBFs. Author Rutherford Favero notes that while the effectiveness of PBF models in improving college quality is largely unknown, some schools have seen significant improvement in graduation rates as additional resources have been made available to schools that serve higher risk students. Providing additional resources creates increased quality. Because of the significant variability in PBF models from one state to the next, it is difficult to compare them or identify critical elements that lead to success. Favero recommends that PBF models may more effectively encourage and measure success by focusing on relative change achieved by an institution, as opposed to comparing top-line outcomes measures.

(February 2019). Measuring the Effects of Outcomes-Based Funding on Certificate Production: Challenges, Inconsistencies and Recommendations for Future Research. Research for Action. Philadelphia, Pennsylvania. https://www.researchforaction.org/publications/research-brief-measuring-the-effects-of-outcomes-based-funding-on-certificate-production-challenges-inconsistencies-and-recommendations-for-future-research/

- In this study, the authors analyzed the relationship between outcomes-based funding and the production of postsecondary certificates. A key finding of the study is that certificate programs are poorly defined and vary significantly in length and labor market value. These inconsistencies make it difficult to study the impact of outcomes-based funding since there isn't a consistent definition or baseline that serves as a legitimate point for comparison. The authors recommend that states more clearly define what constitutes an effective certificate program and that they link statewide longitudinal data systems throughout the country to provide a clearer picture of student outcome trends across varying demographics.

Hagood, L. P. (June 20129). The Financial Benefits and Burdens of Performance Funding in Higher Education, University System of Georgia. https://journals.sagepub.com/doi/pdf/10.3102/0162373719837318
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- In this study, Hagood conducted a statistical analysis of the influence state PBF models may have on university systems. Her findings show that while some PBF programs seem to yield positive results, others are highly detrimental to the students they are designed to serve. In general, PBF models tend to harm the schools that are already receiving limited funds, while rewarding the schools that are already receiving excessive funds. In general, PBF funding schemes tend to reward institutional selectivity. As a result, PBF models have a tendency to widen the gap in state funding between well-supported and minimally supported institutions, thus heaping rewards upon the campuses that are already the most politically "powerful" universities that have outsized influence in state funding decisions.

Improving Transfer of Credit Opportunities

Dundar, A., Shapiro, D., Huie, F., (September 2017). Tracking Transfer: Measures of Effectiveness in Helping Community College Students to Complete Bachelor's Degrees, National Student Clearinghouse

Research Center. (Herndon, VA). https://nscresearchcenter.org/wp-content/uploads/SignatureReport13_corrected.pdf

- This report by the National Student Clearinghouse aimed to study transfer patters among students with differing demographic characteristics. For example, the authors sought to understand the role of student socioeconomic status, campus urbanicity, and out-of-state campus location on the number and percent of students who successfully transfer from a two-year to a four-year campus. Findings of the study include that lower income students in general have significantly lower transfer rates than higher income students (25.9% and 39.9%, respectively), but among students who are transferring an entire degree, there are insignificant differences in rates of transfer between disadvantaged and advantaged students (33.1% and 32.8%, respectively). While a growing number of states have statewide transfer policies, the study found that 18 percent of transfers were among students moving from one state to the next.

Simone, S. A. (August 2014). Transferability of Postsecondary Credit Following Student Transfer or Coenrollment, Statistical Analysis Report. National Center for Educations Statistics, Washington, D.C. https://nces.ed.gov/pubs2014/2014163.pdf

- In reviewing the data provided by the National Center for Education Statistics on transferability of credits from co-enrolled and transfer students, this analysis identified two significant factors that appear to influence the type and amount of transfer credits received: academic performance (GPA) prior to transfer, and transfer direction (e.g., vertical, reverse, or horizontal). A higher GPA was directly correlated with a higher percentage of transferable credits. Reverse or horizontal transfers generally resulted in reduced numbers of transferable credits. Institutional control also appears to play a significant role in determining the transferability of credits. Because many systems are designed to provide seamless transitions between public two-year and four-year institutions, students in these pathways appear to have a higher degree of credit transferability.

United States Government Accountability Office, Report to Congressional Requesters (August 2017). Higher Education: Student's Need More Information to Help Reduce Challenges in Transferring College Credits. Washington, D.C. https://www.gao.gov/assets/690/686530.pdf

- The U.S. Government Accountability Office (GAO) analyzed the Department of Education's most recently available data (at the time) in order to assess the critical challenges facing transfer students. They determined that 35% of all undergraduate students between 2004 and 2009 transferred at least once. Unfortunately, transfer students during this time period lost, on average, 43 percent of their completed credits when switching from one institution to another. Credit loss was even higher (over 90 percent) when students transferred from proprietary to public institutions. GAO found that 29% of websites reviewed did not include a list of active articulation agreements, suggesting that without this information, it may be difficult for students to make choices that will improve their transfer-of-credit opportunities.

Additional Resources and Links to Other Annotated Bibliographies

Achieve, Inc. (February 2007). A Strategy Session for Achieve American Diploma Project (ADP) Network States Moving From Some to All: Upgrading Graduation Requirements for All Students. Dallas, Texas. https://www.achieve.org/files/Achieve%20-%20Agenda%20for%20Grad%20Requirements.pdf
- This annotated bibliography is a compilation of resources that display the necessity for increasing graduation requirements across the board. It looks at resources in the mid 2000's from around the country.

Center for Community College Student Engagement (2014). Pathways Resource Brief. http://www.ccsse.org/docs/Pathways%20Annotated%20Bibliography_final.pdf
- In this annotated bibliography, CCCSE offers an extensive look at how pathway programs nationally affect community college completion and attendance.

Completion Arch, The: Measuring Community College Student Success. Transfer and Completion – Annotated Bibliography. http://secure-media.collegeboard.org/digitalServices/pdf/advocacy/arch/The-Completion-Arch-Transfer-and-Completion-Annotated-Bibliography.pdf
- This review focuses on how community colleges are currently assessed and provides a variety of suggestions about how to improve the current national metric systems.

Lumina Foundation. (July 2010). Annotated Bibliography of Transfer Student Literature. http://cierp2.utep.edu/development/Student%20Success%20at%20UTEP/Appendix%20A_Transfer%20Student%20Literature%20Annotated%20Bibliography.pdf
- This bibliography presents an overview of the risks and rewards involved in being a transfer student as well as offer a range of suggestions for improving the policy around developmental education.

Minnesota, Campus Compact. Annotated Bibliography: Access and Success. http://www.compact.org/wp-content/uploads/resources/downloads/MNCC_access_bibliography.doc
- This report focuses on the design and effectiveness of college access programs and various models for evaluating and promoting student success.

NODA, Association for Orientation, Transition, and Retention in Higher Education (2017. Orientation, Transition, and Retention Annotated Bibliography. Minneapolis, Minnesota. https://cdn.ymaws.com/www.nodaweb.org/resource/resmgr/docs/Annotated_Bibliography_OTR_1.pdf
- In 2017, NODA published this extensive annotated bibliography covering a vast range of topics from students with disabilities, to dual-enrollment students, to spring admits. The topical scope of this review is extremely large, but fortunately is isolated to the mid-2010s, making it a great reference for recent national policy on many higher ed conversations centered around orientation, transition and retention.

Oregon Department of Education (January 2007). Annotated Bibliography of Research for the State Board of Education Oregon Diploma Discussion. https://www.oregon.gov/ode/students-and-family/OregonDiploma/Documents/bibliography-of-diploma-research.pdf

- The Oregon Department of Education spent 18 months compiling an annotated bibliography of their research found both in the state of Oregon, as well as a national review, on the topics of college readiness, post-secondary access, and long-term bachelor's degree completion. Comprised mostly of statistical studies and surveys of current policy and practice, this 2007 publication is an in-depth look at the key transitional stage between secondary and postsecondary education

Savitz-Romer, M. & Jager-Hyman, J. (April 2009). Annotated Bibliography: Removing Roadblocks to Rigor – Linking Academic and Social Supports to Ensure College Readiness and Success. Pathways to College Network. Washington D.C. https://eric.ed.gov/?id=ED509546

- The Pathways to College Network offers a grand scope of the many challenges students are faced with during the transition from secondary to post-secondary education, and how the social support offered on a local level often has an effect on these students. Published in 2009, this was one of the more extensive reviews on a national scale of the policy and practice needed at the secondary level in order to prepare students for college.

ABSTRACT
         This bibliography of recent dissertations (1970 to
March 1975) on the subject of attrition and retention of college
students is intended to serve as a resource guide for administrators
and for research in higher education. The arrangement is by type of
institution for which the data were collected (public community
colleges, public colleges and universities, private colleges and
universities, and others), subdivided by studies of a single
institution and by those studies that included data from two or more
institutions. (Author)

COLLEGE STUDENT RETENTION

AN ANNOTATED BIBLIOGRAPHY OF
RECENT DISSERTATIONS (1970-MARCH 1975)

Compiled and Annotated by

Dr. Lee Noel
Regional Vice President

Lois Renter
Head Librarian
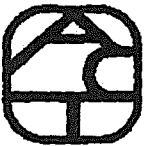
The American College Testing Program
2201 North Dodge
P.O. Box 168
Iowa City, Iowa 52240

FOREWARD

The attrition and retention of college students is a high priority
topic for discussion among educators. This bibliography of recent
dissertations (1970 - March, 1975) on the subject is intended to
serve as a resource guide for administrators and researchers in
higher education.

The arrangement is by the type of institution from which the data
were collected, subdivided by studies of a single institution and by
those which included data from two or more.

All the dissertations included in the bibliography are available
from University Microfilms at Ann Arbor, Michigan. The order
number for each follows the date in the citation.

Additional copies of the bibliography are available, without charge,
from the authors at:

The American College Testing Program
2201 N. Dodge
P.O. Box 168
Iowa City, Iowa 52240

Lee Noel
Lois Renter

3

PUBLIC COMMUNITY COLLEGES

Single Institution Studies

Burdg, M.L. Relationship of Student Attrition Rates and Self-Actualization of Community College Teachers. (United States International University, 1970) 70-22,348.

This study asked two questions: (1) Are teachers with low, average, or high student attrition rates different in self-actualization, as measured by the Personal Orientation Inventory (POI)? (2) Are teachers, classified according to certain selected variables, such as status in an area of employment, different in student attrition rates or self-actualization?

Teachers were sorted into seven groups: I,II,III--low, middle, high attrition; IV,V--full or part-time. Additionally, (group VI) four observers named five teachers who in their opinion demonstrated a high level of rapport with students. Also, (group VII) an analysis of registration class section cards yielded those teachers whose classes closed first, indicating student preference for the instructor.

Significant differences in Self-Actualization scores showed up between vocational and non-vocational teachers; attrition rates were lower for full-time teachers; the five teachers names by the observers showed up in the low attrition groups and they also had instructed in at least two of the classes which filled to quota early during registration. They had POI scores equal to or above the means given by the publisher's norms for self-actualization. There were nineteen teachers whose class registration closed early and who took the POI. Of them, seven were in the low attrition group, and twelve in the middle attrition group.

Byrne, M.M. Characteristics of Dropout and Dropin Liberal Arts Students at Lansing Community College and Identification of Institutionally Controllable Variables Affecting Student Holding Power. (Michigan State University, 1974) 74-19,792.

A stratified random sample of two hundred dropout and returnee liberal arts students was selected to be interviewed by telephone. Each student was asked open-ended questions concerning reasons for attending and dropping out or returning to the college. Each was also asked to respond to statements concerning self-motivation, instruction, status, importance of college, and environment.

The results indicated that returnees were more apt to be married and that they earned higher grades than single students. Dropouts and returnees worked in equal proportions while attending college, and about the same number of hours. Both groups equally said their work interfered with college attendance.

The major finding was that non-preference students differed greatly from declared majors in the combined group. Declared majors shared a more

traditional view of college, viewed the instruction more positively, earned higher grade point averages, liked more liberal arts courses, and attended college for college-related reasons rather than for personal ones.

Cannady, A.R. A Study of Factors Which Influence Minority and Non-Minority Student Enrollment and Persistence in a Community College. (Texas Tech University, 1973) 73-23,748.

The researcher constructed a questionnaire to identify factors which influenced enrolling and persisting as perceived by minority and non-minority students, and to identify characteristics of non-attenders, non-persisters, and graduates.

Non-attenders identified the fewest positive factors of influence, graduates the most. Also, non-attenders identified one negative factor, "My knowledge of college costs, programs, and entrance requirements." The factor which most influenced all three samples was "My interest in more schooling." Factors identified as positive by graduates, but not identified as such by the other two groups were "Attitude of college instructors" and "Personal attention given students at college." Non-attenders were more interested in on-the-job training or vocational-trade schools. They differed significantly from non-persisters and graduates on 14 of 16 comparative characteristics.

Minority and non-minority students differed significantly in their perceptions of degree and/or direction of influence on 19 of the 22 factors of influence on their decision to enroll or remain. All three samples perceived strong family influence upon decisions to attend. Blacks perceived their parents as more supportive than did Mexican-American students. More non-attenders came from lower to lower-middle socioeconomic levels, with minority non-attenders lower than Anglo-American non-attenders.

Ceniceroz, R.G. The Use of Feedback Information by a Community College in Decision Making Affecting Student Retention. (Claremont Graduate School, 1974) 74-7906.

This study concerned itself with the assessment of the college's ability to increase retention by determining the "real" priorities of the system as measured by the presence or absence of effective informational feedback loops, and the priorities assigned to these. A successful loop is one in which there is a dependent working relationship among the goal, sensing mechanism, and decision maker who administers corrective action as needed. The Instructional Program and the Student Services Program were singled out for investigation since they are most apt to help determine a student's success in the academic program and a student's feeling of belonging on campus, two important influences on remaining in college.

Findings revealed that decision-makers are not convinced of the importance of retention since they still make decisions with no regard for the information or evidence available. Findings also suggested that local departmental goals are in direct conflict with larger institutional goals.

Recommendations included: (1) departmental accountability in the area of student retention, (2) student input into departmental affairs, (3) uniform departmental standards, and (4) faculty adoption of a philosophy that will be contrary to the screening role currently in vogue.

Colozzi, E.A. Did They Leave for the Best of Reasons?: A Study of Persisters and Dropouts in an Open Admissions Community College. (Columbia University, 1973) 74-6396.

The specific purposes of the study were: (1) to determine whether there were differences between regular persisters and dropouts and between open enrollment persisters and dropouts, based on selected intellective and non-intellective characteristics, and (2) to develop a profile of the open enrollment dropout.

Findings indicated that regular and open enrollment students are different and that, perhaps, minority students are not taking full advantage of the open door. Attrition rates for both regular and open enrollment students were below national figures and projected estimates at CUNY. Large proportions of those withdrawing were doing well in college. Dropouts were found to have no specific expectations from attending college, and when interviewed, expressed concern about the lack of academic challenge.

It was concluded that the academic challenge at the college may have declined because of open admissions. The success of the program may be determined by maintaining challenge while identifying students' strengths and weaknesses early. Remediation and counseling were emphasized. Career development programs were recommended as well as a job referral program for dropouts. Workshops on open enrollment were suggested for faculty and administration.

Eddy, B.B. A Study of the Relationship of Selected Student Characteristics to Persistence and Withdrawal of a Sample of Full-Time Freshmen at a Community College. (American University, 1970) 71-17,921.

This study was designed with the following objectives in mind: (1) to examine differences between the attrition and survival groups on the characteristics of age, sex, high school rank in class, the verbal, quantitative, and composite converted scores of the School and College Ability Test, and college grade point average, (2) to study differences on these characteristics between the attrition and survival groups when stratified according to academic achievement, and (3) to apply a multivariate statistical technique for the purpose of predicting students' group membership in the attrition-survival dichotomy.

The data yielded the following significant findings: (1) high school rank in class and college grade point average were discriminators between the attrition-survival groups, (2) there was a difference in the performance of dropouts and persisters in the academically failing subgroup on the criterion of

college grade point average, and (3) the seven variables discriminant function was effective in predicting group membership in the attrition-survival dichotomy.

The findings further suggested the improbability of discovering one or two simple and absolute reasons to explain the junior college dropout, and that there is a need for improved procedures and techniques in order to understand the factors influencing the dropout process.

Garcia, E.L. A Comparative Study of Community College Mexican American and Anglo American Graduates and Dropouts. (University of California, Los Angeles, 1974) 74-24,590.

The purpose of the study was to determine specific variables that cause attrition and persistence by means of the administration of a modified version of the NORCAL Questionnaire and Follow-Up Questionnaire on students who graduated or dropped out, and further, to discover reasons for possible differences in actual versus predicted academic performance of the two groups.

In this study, males had a higher attrition rate. Ethnic background was of little significance between graduates and dropouts, except that Mexican Americans as a group showed more concern for financial support and cooperative education. There were significant differences when these groups were compared by sex. Counselor-student rapport and exchange of information were significant concerns of dropouts of both groups.

Another finding was that Mexican American students lacked sophistication of school procedure. When parents of Mexican American students have become sufficiently acculturated, it is no longer a discriminating factor in community college attrition.

Gum, H.S. A Study of Dropout Propensity of Selected Community College Students. (Oregon State University, 1973) 73-25,352.

The purpose of this study was to determine if there were common factors influencing student decisions to terminate course work. The data were obtained through an exit and a follow-up interview. Students were categorized as those in transfer programs, in career programs, or undecided as to major. Questions also included the student's opinion of the program of study and college characteristics.

The major findings suggested that: (1) the major reasons for leaving were full-time employment, health, finances, and personal problems, (2) there were no significant differences in responses among the three categories of students, (3) lack of "identity," failure to seek help in making decisions, lack of personal attention by the staff, and insufficient information regarding various program options were all underlying reasons for attrition, and (4) stated reasons for leaving the community college were not necessarily the true or "real" reasons.

Kurlander, E.D. A Predictive Study of Academic Success and Persistence in a Community College Utilizing Rotter's Construct of Personal Power and Selected Variables. (State University of New York at Albany, 1971) 72-31,783.

The primary purpose of this study was to extend educational prediction of academic success and persistence by using selected psychological variables. In addition to Rotter's Social Reaction Inventory, the Manifest Anxiety Scale and the Occupational Aspiration Scale were administered. Traditional predictors such as high school average, and a standardized test, the Regents Scholarship College Qualification Test (RSCQT) were included. Socioeconomic variables were also analyzed.

Findings revealed that there were no statistically significant differences in the characteristics of persisters and withdrawers, and that the psychological, educational, and socioeconomic variables were not particularly effective in predicting success and persistence, but that the traditional predictors, high school average and RSCQT, were the most efficient.

Mynatt, H.L. The Effects of a Developmental Education Program in a Community College Upon Self-Concept, Grade Point Average and Attrition. (East Texas State University, 1972) 73-4442.

The effect of the developmental education curriculum was the primary factor under investigation in this study. First semester enrollees were divided into three groups: Group I--students who were counseled and/or advised to enter the General Studies Program but rejected enrollment, Group II--students from randomly selected first semester college parallel English classes, and Group III--enrollees in the General Studies Program. The three groups were pretested and posttested, using the How I See Myself Scale. Grade point average was determined at the end of the Fall Semester, and Registrar's records were used to ascertain reenrollment for the following semester.

Some conclusions were: (1) the developmental education program did not have a significant effect on its enrollees' self-concept, (2) grade point averages were significantly different among the three groups with students in Group III significantly higher than Group I, but not different from Group II, and (3) the holding power of the General Studies Program was considerably greater than for the other forms of curricula under investigation.

Nutt, J.D. A Comparison of Selected Dropouts and Persisters at Shoreline Community College with Respect to Selected Non-Academic Characteristics. (Washington State University, 1974) 74-16,387

The sample of students in this study included dropouts, persisters and students who stated, at the beginning of the freshman year, that their goal was to transfer to a four-year institution. Students were matched according to sex and tested academic ability, using the Washington Pre-College Test.

8

The score used in the matching procedure was the All-College Prediction
Score (ACP). The students were then compared with respect to selected non-
academic characteristics, such as student's perception of parental attitude
toward college attendance, career plans, participation in extracurricular
activities, part-time work plans, etc.

An analysis of the data showed dropouts to be older and less confident of
their academic ability. Dropouts in the upper half of the ACP scores
exhibited a negative self-concept, both in academic ability and extracur-
ricular involvement. Lower half dropouts showed a strong reliance on the
peer group, and their parents were perceived as placing little value on
higher education. They were less active in high school activities.

Remedial techniques should include intensive counseling to build self-image
and a method of combating negative peer group influence was called for.
Potential dropouts of different sexes and ability levels would need to be
treated separately.

Pappas, G. A Descriptive Study of the Drop-Out Student in a San Diego Community
    College. (United States International University, 1975) 74-24,526.

The purpose of the study was to examine and appraise the student drop-out
rate. The three main objectives to be achieved in order to accomplish the
purpose of the study were: (1) an appraisal of specific variables that
might affect the drop-out rate, (2) an appraisal of the correlation between
the teachers' student drop-out rate and specific variables, and (3) inter-
views with students to assess conditions that might lead to attrition.

Information was collected from student personnel records, counseling records,
class rosters, and student interviews. Analysis of data showed five signif-
icant demographic conclusions: (1) the teacher is important to the drop-out
rate, (2) high school grade point average is a good indicator of success in
the community college, (3) the score on the entrance test is also a good
predictor, (4) it is more difficult for the working student to persist, and
(5) students who took the review English course did not fare better than
students who did not take the course.

Parilla, R.E. A Lifestyle Analysis of Registration, Attrition, Transfer, and
    Graduation of Full-Time Students Who Entered Cuyahoga Community College
    in the Fall of 1968. (Florida State University, 1973) 73-25,124.

The population for this study included all the first-time students of the
college, Fall 1968, who were residents of Cuyahoga County, Ohio. In addition
to student data taken from college records, the socioeconomic status (SES)
information necessary to determine the SES indexes was taken from 1970 census
data for Cuyahoga County. Each student was identified with his/her home
census tract and indexed into one of four SES index areas.

The evidence led to the following conclusions: (1) lifestyle was significantly
related to initial enrollment, with the lowest under represented and the upper

middle over represented, (2) lifestyle was related to earning an associate degree in two years, but not to earning it in three or four years, (3) lifestyle was not significantly related to transfer during the first year, but upper lifestyles tended to transfer to a greater extent after the first year, (4) lower lifestyle students were more likely to withdraw during the first year, but beyond the first year lifestyle was not significantly related to withdrawal, and (5) withdrawing from college with poor grades, for full-time employment, or to enter the military was not related to lifestyle.

Preller, R.E. Persistence and the Characteristics of Students at an Urban-Suburban-Rural Community College. (Illinois State University, 1972) 72-22,912.

The two problems considered were: (1) whether or not there were any significant relationships between persistence and any of the variable student attributes routinely known as the students matriculate or progress in their studies, and (2) if students who terminated their studies before completion were really "dropouts" in the sense that they were "failures."

The findings indicated that cumulative college grade points varied with persistence, as did composite American College Test scores, percentile ranks in high school graduating class, and to a lesser extent, the sizes of high school graduating classes, with smaller classes positively related to persistence. Students enrolled in transfer mathematics and science tended to persist the longest and terminal general studies students, the shortest period of time. Those students leaving full-time study should not be thought of as failures or "dropouts" since typically they are not lost to formal education. .

Sondalle, M.P. The Academic Cluster Group and Its Effects Upon the Achievement, Attrition, and Attitudes of Freshmen Community College Students. (University of Washington, 1974) 74-29,508.

Based upon Theodore M. Newcomb's theoretical model concerning student peer group formation and influence, the researcher postulated that students scheduled to take classes together as an academic cluster group would demonstrate a higher level of academic achievement, a lower attrition rate, different perceptions of the college environment, a higher rate of satisfaction with their college experiences, and a lower rate of personal stress within the college environment than students taking alternate sections of the same courses, but not scheduled as a cluster group.

The major findings indicated that although clustering had no effect on first year attrition, significant numbers of clustered students did persist through the second year and earn degrees. Clustering, however, did not influence the remaining aspects. It was concluded that this was due to the particular environmental characteristics of the college and the failure of the design of the study to ensure for the establishment of socio-psychological groups.

The findings from the longitudinal student data and personality trait measures indicated both theoretical and practical implications for the further study of personality factors and their relationships to the realization of community college students' educational goals.

Sykes, A.B. The Effect of Tutoring, Reading Instruction, and Financial Stipends Upon Student Achievement, Attrition, and Attitudes at Compton College. (University of California, Los Angeles, 1971) 72-2922.

The experimental group for this study was selected from a special program (Project Hope). The subjects were randomly selected from first semester freshmen who scored at or below the tenth percentile on the Cooperative School and College Ability Test and below 90 on the New Purdue Placement Test.

Four groups of 36 each were studied using various combinations of treatment: tutoring, special reading instruction, $30 per week stipends, and reported earnings. The fifth group was a control: no treatment and no reported earnings. The criterion for assessment was improved grade point average, lower dropout rate, and improved study habits and attitudes.

Results indicated that Project Hope was not significantly affecting student achievement as measured by grade point average or study habits and attitudes. It did appear to improve reading skills and to lower the dropout rate for this group of students. The evidence was not adequate to measure the impact of finances upon attrition. Recommendations for further study included a replication of this research with various modifications.

White, J.H. Individual and Environmental Factors Associated with Freshman Attrition at a Multi-Campus Community College. (George Washington University, 1971) 72-3745.

The purpose of this study was to analyze the association of certain individual factors and characteristics of the campus environment with patterns of persistence, transfer, and voluntary nonpersistence for freshmen. The sample consisted of 205 nonpersisters who did not register at the college for the beginning of their second year, and 303 persisters who did.

Student demographic data, obtained from college records, and student perceptions of campus and personal environment, obtained from a mailed opinionnaire, were analyzed both separately and in various combinations to study the interaction between student and campus. Fifteen factors were found to be significantly related to persistence. They included first semester grade point average, level of academic motive for attending college, level of educational aspiration, perception of adequacy of family financial resources, delayed matriculation, and ACT English score.

In general, nonpersisters stated these reasons most frequently as important in their decision to interrupt attendance at college: uncertain goals, lack of interest, personal and psychological problems, financial problems, poor grades, conflicts with parents, and college courses not related to one's goals.

11

Multiple Institution Studies

Anderson, D.L. Recruitment, Programs and Retention of Disadvantaged Youth in
Florida Community-Junior Colleges. (Florida Atlantic University, 1973)
74-1673.

In order to determine the effectiveness of recruitment methods, retention
procedures, and programs for disadvantaged youth, a survey questionnaire
was sent to the counseling departments of the 28 Florida Community Colleges
and seven satellite campuses.

Data were requested in the areas of methods of recruitment, ethnic and
economic categories included in disadvantagement, selection methods,
material aid given by the college to disadvantaged students, extent and
effectiveness of vocational programs, present status of student retention
and follow-up programs on dropouts.

The analysis of the data showed that: Florida Community Colleges have diverse
offerings and student populations, the commitment to serve in general is
more evident than is research to determine specific opportunity for the dis-
advantaged, special training programs are geared to the academic offering
of the college with conservative emphasis on remediation, and there seems
to be an unwillingness to admit a need for institutional change, especially
as programs relate to retention. Future studies are needed which obtain
evidence from the dropouts.

Delany, Jr., W.S. A Critical Analysis of Persistence of Vietnam Era Veterans in
Selected Urban Community Colleges in Texas. (University of Texas at Austin,
1973) 74-5226.

Vietnam era veterans now constitute one-sixth of the students in community
colleges. This study investigated, by means of questionnaire and college
records, selected factors from veterans' military backgrounds, their attitudes
toward certain aspects of college environment, and academic performance to
determine the effects of these factors on persistence.

Significant differences were found between persisters and nonpersisters,
but none between race-ethnic groups. Significant differences appeared in the
areas of attitudes toward the counseling office, attitudes regarding instruc-
tors and instruction, efforts of the college to serve veterans, acceptance
on campus, and overall attitude. There was also a significant difference
in the academic performance of persisters and nonpersisters. None was found
between those who served in Vietnam and those who did not.

Horton, N.K. A Descriptive Evaluation of Persisters and Non-Persisters in Texas
Community Colleges. (Texas A & M University, 1973) 74-13,071.

This research was conducted for the purpose of determining characteristics
of sophomores in community colleges since deviation from standards for

each variable or characteristic common to sophomores, as compared to freshmen, might indicate reasons why freshmen do not persist in the community college. Scores on the Holland Vocational Preference Inventory, College Inventory of Academic Adjustment, a Student Questionnaire, the American College Test (ACT), and overall grade point ratios were used.

Some major conclusions were: (1) sophomores exhibited higher mean scores on the ACT on three of four academic areas, (2) sophomores appeared more adjusted to college and were better equipped emotionally to handle upsets, and (3) sophomores who showed an interest in service-related fields generally persisted. Some differences based on sex were also found.

Merritt, J.E. Analysis of Academic Achievement, Biographical Characteristics, in Relation to Persistence Descriptors of Selected Virginia Community College Students. (University of Virginia, 1974) 74-23,320.

This study was conducted to determine if there were biographical characteristics and academic variables which reveal differences between students who complete their program of study and those who do not persist to the attainment of a B.A. or A.A.

The subjects were stratified into two groups: college transfer and occupational. They were further classified as Persisters I--graduates, Persisters II--transferred to a four-year college, continued at the community college, or went to work in their curriculum area, and Nonpersisters--left the community college and not in one of the above categories. Data were collected from American College Test scores, community college and high school records, and a biographic questionnaire.

It was determined that certain academic variables distinguished significantly among all three categories in both groups. No significant differences were revealed by the biographic variables because of inadequate numbers in the biographic cells, but some noteworthy descriptive differences were found.

Some conclusions were: (1) biographic data can be used for counseling students who are potential Nonpersisters, and (2) colleges cannot assume that obtaining a degree was the entering student's objective since obtaining job expertise for occupational students and two years of education toward a B.A. for transfer students were significant goals.

Snyder, F.A. Financial Assistance in Selected Pennsylvania Community Colleges and Its Relationship to Persistence and Achievement. (University of Maryland, 1971) 72-1648.

The several objectives of this study were to identify personal and background characteristics of recipients and non-recipients of aid and employed and non-employed students, and to examine various relationships between (1) characteristics, aid, and employment, and (2) levels of persistence and academic achievement.

Results showed that recipients of financial aid had lower socioeconomic back-
grounds than non-recipients, but the two groups differed little in academic
backgrounds. Scholarship recipients tended to have high ACT scores, and
loan recipients, lower scores.

Over half of the respondents held jobs as freshmen, and men worked longer
hours than women. The proportion of employment used for meeting educational
expenses was estimated by students as three-fourths.

Aid recipients and non-recipients did not differ significantly in college
achievement and persistence when effects of high school rank and family in-
come were held constant, but because of aid-recipients' lower socioeconomic
backgrounds, the findings were interpreted to indicate some probable benefits
of financial aids to educational outcomes.

Woods, E.W. A Comparison of the Perceptions of the Academic Environment of Selected
Alabama Public Junior Colleges by Persisting and Non-Persisting Students.
(Auburn University, 1971) 72-2225.

This study was composed of three phases: (1) comparisons of the persisting
and non-persisting students' perceptions of the real or the ideal academic
environments, (2) comparisons of the subjects' real versus their ideal per-
ceptions of the academic environments, and (3) comparisons of the non-
persisting students' real or ideal perceptions according to the programs of
study in which the subjects were enrolled. The Junior College Environment
Scale was used as the instrument of measurement.

The study revealed that both groups had similar views of the real and the
ideal academic environment except at one college. All the subjects had a
significantly different view of the real academic environment in comparison
to their perception of the ideal. Comparisons of non-persisting students by
program of study yielded significant differences among the three groups--
subjects in transfer programs, vocational/technical students, and those in
"other" or non-classified programs.

PUBLIC COLLEGES AND UNIVERSITIES

Single Institution Studies

Baier, J.L. An Analysis of Undergraduate Student Attrition at Southern Illinois
University at Carbondale, 1970-1973. (Southern Illinois University, 1974)
75-102.

The purpose of this study was to determine the nature of the university's
40-50% undergraduate attrition rate. Students who entered in the 1970 Fall
Quarter were divided by high school or transfer entry and by sex. They were
then classified by enrollment status as of Spring Quarter, 1973. It was
found that three years after entering SIU-C, 47.4% of the high school entries

and 45.2% of the transfers were either suspended or had withdrawn, and of these, over half voluntarily withdrew while in good academic standing.

Using a number of demographic, academic, institutional and socioeconomic variables, it was found that: (1) academic success could be more accurately predicted than could academic suspension or withdrawal for high school entries, (2) academic withdrawal could be more accurately predicted than academic success for transfer entries, and (3) voluntary withdrawal was the most difficult to predict for both groups. Of the variables selected as possible predictors of enrollment status, nine were found to be most predictive.

Based on the findings, it was recommended that SUI-C review the effectiveness of its new student recruitment, academic advisement, and developmental skills programs, its student services, financial aid programs, and General Studies programs in relation to the attrition problem and the mission of the university.

Bean, A.G. Personality Measures as Multiple Moderators in the Prediction of College Student Attrition. (University of Pennsylvania, 1970) 71-19,203.

Bean's study asked two general questions: (1) Are personality measures useful as moderators of the relationship between measures of scholastic aptitude and attrition? (2) Do personality measures increase the predictability of attrition when added to measures of scholastic aptitude in a linear regression analysis?

The verbal and mathematical scores of the Scholastic Aptitude Test (SAT) were selected as the predictor measure. The criterion variable was persistence versus academic dismissal, excluding students who withdrew. The moderator variables were sex of student and four personality measures drawn from the Runner Studies of Attitude Patterns: (1) independence, (2) acquiescence, (3) assertiveness, and (4) tool interest.

The results showed that only acquiescence and assertiveness defined stable, differentially predictable subgroups. As predictors, the four personality measures did not substantially increase the predictability of SAT scores and sex of student combined. Personality measures of independence and acquiescence can act as moderator variables when SAT scores are used to predict college student attrition, yet be of little value as predictors.

Berg, A.S. Selected Factors of Dropout and Non-Dropout Freshmen Under Open Admissions at Queens College, CUNY. (Fordham University, 1973) 73-26,706.

This study sought to compare selected demographic, performance, personal and economic factors related to dropout and non-dropout day freshmen who would have been traditionally accepted and those who would not in the Open Admissions Program, 1970. Comparisons were made with Fall 1969 freshmen in the Non-Open Admissions Program, both dropouts and non-dropouts.

Conclusions were: (1) the Open Admissions Program had no effect on persistence among freshmen, (2) distance and time in travel did not contribute to dropping out, (3) remediation contributed to persistence for non-traditionally accepted freshmen, (4) younger students were more likely to persist, (5) advisement was significant in persistence for non-traditionally accepted freshmen, (6) high school rank did not strongly predict persistence, (7) ratings of high schools were not significant, (8) low college grade point averages signaled dropouts, and (9) choice of major, sex of student, residence in poverty areas, and financial aid were not relevant to determining persistence.

It was recommended that high school seniors continue to be allowed to choose a CUNY college regardless of distance, that high school percentile rank as a criterion for admission should be re-examined, that choice of major at college entrance no longer be required, but with interdisciplinary freshman orientation programs held year-round, that placement tests be administered to all college bound students at the end of the high school junior year, with remediation provided for seniors, that advisement should be required for failing or near-failing college freshmen, and that early admissions of qualified high school juniors be considered. Some recommendations for further research were also made.

Brooks, J.N. An Identification of Factors Which Appear to Exert a Holding Power on Eastern New Mexico University Students. (New Mexico State University, 1971) 71-24,632.

Students who completed their degree were compared to students who enrolled at the same time but did not persist into their second academic year. The data collected were from personnel files and permanent records of the students. They included age, sex, high school grade point average, ACT composite score, size of senior class and type of high school, marital status, initial major, social fraternal affiliation, past military service, delayed or immediate college entrance, and occupation of head of household.

The results showed that dropouts tended to have a lower ACT composite score, 17 or less, and a high school grade point of less than 2.0. The lower the level of employment of the family breadwinner, the more likely the student was to leave. Significant numbers of younger freshmen, 17 to 18 year olds, persisted as did students who attended college without an interruption between high school and college. More successful students declared a major at initial enrollment than did dropouts. Sororities and fraternities appeared to exert a holding power. The other variables did not yield any significant differences.

Brown, R.A. The Effect of Self-Awareness Classes on the Attrition Rate of College Freshmen. (University of Pittsburgh, 1972) 73-1649.

This study attempted to evaluate the effect of group counseling procedures on classroom size groups of college freshmen. During an orientation meeting,

16

freshmen were asked, "Do you expect to graduate?" on a questionnaire being used to determine their reasons for attending college. Of freshmen expecting to graduate, the attrition rate of those counseled was compared with those who did not receive counseling.

The total freshman class was invited to attend the self-awareness classes. In addition to these volunteers, four other classes were selected to receive the treatment. Consequently, non-volunteers who received treatment were included, as well as some volunteers who did not attend the classes. Prior to the treatment all groups being compared on attrition were compared on predictors of college success to insure equal ability to remain in college.

The results indicated that group counseling can lower attrition rates of college freshmen, that attitudes are an important factor in the ability to remain and those attitudes can be effected through these classes, and that those who do not seek help can in fact be helped by selecting them for self awareness classes.

Cochran, J.A. A Descriptive Study Examining Grades, Reading Ability and Attrition of Certain Low Income Freshmen at Arizona State University. (Arizona State University, 1974) 74-20,127.

The purposes of this study were: (1) to obtain a descriptive profile of academic and demographic characteristics of low income freshmen using the American College Tests, Nelson Denny Adult Reading Test and Cohort Questionnaire, and (2) to determine the effect of three treatments--counseling aid, academic aid, and no treatment--on college grades, reading scores and attrition.

While various significant correlations were found among the tests, demographic variables, and treatments, the results of the study were not considered sufficiently conclusive to develop definitive programs for implementation. Instead, a five-year research model was developed so that the current study, with modifications, could be extended to obtain more conclusive results. Financial aid and different counseling treatments were added as influences to be examined in the model.

Cooper, W.R. A Longitudinal Study of Characteristics Associated with Attendance Persistence for Selected Groups of Students at Arizona State University. (Arizona State University, 1974) 74-5457.

The sample studied was composed of 420 students selected randomly from the 1964 freshman class. The descriptive data consisted of 21 selected characteristics. The sample was stratified into six groups: the sample, graduates, dropaways, survivals, and withdrawals, voluntary or forced.

Among the findings were the following: (1) males and females tended to dropaway at equal rates and tended to withdraw at near equal rates, (2) dropaway rates for married students were higher, (3) the forced withdrawal group had the highest "poor" conduct, (4) students whose parents were non-professionals

tended to do as well as children of professionals, (5) in all groups, except the dropaways, the number of students in the upper 50th percentile was more than twice that in the lower 50th percentile, (6) final grade point average was a highly significant factor between graduates and dropaways and between voluntary and forced withdrawals, and (7) sex and age were significant only between voluntary and forced withdrawals and between dropaways and survivors.

Dunn, B.R. Educational Borrowing Through Guaranteed Loan Programs: Perceptions of Ball State University Dropouts. (Ball State University, 1973) 74-2936.

Information was gathered by means of a questionnaire sent to students who had borrowed through the Guaranteed Student Loan Program and who had withdrawn from school before completing a degree program.

The analysis of the data revealed that these students were usually single at the time of borrowing but tended to marry at a later date, were not dependent on parents for financial support, and came from homes of parents having a wide range of annual gross incomes. They were more likely to borrow through the loan program than obtain money for education expenses from any other source, did not use the money for purposes other than education, and tended not to default on repayment to the lender.

The student borrowers perceived the loan program as a positive effect on the decision to attend college, but not on the selection of Ball State as the institution to attend. They perceived the overall borrowing experience as satisfactory but believed the basis for repayment should have been a combination of the amount borrowed and the borrower's income after leaving college.

Dutt, L.G. Student Persistence in College: An Analysis. (University of Kentucky, 1971) 72-9387.

Attendance patterns of the freshman class which entered the University of Kentucky, Fall 1964, were observed for 13 semesters. Twenty percent of the class graduated in four years and by the end of six and one-half years 43.1% had received degrees from the university.

Findings showed that the first three semesters represented a crucial period. Men were more apt to leave for academic reasons than were women. Significant differences were also found between the proportion of men and women entering and graduating.

Persisters and defaulters were interviewed and significant differences were found in family continuity, college completion by fathers of the students, undergraduate college of enrollment during the freshman year, and mean scores on each of the American College Tests. Persisters and defaulters both entered college for vocational reasons. Defaulters left primarily because of academic difficulties.

A multivariate analysis of variance was performed with five attendance
levels for both men and women, using the Omnibus Personality Inventory.
These findings revealed that when ability is controlled, sex and attendance
grouping has a significant effect on personality scores.

Greenwood, C.H. Characteristics of Black Freshman Dropouts at Ball State University.
(Indiana University, 1972) 73-10,823.

Characteristics of black students entering the freshman classes of 1968 and
1969 and who dropped out during or at the end of the freshman year were
compared with those who continued into their sophomore year. Data were
gathered from university records in 18 categories.

Significance was found in the five characteristics of age, high school rank,
financial aid, admission status, and entrance test performance. One con-
clusion was that the characteristics involving significant differences were
those unrelated to race, with the acknowledgment that finances, parental
education, family size, etc., may aggravate nonpersistence in blacks.

Other conclusions were that finances and late starting affect persistence
but that these may be related to each other and to other non-significant
characteristics. Recommendations included similar studies about whites for
comparison, and improvement in financial aid and counseling for Ball State
blacks.

Gustavus, W.T. Successful Students, Readmitted Students and Dropouts: A Study of
Differential Patterns of College Achievements. (Florida State University,
1970) 71-7023.

The influence of selected factors on student success was investigated in
this study. A comparison of the three groups showed a significant rela-
tionship between degree of success in college and father's education and
between degree of success and early college performance.'

In the first two years of college the significant factors in degree of suc-
cess were found to be self-report of the importance of college, graduate
school plans, number of changes made in academic major, type of residence
lived in, and perception of friends' academic ability.

For the final two years of college, a significant relationship was found
between degree of success and number of hours studied per week outside of
classes, graduate school plans, number of changes in academic major, and
perception of friends' academic ability. Early commitment to an academic
major was found to have a significant relationship to degree of success.

Hooks, C.M. An Exploratory Study of Freshmen Student Attrition at UCLA: 1968-1971.
(University of California, Los Angeles, 1973) 74-11,536.

The purposes of this study were to: (1) describe the two groups of students involved, freshmen 1968-1969 and 1970-1971, who had dropped out, (2) discover their major rea-,on for leaving and ascertain the circumstances under which they would have continued, (3) assess the affect of campus disruptions upon attrition, and (4) report their activities at time of interview, both academically and non-academically. Data were compiled from university records and an in-depth personal interview.

Four conclusions were drawn from the results: (1) the students involved came from a diversity of backgrounds, (2) the fact that a majority of both groups left by choice indicated that factors other than poor scholarship were responsible, (3) campus disruptions during the period were an important factor in freshman student attrition, and (4) leaving UCLA did not signify termination of education for a large part of both groups surveyed.

Howitt, D.E. An Analysis of Voluntary Attrition and Persistence at Kearney State College. (University of Nebraska-Lincoln, 1972) 73-15,369.

The primary purposes of this study were: (1) to compare and contrast selected intellective and non-intellective characteristics of persisting students, and (2) to analyze student assessments of the degree to which selected factors influenced their continuation or withdrawal. Data were obtained from: (1) a review of the current literature, (2) questionnaires mailed to persisters and nonpersisters, (3) college permanent records, and (4) personal interviews.

Two intellective characteristics significantly differentiated between the two samples. Nonpersisters had a lower mean grade point average and they were more frequently found in the lower quartile ranks in high school class.

Significant differences were evidenced in 16 of the 26 selected non-intellective factors, such as sex, age, financial support, degree plans, etc. Continuing students were influenced mostly by factors having a relationship to the general area of curriculum and instruction. Two general areas significantly influenced nonpersisters to withdraw: the area of personal and family conditions, followed by the influence of the general area of curriculum and instruction. The most important reasons for transferring were: major not available, dissatisfaction with the institution, and change in vocational interests or objectives.

Klindienst, D.H. Predicting the Accommodation and Progressive Retention of Selected Freshmen at Clarion State College. (Pennsylvania State University, 1971) 72-19,334.

Given that recent revisions of high school and college curricula have been aimed at the cognitive aspects of education which works to the disadvantage of already educationally disadvantaged students, this study sought: (1) to identify certain independent variables of personality and adjustment which could be used to predict the first year progressive retention of freshmen who had been identified by the college admissions officer as disadvantaged, and (2) to determine whether these variables could be used also to predict the retention of comparable but normally admitted freshmen.

Data were obtained from the administration of a battery of standardized tests, high school records, and administration of two investigator-prepared devices. A tutoring service was also instituted for the experimental group with no such treatment for the control subjects.

The greatest single factor in predicting an educationally disadvantaged student's adjustment to the learning environment was found to be his/her accommodation to the program. It was concluded that those students classified as disadvantaged must be assured of: (1) closer student-instructor interaction, (2) the development of a positive self-concept, and (3) attention toward assistance in organized learning patterns.

Morrisey, R.J. A Comparison of the Nonintellective Characteristics, as Determined by the College Student Questionnaire, of Freshman Probationary Student Dropouts and Persisters in an Urban University. (University of Missouri-Kansas City, 1970) 70-16,446.

In the given university situation where the Ability range is limited to the upper levels, it was proposed that certain specified biographical and attitudinal characteristics might have a greater effect on attrition than does Ability. A secondary purpose of the study was to determine if the College Student Questionnaire is an adequate instrument for measuring those nonintellectual variables. It was determined to be adequate, and it did discriminate reliably and validly between groups of students.

Some findings were: (1) that Fall Grade Point Average and High School Percentile Rank were positvely related to persistence for the total population, (2) that Independence, Family Social Status, and Liberalism were positively related to persistence for certain groups, (3) that Family Independence was negatively related for certain groups, and (4) that Peer Independence and Sex had no reliable association with persistence.

Some reliable relationships were not in the expected direction, based on previous research findings. Most notable among these were those concerning Family Independence, which was negative, and Ability, where students from the Middle High School Percentile Ranks behaved more unpredictably as regards persistence than did high and low Ability students.

Morrison, I.T. An Analysis of the Nature and Extent of Student Attrition at the University of Tulsa. (University of Tulsa, 1974) 74-19,533.

The purpose of this study was to determine whether there were differences among three groups of students--those who persist to a degree, those who transfer to other institutions, and students who discontinue their pursuit of higher education--on the selected characteristics of age, high school and college grade point averages, Scholastic Aptitude Test (SAT) scores, and impressions of the university, faculty, and students. The students were further partitioned by sex. The Semantic Differential was selected as the criterion instrument and made part of a questionnaire designed for the study.

The major findings were as follows: (1) there was evidence of differences among the three groups on the variables of high school grade point averages, college grade point averages, and age, and (2) there were no differences found among the three groups on the variables of SAT scores and impressions of the university, faculty, and students.

Among the recommendations were suggestions that studies of other classes be made for comparative purposes, and that exit interviews be considered as one possibility for decreasing attrition rates.

Parham, J. Relationships Between Academic Achievement, Attitudes and Attrition of Black Athletes at Arizona State University. (Arizona State University, 1973) 73-12,086.

The specific purpose of this study was to answer questions concerning the relationships between former black athletes' achievement and attrition, and between achievement and college major, differences in achievement between former black athletes classified by attrition and present black athletes, and various relationships concerning achievement and attitudes.

Four conclusions were inferred from the findings: (1) black athletes did poorly in academic subjects in college, resulting in a high attrition rate, (2) black athletes who did well academically in high school had favorable attitudes toward both high school and college coaches, teachers, administrators, and counselors, (3) those who did well in college did not have favorable attitudes toward college coaches, teachers, etc., and (4) the black athlete was aware of and concerned about his limited accomplishments.

Several of the recommendations were programs designed to improve academic achievement, counseling programs to help clarify attitudes, a decrease in the number of eligibility hours by the National Collegiate Athletic Association, and five or six year athletic scholarships. Additional research was also recommended.

Robinson, T.C. The Interaction of Student Personality Factors with the University Environmental Press as Related to Student Attrition. (State University of New York at Buffalo, 1971) 72-249.

The major purpose of this study was to determine whether congruence or dissonance existed between the personality of both dropouts and persisters and the environmental press of their university. It was hypothesized that those students who displayed congruence would persist and those who displayed dissonance would drop out. Also, the degree of congruence or dissonance between persisters and dropouts was to be determined to indicate personality differences. An attempt was also made to replicate earlier studies dealing with personality differences between persisters and dropouts. The data were generated by the Activities Index and the College Characteristic Index.

The analysis of total scores revealed that both dropouts and persisters were dissonant with their environment. In fact, dropouts and persisters both

scored significantly higher than the press scores. The tests also indicated that there is no significant difference between dropouts and persisters by personality.

Further analysis comparing persisters and dropouts by subscale with their environment yielded differences between them on a number of the variables.

Russ, J.E. Relationship Between Ability, Family Income, and Amount of Financial Aid Received by Students and Their Persistence in College. (East Texas State University, 1973) 74-11,899.

This thesis sought to determine whether significant relationships existed between the selected variables and persistence, and whether a significant relationship existed between the combined variables and persistence.

Among the significant conclusions were: (1) the amount of financial aid received was the variable found to be most related to persist nce, (2) ability and family income were also related to persistence, (3) ability was related to family income and to the amount of financial aid received, and (4) ability was the variable most consistently related to persistence.

Implications were that availability of money is a determining factor in persistence, that since ability is important, low ability students should be provided with counseling, developmental courses, and tutoring in addition to financial aid, and that students of high ability from low income families should be given first consideration in the dispersion of financial aid since they are more likely to persist. Recommendations for further research were also made.

Smith, J.S. A Multivariate Combination of Academic and Non-Academic Factors Related to Student Attrition. (University of Pittsburgh, 1971) 72-16,065.

This problem was to determine if combinations of particular variables could be used to differentiate groups of student dropouts and non-dropouts by means of factors which defined the groups. Four academic and seven non-academic variables were tested as useful criteria for defining and differentiating the various student dropout and non-dropout groups.

The multivariate analysis revealed that each set could be used independently to significantly differentiate the student groups. The sets were then combined for a discriminant analysis. This treatment showed that high school rank and motivation for grades were the two variables most useful for the discrimination of groups. A canonical correlation technique revealed that motivation to maintain a high academic record was the main differentiating factor between non-dropouts and dropouts.

Generally, this study demonstrated the applicability of multivariate analytical methods for treating certain student personal data. They cannot be said to improve the predictability of student performance, but they are recommended for the development of defining factors based on separate sets of variables.

Multiple Institution Studies

Bess, R.O. Academic Performance and Persistence Characteristics of Special
Admission Minority-Poor Freshmen and Regular Freshmen at Six California
State Colleges. (University of Southern California, 1972) 72-25,998.

Comparisons were made between the special admission minority-poor students
and regular students, and between black and chicano minority-poor students.
Men and women were treated separately. Factors studied were grade point
averages, degree credits completed, withdrawal rate and potential for
degree completion through the first and second year.

In general, the differences found favored regular men, regular women, and
chicano women. The conclusions were: (1) grade point averages for
minority-poor are generally lower, (2) substantial numbers of minority-poor,
especially women, can succeed, (3) minority-poor students may need as many
as six years to complete a degree, and (4) minority-poor women are more
likely to complete a degree, and in less time, than their male counterparts.

Studies like this should be expanded to cover the entire undergraduate
period, the differences between minority-poor women and men should be
studied, research on the effect of curricular patterns and remediation is
needed, differences among minority-poor groups should be considered in
allocating aid, and institutional changes are needed in the fact of changing
socioeconomic characteristics of student bodies.

Hammond, E.H. The Prediction of Early Attrition from College. (University of
Missouri-Columbia, 1971) 72-10,611.

This study tested the effectiveness of a quantitative method for predicting
which entering college freshmen would drop out during the first semester or
quarter. A Retention Index (RI) was constructed by combining those items
from existing instruments which were found by multilinear regression item
analysis to be significant predictors of college attrition.

Two sample administrations of the RI were used to develop a cross sample
weighting system, and a separate weighting system for each sample. Using
the separate weighting systems, 96% of the attrition population was iden-
tified at one university and 93% at the other. The cross sample weighting
system identified 96% of the dropouts of both samples.

The conclusion was that the use of the RI was a successful method for
identifying, prior to the beginning of their college education, those new
freshmen who did interrupt their schooling during their first semester or
quarter.

Holloway, E.L. Environmental Perceptions of Unsuccessful Students on Selected
College Campuses. (University of Oklahoma, 1970) 70-22,987.

The primary concern of this study was to identify environmental factors that
show a relationship between unsuccessful and successful students at two

Oklahoma state colleges. Unsuccessful was defined as students who are not progressing academically and who are on academic probation. Successful students are those whose grade point averages 3.00 and higher. The College and University Environment Scales was administered to a stratified sample at the two colleges.

The following conclusions appeared to be warranted: (1) the findings generally supported the assumption that unsuccessful students at different institutions have similar perceptions of their environment, regardless of the uniqueness of the institution, (2) unsuccessful male and female students reported the campus similarly on only two of the seven dimensions, supporting the notion that sex has some influence on how students perceive the campus environment, and (3) students from outside Oklahoma had a different impression of the campus press when compared with legal residents of Oklahoma.

Patton, W.S. An Investigation of Selected Factors Related to Persistence of American-Indian Students at Two New Mexico Universities. (New Mexico State University, 1972) 72-30,787.

This study sought to identify factors related to American-Indian persistence. For comparative purposes a random sample of non-Indian students was included.

Among the factors tested for classification purposes were age, sex, marital status, tribal affiliation, ACT scores, grade point average, major field of study, size of high school, Indian Club membership, and Indian or non-Indian roommate.

In summary, it was found that the "best" combination of factors was a female student less than 19 years of age when first enrolled in college, a graduate of a larger, public high school who ranked in the upper third of the graduating class, had scored 17 or above on the ACT test, and chose a major field of study within the professional field.

PRIVATE UNIVERSITIES AND COLLEGES
(2 year and 4 four)

Beyer, D.E. An Analysis of Selected Intellectual and Nonintellectual Characteristics of Dropouts and Survivors in a Private College. (Baylor University, 1971) 72-4144.

Freshman students from 1967-1970 were studied. Students from 1967 to 1969 were analyzed separately from the 1970 group. A larger number of variables was assigned to the latter. Also, the 1970 freshmen were divided into two groups, one receiving extra faculty advisement.

The results showed that over 50% of the 1967-1969 freshmen did not return for a third term. These dropouts had lower grade point averages and ACT scores. They tended to be older, and more females dropped out than males.

Students who had financial aid from the college dropped out more than those with no aid from the college.

The group of 1970 freshmen who received more faculty interest made a little improvement in their grades, but there were more dropouts in this group than in the control. The Sixteen Factor Personality Questionnaire, which was used with the 1970 group, showed that dropouts tended to be venturesome, trusting and adaptable, and lower on anxiety. Survivors tended to be restrained and shy, suspicious and self-opinionated, and higher on anxiety.

Coppock, G.S. Environmental Perceptual Influences on Student Retention at Southwest Baptist College. (Southern Baptist Theological Seminary, 1971) 72-18,363.

This study sought to isolate those perceptions of the SWBC campus which appeared to be influential in the retaining behavior of previously enrolled students. As background, a review of the plight of private colleges today and of how the potential distinctives of Christian colleges might aid their survival was included.

Data were obtained from three testings of the College and University Environmental Scales (CUES): freshmen, Fall 1968; same population, next semester, 1969; those still enrolled in Spring 1971 and who had taken CUES in the 1968 and 1969 testings.

The findings generally supported the first hypothesis which suggested that students perceiving the environment more favorably would be more likely to remain. The second hypothesis, which suggested that after an initial drop in perception from what was expected, the Community and Propriety scales of CUES would indicate a significant stabilizing trend, was not generally supported. Although a less drastic decline was observed, the stabilization was not positive in seven of eight comparisons. The highest perception was on the Community scale. A positive perception of the Community aspect tended to be most conducive to student retention.

Dresser, D.L. The Relationship Between Personality Needs, College Expectations, Environmental Press and Undergraduate Attrition in a University College of Liberal Arts. (Syracuse University, 1971) 72-6568.

To determine whether personality needs or college expectations are systematically related to undergraduate attrition, the Activities and College Characteristics Index (ACCI) scores of 762 Liberal Arts students who left Syracuse University during 1968-69 without graduating were compared with classmates, matched by sex and ability, who persisted.

These two groups were also compared in terms of the deviance of their needs and expectations from those of the average individual of the same sex in their class, the dissonance of their needs and expectations, and the dissonance of each of these with respect to the environmental press perceived by upperclassmen in 1969.

The principal finding was that Liberal Arts leavers showed significantly higher Intellectual Interests. In terms of press expectation, those who left appeared to have expected less of an Intellectual or Academic Climate, lower levels of Academic Achievement and fewer opportunities for Self-Expression.

Personality need deviance and press expectation deviance were found to be related to attrition for females but not for males. This was also true for need-press dissonance. Expectation-press dissonance was not discriminating for either sex.

Taking College Board and Activities Index scores as criteria of quality, the findings suggested that on the whole the College of Liberal Arts at Syracuse University is losing its more scholastically able and intellectually inclined students.

Evans, J.M. The University and Its Students: A Longitudinal Study of the Relationship of Cognitive and Non-Cognitive Factors to Academic Success, Retention and Achievement at One Private Liberal Arts College. (Boston College, 1974) 74-19,215.

In order to evaluate the effectiveness of the peculiar institutional worth of the Christian liberal arts college, among other things, it is necessary to know who its students are at time of entrance. The population studied included all entering students over a ten year period.

The data came from the scores of the Sixteen Personality Factor Inventory, and from the records of academic success or failure, retention, graduation, and major field of study. The institutional data were collected from an institutional self-study, the Institutional Functioning Inventory, and an historical case study of the institution.

Three dependent variables generated prediction equations for institutional use. These were academic achievement, retention, and graduation prediction. Difficulties in the formulation of variable definitions precluded verification of the latter two, enabling only "success" to be immediately useful. It was also found that Christian college students do not significantly differ from national norms on personality profiles, although some factors show measureable movement away from the mean, and thus provide a distinctive profile.

The results of the project indicated a need for replication studies, for redefinition of academic success, for intensive analysis of sub-populations at Christian colleges, and for further comparisons between students of Christian institutions and those of similar but secular colleges.

Hoffman, P.W. A Comparative Study of Student Retention and Attrition at Manchester College. (Purdue University, 1971) 71-20,472.

A random sample of students who were first-term freshmen in the Fall of 1965 and 1966 was categorized into three groups: Continuees, Transfers, and

Withdrawees. These groups were compared on a number of variables thought to be related to retention and attrition. The data were obtained by a questionnaire and from student records.

The Continuees and Transfers were similar in aptitude, educational background, and academic performance. Continuees had a higher loyalty to Manchester and were more satisfied academically and socially. Transfers desired a larger college with different course offerings, fewer restrictions, and more social opportunity. A third of the Transfers had a transfer planned when they initially enrolled.

The Withdrawees differed from the other two groups in that they married sooner, delayed college attendance, were less sure of their intentions to complete a degree when they initially enrolled, worked more hours, had a lower high school rank, lower college grade point index, and had parents with less formal education.

Scott, J.C. A Study of the Relationship Between Students' Personal Perception of Environmental Press and Attrition at a Two Year College. (University of Missouri-Columbia, 1971) 72-10,655.

Comparisons were made to determine whether or not there were differences in students' personal perception of the environmental press as perceived by graduates and transfer outs, graduates and returnees, and transfer outs and returnees.

Data were gathered through administration of the College Characteristics Index. ·All students at the college were tested in March, 1970.

Following are some conclusions: (1) transfer outs, in contrast to graduates, perceive fewer opportunities for engaging in activities associated with dating, athletics, and other forms of normal collegiate behavior as well as fewer opportunities available to students for self-expression and development of leadership potential, (2) transfer outs and returnees, in contrast to graduates, perceive fewer attempts on the part of the institution to preserve student freedom and to maximize personal responsibility, (3) except for student dignity, transfer outs and returnees approximate significant differences on the same factors as do transfer outs and graduates, (4) the Columbia College group, in spite of differences among them, perceived the environment as relatively nonintellectual in comparison to the normative group, with graduates having mean scores closer to the normative group, and (5) the press differences of the three groups existed exclusively in a nonintellectual framework.

Seabrooks, G.C. Factors Related to Admissions, Low Achievement, and Early Attrition of the Disadvantaged Student at the University of Notre Dame. (Catholic University of America, 1974) 74-19,476.

The purpose of this study was twofold: to test hypotheses about the religious and political beliefs of non-attrited and attrited disadvantaged students,

as measured by the This I Believe (TIB) test, and secondly, to test the validity of TIB as an alternative for measures of college aptitude and achievement.

Beliefs were used because they can be identified as radical, liberal or political. Beliefs toward diverse goals are highly correlated and only the most intelligent and most politically involved hold highly structured belief systems. The criterion measures for academic success were extracted from college records.

The findings indicated significant differences between the two samples. There was, however, a nonsignificant relationship between total TIB and academic measures of aptitude and achievement. In summary, nine out of ten hypotheses were supported and the differences in belief were highly significant. Thus, TIB was proved beneficially valid.

OTHER

Berger, D. The New College Dropout: An Examination of Factors Associated with Termination for Traditional and Non-Traditional College Students. (Columbia University, 1973) 73-15,016.

The non-traditional student was defined as one characterized by low aptitude and low socioeconomic background and who would probably not have gone to college in previous years. The study was longitudinal and undertaken at a large urban university. There were four categories in which data were collected and students were measured: cognitive, socioeconomic status (SES), motivational, and college specific.

Findings indicated that family support was significant. No relationship was found between the three cognitive measures and termination, and the SES variable and termination. This was attributed to college policies of not forcing students to resign for poor academic records, and of extensive compensatory programs.

Different ratings on perceptions of the college had either positive or negative correlations with termination depending on the student's ability and SES. For example, low aptitude students who saw college as leading to a prestigious job tended to drop out whereas their high aptitude counterparts with similar perceptions tended to remain. The apparent reversal effects were explained in terms of psychological theory.

Hannah, W. Dropout-Stayin Personality Differentials and College Environments. (University of Southern California, 1969) 70-11,367.

The study investigated the distinguishing personality traits of college dropouts and stayins, obtained by means of the Omnibus Personality Inventory,

and the institutional characteristics of thirteen diverse small colleges, using the College and University Environment Scales, in order to explain why certain kinds of students leave certain types of colleges. The students' Scholastic Aptitude Tests scores were also compiled from college records.

Based on the analysis of these data, it was concluded that: (1) students who are more diverse, complex, impulsive, aggressive, and anxious tend to withdraw from college, (2) the less integrated, more anxious, altruistic, religiously liberal students more frequently withdraw from the friendly, supporting, sympathetic environments which place less emphasis on the search for personal meaning, (3) leavers from the more vocational or professional colleges tend to exhibit greater interest in self-understanding, and relatively little in practical achievement, and (4) students who withdraw from the liberal experimental college are highly sensitive, withdrawn, artistic individuals who exhibit hostility, and are less practically oriented. Recommendations included institutional changes and programs designed to help retain these dropouts.

Johnson, C.W. Nonintellective Factors Related to College Achievement and Attrition. (University of South Carolina, 1970) 71-9716.

This study was concerned with investigating the relationship of twelve nonintellective factors to attrition and to academic achievement of students over the four-year period of their enrollment in a small coeducational liberal arts college. Variables used were a measure of achievement motivation, a measure of educational interest, and ten temperament traits.

The battery differentiated significantly between dropouts and high-achievers and between high- and low-achievers but not between dropouts and low-achievers. The variable of educational interest was not significantly different for any of the groups. Grade point ratio correlated with several other variables significantly, but the coefficients were not sufficiently high to warrant their use by themselves in prognosis of academic achievement.

Jurgela, A.R. The Development and Validation of a Scale to Distinguish Between Voluntary College Dropouts and Students Who Remain in College. (Boston College, 1970) 71-13,158.

The objectives of this study were to determine whether or not male and female "voluntary" dropout scales could be constructed from the College Interest Inventory (CII) to distinguish voluntary dropouts from "stayin" students, and to examine the feasibility of developing a linguistic-nonlinguistic scale from the CII so that college counselors could use the inventory to assist students in their selection of an appropriate academic major.

The analysis of data revealed that significant differences existed on the responses on the CII between: (1) male voluntary dropouts and male stayins,

(2) female voluntary dropouts and female stayins, and (3) males and females in general on the significant nonlinguistic items.

From these critical items, scales were constructed to identify potential voluntary dropouts, to identify linguistic-nonlinguistic preferences, and to select individuals with whom a counselor could work to modify goals, attitudes, and beliefs. Recommendations for further studies were also made.

Kendall, R.E. Achievement of Junior College Transfer Students in a Four-Year Institution: A Comparative Study of Persistence and Academic Achievement. (University of Utah, 1972) 72-33,310.

The specific problem of this study was to determine if there were significant differences in the post-transfer grade point averages and enrollment status of junior college transfer students compared with students who enrolled initially in a four-year institution (Brigham Young University).

Findings indicated that: (1) transfer students generally experienced a drop in grade point average during the first quarter after transfer, with a later gain but, generally, not up to the cumulative level achieved prior to transfer. (2) there were significant differences in the post-transfer grade point averages when the junior college transfer students were grouped by number of hours at entry, sex, college of origin, but none when grouped by marital status, and missionary experience, (3) when the criterion successful/unsuccessful was used as a measure of persistence, the above five factors did not generally discriminate between persisters and nonpersisters, but entering grade point averages did, and (4) transfer students took significantly more semester hours to complete a degree than did native students, but there was no significant difference in the number of semesters taken by either group in the completion of a degree.

Lawry, N.D. A Comparative Analysis of Selected Personal and Academic Characteristics of Community College Graduates and Dropouts. (Fordham University, 1973) 73-26,722.

Specifically, this study attempted to determine whether or not significant differences existed between graduates and dropouts on 14 characteristics such as sex, age, reason for enrolling, grade point average, etc. Data were collected from student records. Information concerning the activities of students after college and their evaluation of the community college experience was obtained through a questionnaire constructed by the investigator.

The major findings yielded the following: (1) females, younger students, and those with higher grade point averages tended to persist, and that sex, age, and grade point average were the only three characteristics which distinguished between graduates and dropouts, (2) further education and full-time employment accounted for the principal activities of the graduates and dropouts, and

(3) graduates expressed a greater degree of satisfaction with their college attendance. Both groups emphasized the importance of adequate counseling services. Recommendations included replication of this study at other community colleges, and expansion of community college counseling services.

Oldroyd, R.J. Maximizing Dropout Prediction Using the College Auto-Biographical Inventory. (University of Missouri-Columbia, 1973) 74-18,609.

This exploratory study sought to develop a method of scoring the College Auto-Biographical Inventory (CABI) that would maximize its validity.

Two different versions of CABI were administered in different years to similar groups of community college freshmen and university freshmen. Scoring keys from the common items on these two instruments were developed on one sample and cross-validated on the other.

Five empirical criterion scoring keys were constructed using responses that differentiated between dropouts and persisters by increasingly greater amounts. Suppressor type correction was attempted but was not supported by the results, nor was the moderator approach to improving prediction. In both cases, chance error introduced by the response selection process offset the gains. The most predictive of the scales were the composite scores developed by obtaining orthogonal factor scores from a principle-axes factor analysis and using multiple regression to determine weights for each factor that would maximize dropout prediction.

The conclusion was reached that the efficient prediction of early attrition is extremely difficult because so many variables can enter into a person's decision to drop out. Recommendations for further research were included.

Painter, B.C. A Scale of Social Functioning Studied in Relationship to Persistence or Withdrawal by Junior College Students. (University of the Pacific, 1973) 73-19,168.

The purpose of this study was to use the Heimler Scale of Social Functioning (HSSF) to measure life satisfactions and frustrations of a stratified sample of students who had dropped out or had persisted into the second quarter.

An analysis of variance three-way design was selected with the dependent variable the positive or negative score on the HSSF, and the independent variables dropouts or persisters, sex, and stated college goal, either terminal or transfer. The failure to get significant differences from the analysis of variance statistics could be attributed to either inadequacies of the hypothesis or the small sample.

The HSSF indicated the following strengths as a counseling tool: (1) ease and speed of administration, (2) interpretation rested on the respondent's view of himself, and (3) the graphic presentation of the scale results seemed to provide stimulus to self-evaluation within the counselor-student conference.

The findings strongly supported the need for continued effort to personalize and individualize personnel service to students in order to provide guidance for the expanding heterogeneity of the student population.

Renas, S.M. An Economic Analysis of Academic Dropouts. (Georgia State University, 1971) 72-2996.

The objective of this thesis was to examine the impact of imperfect capital markets on the educational investment decision. Earnings while attending college are typically lower than earnings a person could receive had he/she dropped out the year before. As a result, a student may require financial assistance before pursuing additional education. Since schooling is an illiquid asset, a lender assumes a considerable risk and will likely turn down a student loan without external guarantees of repayment.

A theory of investment in human capital was developed, in which people select that educational investment opportunity which permits them the highest expected utility surface, which is a function of their intertemporal pattern of consumption. It was estimated by simulation the degree to which a person's willingness to defer gratification and ability to finance his/her education may affect the decision to remain in school.

The findings demonstrated that a person's willingness to defer gratification and his/her desired level of education are, in most cases, positively correlated. A student's decision to remain in school is frequently affected by his/her success in obtaining financial assistance. A student may drop out early if he/she experiences difficulty in financing his/her education. However, the level of academic attainment may be increased if financial assistance to students is provided on a broader scale.

Robinson, L.L. Classifying Dropouts Using the College Auto-Biographical Inventory. (University of Missouri-Columbia, 1973) 74-18,625.

The purpose of this study was to analyze the College Auto-Biographical Inventory (CABI) by multivariate statistical procedures in an attempt to determine if diagnostic profiles could be developed that identify "types" of college dropouts.

The number of factors being measured by the CABI was determined and the data matrix was reduced to a matrix of standard scores.

A cluster analysis was performed to identify subjects that had scores with the closest distances to each other. Computer program limitations made it necessary to sample the data. The first analysis was conducted on a 10% stratified random sample; the second, on an equal number of dropouts and persisters.

Results of the first sample identified: (1) female persisters, (2) male persisters, and (3) mixed dropouts-persisters. The second analysis

identified: (1) a female dropout group, (2) a male dropout group, and (3) a large combined profile group.

There were three sets of profiles in the female group: (1) female dropouts from all schools, (2) female dropouts from four-year institutions, and (3) female dropouts from two-year institutions. Two clusters were identified that related to male dropouts: (1) four-year male dropouts, and (2) two-year male dropouts.

Saliba, W.S. The Development and Validation of a Scale to Distinguish Between Involuntary College Pushouts and Voluntary College Dropouts. (Boston College, 1970) 71-16,155.

The purpose of this research was to determine whether or not both male and female involuntary pushout scales could be constructed from items on the College Interest Inventory (CII) so as to distinguish involuntary pushouts (academic and disciplinary dismissals) from voluntary dropouts (those who leave of their own accord before the second semester of their sophomore year).

It was concluded as a result of the analyses that specific selected items on the CII do make critical distinctions between male responses of the two groups and between female responses. From the critical items identified, scales were constructed to identify potential male and female dropouts, and hence, select individuals with whom a counselor can work to modify goals, attitudes, and beliefs.

It was recommended that: (1) further research be made to distinguish between academic and disciplinary dismissals, (2) additional students and a wider range of colleges be studied, (3) similar research to develop local norms be encouraged, and (4) an attempt to establish the correlation between the CII and certain other instruments be made.

Annotated Bibliography
Support for Raising Graduation Requirements

Making the Case for Raising Graduation Requirements

ACT, Inc.
Crisis at the core: Preparing all students for college and work, 2004
This report shows that, while it is important for all high school students to take a core college preparatory curriculum if they are to be ready for college and for workforce training, they can increase their readiness by taking other courses in addition to the core—particularly Biology, Chemistry, Physics, and mathematics beyond Algebra II. Such coursework benefits students of both genders, all racial/ethnic groups and all levels of prior achievement.

ACT, Inc.
Courses count: Preparing students for postsecondary success, 2005
Rigorous college preparatory course sequences, particularly in English, mathematics, and science, are critical to preparing students for postsecondary education and work. Yet large numbers of students still do not benefit from taking these sequences. Why? This report explores three interrelated reasons: 1) the varying courses and sequences that students can complete do not all make the same contributions to postsecondary readiness, 2) students do not always take the courses and sequences that contribute most to postsecondary readiness, and 3) the lack of rigor of the high school curriculum does not result in all students being adequately prepared for success in college and in workforce training.

ACT, Inc., & The Education Trust
On course for success: A close look at selected high school courses that prepare all students for college, 2004
ACT and The Education Trust examined ten high-performing yet high-minority and high-poverty high schools across the U.S. to learn what aspects of the schools' curricula contribute to student readiness for college and for workforce training. This report demonstrates that when high school students are provided with high-level courses, qualified and experienced teachers, teaching that is flexible and responsive, and extra help when they need it, they all can be prepared to succeed.

Barth, Patte and Kati Haycock
In *Double the Numbers: Increasing Postsecondary Credentials for Underrepresented Youth*, edited by **Richard Kazis, Joel Vargas and Nancy Hoffman, Harvard Education Press,** May 2004
"Core Curriculum for All Students"
The authors of this report argue that the only way to ensure that all high school students graduate ready to succeed in college and careers is to require the same high-quality college-preparatory curriculum for all students. Although this strategy may hinder the development of creative-learning programs, Barth and Haycock say that the benefits of a common, high-standards curriculum, particularly for low-achieving students in poorly performing schools, outweigh the risks of reducing program options.

Conley, David T.
The College Board
Understanding University Success, 2003
This report identifies the skills and knowledge in English, mathematics, the natural sciences, social studies, foreign language and the arts that students need to succeed in entry-level university courses.

Cooney, Sondra and Gene Bottoms
Southern Regional Education Board
"Middle Grades to High School: Mending a Weak Link," 2002
This article contends that exposing middle grades students to more challenging courses while providing them with adult supports and mentoring is fundamental to ensure better high school performance. It argues for a more rigorous preparation in middle school to ease students' transition to college-preparatory courses.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

1

The Education Trust
A new core curriculum for all: Aiming high for other people's children. Thinking K–16, 7(1), 2003, Winter
This special issue of the Education Trust's publication *Thinking K–16* focuses on the need for all high school students to complete a rigorous core curriculum regardless of whether they plan to attend college immediately after graduation or enter directly into the workforce. In addition, the material in the issue provides support for the contention that all students, not just the highest-achieving, are capable of doing the work required by such a curriculum.

Horn, L. and L.K. Kojaku
U.S. Department of Education, National Center for Education Statistics
High School Academic Curriculum and the Persistence Path through College: Persistence and Transfer Behavior of Undergraduates 3 Years After Entering 4-year Institutions, 2001
This report found the numbers of students taking rigorous high school courses positively affects college persistence for all students. It examines socioeconomics, types of college and freshman grade point average as part of the methodology.

National Governors Association
Getting it done: Ten steps to a state action agenda. (Redesigning the American High School), 2005
As part of his 2005 initiative as chairman of the National Governors Association (NGA), Virginia Governor Mark Warner, working with the NGA Center for Best Practices, identified ten steps governors can take to put their states on the right path toward redesigning high schools. These recommendations include creating a permanent education roundtable or commission and defining a rigorous college and work preparatory curriculum for high school graduation.

Rosenbaum, James E.
American Federation of Teachers
Time to Tell the Kids: If You Don't Do Well in High School, You Won't Do Well in College (or on the Job), 2004
This report examines open-enrollment admissions and the large numbers of students who enter college but do not graduate. It discusses steps needed to increase the odds of college graduation and ways to help students find productive, successful post-high school paths.

Schoeff, Mark Jr.
only include if you have a hyperlink – otherwise delete *Workforce Management*, March 13, 2006, pp. 46–49
Amid calls to bolster U.S. innovation, experts lament paucity of basic math skills.

Warburton, E.C., R. Bugarin and A.M. Nuñez
U.S. Department of Education, National Center for Education Statistics
Bridging the Gap: Academic Preparation and Postsecondary Success of First-Generation Students, 2001
This report examines the high school preparation and postsecondary persistence of first-generation college students (students whose parents had no education beyond high school) and compares them with students whose parents went to college. It found that rigorous preparation in high school substantially narrows the gap in postsecondary outcomes between first-generation students and their peers whose parents graduated from college.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

2

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

Making the Case that All Students Need Challenging Math in High School

Adelman, Clifford
U.S. Department of Education
The Toolbox Revisited: Paths to Degree Completion from High School through College, 2006
This study follows a nationally representative cohort of students from high school through college to show major predictors for the completion of a bachelor's degree. It found that significant factors include: high school curricula, postsecondary benchmarks, students' time management, college migration and students' academic performance. Adelman found that the highest level of math taken in high school has the most powerful relationship to earning a bachelor's degree. This is true regardless of student ethnicity, family income or parents' education levels. Students who complete Algebra II in high school more than double their chances of earning a four-year college degree.

Carey, Kevin
Education Sector
"High Schools Failing to Prepare Many College-Bound Students for Science Careers"
This article recommends raising the bar on high school math courses to increase the number of students graduating from the fields of science, technology, engineering and mathematics in college and thereby preparing more students for science careers.

Gamoran, Adam and Eileen C. Hannigan
JSTOR: The Scholarly Journal Archive
Educational Evaluation and Policy Analysis, Autumn 2000, Vol. 22, No. 3, pp. 241–254
"Algebra for Everyone? Benefits of College-Preparatory Mathematics for Students with Diverse Abilities in Early Secondary School"
This report presents new evidence of the benefits of college-preparatory mathematics, particularly algebra, for students with disparate level of competencies. Algebra is beneficial for all students, although its benefits are smaller for students with very low prior achievement.

Horn, L. and L.K. Kojaku
U.S. Department of Education, National Center for Education Statistics
High School Academic Curriculum and the Persistence Path through College: Persistence and Transfer Behavior of Undergraduates 3 Years After Entering 4-year Institutions, 2001
This report found the numbers of students taking rigorous high school courses positively affects college persistence for all students. It examines socioeconomics, types of college and freshman grade point average as part of the methodology.

Horn, L. and A.M. Nuñez
U.S. Department of Education, National Center for Education Statistics
Mapping the Road to College: First-Generation Students' Math Track, Planning Strategies, and Context of Support, 2000
This report compares first-generation students (those whose parents have no more than a high school education) with their peers whose parents attended college. It focuses on mathematics courses, including the effectiveness of taking algebra in 8th grade and advanced math courses in high school, as well as the planning strategies to prepare for college. The report also examines the involvement of students' parents, teachers and others capable of helping them prepare for college.

Public Policy Institute of California
"Higher Math in High School Means Higher Earnings Later," 2001
This article studies the relationship between mathematics courses and future earnings. It found that advanced mathematics courses were linked to higher college graduation rates and higher future earnings.

Roach, Ronald
"Under Construction: Building the Engineering Pipeline," 2006
This article illustrates problems and proposes solutions to help raise minority student retention and graduation rates in the field of engineering.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

3

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

Rose, Heather and Julian R. Betts
Math Matters: The Links Between High School Curriculum, College Graduation, and Earnings, 2001
This study examines the relationship between mathematics in high school and earnings 10 years later. The authors study a variety of characteristics: the student's demographic characteristics, measures of student motivation and ability, family background and high school characteristics. They find that the relationship between curriculum and earnings remains quite strong and that the rigor of courses is more important than the number of courses.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

4

Making the Case that Schools Can Simultaneously Raise Academic Standards and Reduce Dropout Rates

Allen, Lili, Cheryl A. Almeida, Lucretia Murphy and Adria Steinberg
Jobs for the Future
Building a Portfolio of High Schools: A Strategic Investment Toolkit, 2006
This toolkit is designed to help district reform leaders and their partners in the community plan a design of an excellent school, think through the relationship of their district to other potential partners and develop strategies for launching and sustaining a new school.

Almeida, Cheryl, Cassius Johnson and Adria Steinberg
Jobs for the Future
Making Good on a Promise: What Policymakers Can Do to Support the Educational Persistence of Dropouts, 2006
In this report, researchers look at which students are dropping out and why. Their results show that the problem is not confined to low-income students — about one out of 10 young people from families in the two highest socioeconomic levels drop out. Also, many dropouts eventually earn a GED and then attempt to complete their postsecondary education, but few succeed. The report includes recommendations for policymakers, such as refocusing K–12 accountability systems to emphasize raising both high school graduation rates and academic standards.

Bill & Melinda Gates Foundation
High Schools for the New Millennium: Imagine the Possibilities
The Bill & Melinda Gates Foundation presents the case for remaking U.S. high schools into institutions that encourage all students to learn challenging, academically focused material; give students the support they need to learn it; and send a much larger percentage of students to postsecondary education.

Bottoms, Gene
Southern Regional Education Board
Raising the Achievement of Low-Performing Students: What High Schools Can Do, 2002
This report provides data on the High Schools That Work initiative, which offers a challenging curriculum to students who do not plan to pursue a four-year degree after high school. The report found that schools that adopted the program's curriculum and stayed with the program for several years saw gains in the numbers of those students who completed the higher-level requirements. It calls for policies based on those programs to expand and extend achievement gains among low-performing students and schools.

The Education Trust
Gaining Traction, Gaining Ground: How Some High Schools Accelerate Learning for Struggling Students, 2005
The study highlights five characteristics of high schools that have greater-than-expected gains with underperforming students, compared to schools with only average gains. It found that schools that have a clear academic focus, higher expectations, greater supports, higher quality control over teachers and curricula and effective use of time and resources tended to accelerate underperforming students' learning at a much greater pace and quality.

The Education Trust
The Power to Change: High Schools that Help All Students Achieve, 2005
A strong belief and expectation that all students can and will learn underlines the theme of this report. Using data from three high schools that have extremely high-minority, low-income student populations but nonetheless helped *all* students achieve to high levels, the author found similar characteristics that contributed to the success of these schools.

Guthrie, Larry F. and Grace Pung Guthrie
Center for Research, Evaluation and Training in Education
Longitudinal Research on AVID, 1999–2000; 2000–2001, June 2001 and July 2001
Advancement Via Individual Determination — also known as AVID — is a program for grades 5–12 that places disadvantaged students and students with average grades in advanced-level classes and gives them additional academic supports. These studies assess the impact of AVID on high school students and high school graduates.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

5

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

They find that students who participated in AVID middle school programs graduated from high school, were prepared for college-level work and that the vast majority of them enrolled in four-year programs.

Jerald, Craig
Written for Achieve, Inc
Identifying Potential Dropouts: Key Lessons for Building an Early Warning Data System, June 2006
This white paper provides policy makers with an overview of research about the dropout problem and the best strategies for building an early warning data system that can signal which students and schools are most in need of interventions. Knowing which students are at greatest risk for dropping out and which schools most exacerbate the problem is the first step to reducing dropout rates.

Kemple, James J., Corrine M. Herlihy and Thomas J. Smith
MDRC
Making Progress toward Graduation: Evidence from the Talent Development High School Model, 2005
This research analyzes the impact of the implementation of the Talent Development model, which aims to prepare all students for postsecondary education and employment, in Philadelphia's most troubling schools. It found that the model generates substantial positive impacts during the first year of high school and more modest improvements throughout later grades, but it needs sustainable investment and deeper institutional support to spur significant changes on a larger scale.

Martin, Nancy and Samuel Halperin
American Youth Policy Forum
Whatever It Takes: How Twelve Communities Are Reconnecting Out-of-School Youth, 2006
This report documents strategies that educators, policymakers and community leaders across the country are using to reconnect out-of-school youth to the social and economic mainstream. It focuses on 12 communities that are providing education and employment training for dropouts. It also provides background on the high school dropout issues and describes major national program models serving youth who are no longer enrolled in schools.

Martinez, Monica and Shayna Klopott
American Youth Policy Forum, Pathways to College Network
The Link between High School Reform and College Access and Success for Low-Income and Minority Youth, 2005
This paper extrapolates common practices proven to improve the academic achievement of low-income and minority students. It also gives recommendations for future high school reforms that integrate these practices.

Rumberger, R.W.
In *Dropouts in America: Confronting the Graduation Crisis*, edited by Gary Orfield, Harvard Education Press, 2004
"Why Students Drop Out of School"
This chapter of *Dropouts in America* examines the factors behind students' decisions to drop out. The Civil Rights Project's groundbreaking report reveals the scope of this hidden crisis, reviewing the most recent data on graduation and dropout rates, exploring the reasons that young people drop out of school and presenting the most promising models for helping high school students graduate with their peers. The report is a call to action for educators, advocates and policymakers alike and it is a resource for those concerned with equal rights and the quality of American education.

Snipes, Jason C., Holton, Glee Ivory, Doolittle, Fred, and Sztejnberg, Laura
MDRC, July 2006
Striving for Student Success : The Effect of Project GRAD on High School Student Outcomes in Three Urban School Districts
This report presents results of MDRC's multiyear evaluation of the effects of Project GRAD on student progress at three high schools in Houston and at high schools in Columbus, Ohio, and Atlanta, Georgia. The high schools in the early years of implementation had better attendance and promotion rates than the comparison schools. The improvements in graduation rates at the Project GRAD site essentially mirror the improvements at the comparison schools. The initiative's flagship school was the only site to have a significant positive impact on the proportion of student who completed a core academic curriculum on time.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

6

Southern Regional Education Board.
High Schools That Work: An enhanced design to get all students to standards, 2005
High Schools That Work is an effort-based school improvement initiative founded on the conviction that most students can master rigorous academic and career/technical studies if school leaders and teachers create an environment that motivates students to make the effort to succeed. The centerpiece of High Schools That Work is a challenging curriculum that focuses on preparing high school students for further education and the workplace.

Watt, Karen M., Charles A. Powell and Irma Doris Mendiola
Journal of Education for Students Placed at Risk, September 9, 2004, Vol. 9, No. 3, pp. 241–259
"Implications of One Comprehensive School Reform Model for Secondary School Students Underrepresented in Higher Education"
This study looked at 10 Texas high schools that offered Advancement Via Individual Determination (AVID) programs, which place disadvantaged students and students with average grades in advanced-level middle and high school classes. It found that students who participated in AVID had better attendance and standardized test scores than their peers.

A Strategy Session for Achieve American Diploma Project (ADP) Network States
Moving From Some to All: Upgrading Graduation Requirements for All Students

The Adolphus Hotel, Dallas, Texas
February 8-9, 2007

7

FIRST SCHOLARS

ANNOTATED BIBLIOGRAPHY

While not exhaustive, this tool for professional development seeks to provide a foundational reference for recent and relevant research on first generation students. Resources are separated into four categories, enabling users to explore (1) who first generation students are, (2) why a need for distinctive services exists, (3) what academic models provide evidence of effective support, and (4) comprehensive reports addressing all of the above.

First Generation Student Characteristics

Balemian, K. & Feng, J. (2013, July 19). First generation students: College aspirations, preparedness and challenges. Presentation to the College Board AP Annual Conference. https://research.collegeboard.org/sites/default/files/publications/2013/8/presentation-apac-2013-first-generation-college-aspirations-preparedness-challenges.pdf

This presentation examines the following topics: 1) first-generation test takers in order better understand the needs and challenges they face on their path to college; 2) college-bound test takers who took the AP and/or the SAT; 3) a variety of data elements including student socio-economic background, high-school characteristics, course-taking patterns, and college plans and aspirations; and 4) insight into particular needs of first-generation students and recommendations.

Key Findings and Implications for Practice:

- More than 1/3 of 5-17 year-olds in the U.S. are first-generation students. This rate is highest among underrepresented minority groups (61% of Hispanic/Latino 5-17 years olds are first-generation).
- First-generation test-takers tend to have less core academic preparation than non first-generation test-takers; 70% vs. 80%, respectively. (Core includes test-takers who have taken four or more years of English, three or more years of mathematics, three or more years of natural sciences and three or more years of social sciences and history based on self-reported answers to the SAT questionnaire)
- About 1/3 of first-generation test-takers reported taking Algebra in 8th grade compared to about 1/2 of non first-generation test-takers, and about 2/3 of first-generation test-takers reported taking advanced math courses compared to about 3/4 of non first-generation test-takers
- Schools with majority first-generation test-takers had significantly larger percentages of students eligible for free and/or reduced lunch.
- Schools with higher proportions of first-generation test-takers reported lower numbers of approved AP courses

- A larger percent of first-generation test-takers would like to go to college "in my home state" or "close to home" than non first-generation test-takers.
- A substantially larger percent of first-generation test-takers plan to look for a part-time job while in college than non-first-generation test-takers.
- A larger percent of first-generation test-takers plan to live at home than their non first-generation counterparts and a substantially larger percent of non-first-generation test-takers plan to live on campus than their first-generation counterparts.

Garrison, N.G., Gardner, D.S. (2012). Assets first generation college students bring to the higher education setting. http://files.eric.ed.gov/fulltext/ED539775.pdf

This report details a qualitative research study investigating first generation students' personal assets, providing the field of higher education an alternative to the pervasive deficit-orientation of this under-resourced population. The data revealed that the first generation college students in this study have the following personal assets: proactivity, goal direction, optimism and reflexivity. There were 13 contributing strengths that supported the asset development: resourcefulness, strategic thinking, self-reliance, practical realism, flexibility, persistence, positivity, hopefulness, self-confidence, insightfulness, compassion, gratitude and balance. The development of the students' assets was influenced by their lived experience and occurred in response to their marginalized socio-cultural positioning. The researchers suggest institutions could support first generation students by providing faculty training and augmenting student support services through faculty development and departmental dialogue that exposes instructors to an alternative asset oriented view.

Key Findings and Implications for Practice:
- First generation students exhibit proactivity, goal direction, optimism, and reflexivity.
- First generation students are resourceful, strategic, self-reliant, practical, flexible, persistent, positive, hopeful, confident, insightful, compassionate, grateful, and balanced.
- Faculty should be trained with an eye toward appreciating student assets and developing course assignments and class processes to encourage students' identification and use of their assets.
- Curriculum must be flexible to allow students with a variety of assets to access their own strength in response to the course content.

McCarron, G. P., & Inkelas, K. K. (2006). The gap between educational aspirations and attainment for first-generation college students and the role of parental involvement. *Journal of College Student Development, 47*(5), 534-549.

The primary purpose of this study was to examine if parental involvement had a significant influence on the educational aspirations of first generation students as compared to the educational aspirations of non-first generation students. Longitudinal data from a nationally representative sample of 1,879 students generated by the National Educational Longitudinal Study 1988-2000 was used as the basis for analysis. Findings suggest parental involvement is a viable predictor of postsecondary aspirations, however, study results indicate that the

importance of student perceptions about academics outweighs any lack or abundance of parental involvement.

Key Findings and Implications for Practice:
- First generation students are not being supported for success adequately once they are in the college environment, which may need to be redefined to include child day care, campus work placement programs, online courses and advising, accelerated coursework, student services with evening hours, and more comprehensive career counseling.
- First generation students are not receiving clear messages about the demands and expectations of higher education while at the high school level.
- The inclusion of parents in the educational process may serve to not only boost students' aspirations but also to diminish the negative effects of college culture shock.
- It must be understood that the student's home culture is just as valuable as the college culture.
- College staff working in areas such as recruitment must reach out to students and their families via open houses, orientations, and high school to college bridge programs.
- Practitioners at both two-year and four-year institutions should consider developing stronger partnerships to support the educational pursuits of first generation transfers via articulation agreements, scholarships, and guidance with transfer credits.
- Practitioners may reflect on providing more, "all-inclusive" advising, bridge programs, part-time student support programs, more thorough orientation sessions, assistance with deciphering and obtaining financial aid, guidance for family and life issues, and clearer guidelines for success.

Mehta, S. S., Newbold, J. J., & O'Rourke, M. A. (2011). Why do first-generation students fail. *College Student Journal, 45*(1), 20-35.

The results from this study demonstrate that first generation students enter college less prepared to succeed but also have greater time demands and financial commitments. First generation students in the study were found to be less involved on-campus and socially, have different stress make-ups, feel less satisfied with their college experience (academically and socially), and earn lower grades. The authors propose four initiatives that may make first generation transition to college more successful: Participation in Living- learning programs, first generation programs, transfer student programs, and increased academic peer interactions. As noted by the researchers, the results of this study are limited as it was not a longitudinal study but a cross sectional study and only involved data at one mid-sized university.

Key Findings and Implications for Practice:
- First generation students come from families with lower incomes, work more hours, and rely on grants and student loans to fund their education.
- First generation students were found to be less involved on-campus and socially.
- First generation students feel less satisfied with their college experience (academically and socially), and earn lower grades.
- A transfer student orientation program could be implemented that addresses topics covered in typical freshman orientation programs.
- Professors must be aware of students in their courses who are first generation. They must work to establish relationships with these students, encourage them to get involved on

campus, and ensure that the students are at the very least involved with other students in the class and interactions outside of the class with the professor.

- First generation students must be identified upon their entry to school and programs must be made available for them, including mandatory orientation programs, living-learning programs, and on-campus employment agencies.

Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: how American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of personality and social psychology*, *102*(6), 1178-1197.

The authors conducted four studies to test the hypothesis that first generation students underperform because the interdependent norms from their mostly working-class backgrounds constitute a mismatch with the middle-class norms of independence prevalent in universities. First, to assess university cultural norms, surveys of administrators at first-tier and at second-tier universities revealed that American universities focus primarily on norms of independence. Second, to identify the hypothesized cultural mismatch, a longitudinal survey revealed that universities' focus on independence does not match first generation students' relatively interdependent motives for attending college, and further, that this cultural mismatch is associated with lower grades. Finally, two experiments at both private and public universities created a match or mismatch for first generation students and examined the performance consequences. Together these studies revealed that representing the university culture in terms of independence (i.e., paving one's own paths) renders academic tasks difficult and thereby undermines first generation students' performance. Conversely, representing the university culture in terms of interdependence (i.e., being part of a community) reduces this sense of difficulty and eliminates the performance gap without adverse consequences for continuing-generation students. Research revealed that first generation college students only underperformed relative to their continuing-generation peers when the university culture was represented according to the American cultural status quo— norms of independence and expressive individualism. Conversely, when the university culture was re-framed to include the interdependent norms prevalent in the American working-class contexts that first generation students often inhabit prior to college, first generation students performed just as well as their relatively privileged peers.

Key Findings and Implications for Practice:

- American universities focus primarily on norms of independence (i.e., paving one's own paths), which renders academic tasks difficult and thereby undermines first generation students' performance.
- Creating a university culture in terms of interdependence (i.e., being part of a community) reduces this sense of difficulty and eliminates the performance gap without adverse consequences for continuing-generation students.
- Universities could be more strategic in developing communication materials (e.g., student guidebooks, university mission statements, admissions advertisements and videos) that signal the importance of both independent and interdependent models of self. These products may convey to first generation students that the university is aware that there are multiple viable ways of being and that these other ways of being are welcome and can be successful at the university.
- Universities could expand the dominant "rules of the game" or expectations for college students to include more interdependent cultural norms (e.g., connecting to others, working together). For example, in most universities, undergraduate research

opportunities are listed on transcripts as "independent study." This label conveys that the project will be individually driven, rather than a cooperative project carried out together with a faculty member. By recognizing that research is often a collaborative process, universities might have the added benefit of encouraging a different style of mentoring between faculty and students and, in the long-term, encourage greater numbers of first generation college students to consider pursuing a research path.
- Greater exposure to ideas and practices of interdependence (e.g., working together in groups) could prove useful for students as they transition from their roles as college students to their future roles as employees.

Academic Outcomes for First Generation Students

ACT & The Council for Opportunity in Education. (2013). *The Condition of College & Career Readiness: First Generation Students.* Washington, DC.

This report details the college readiness trends and academic outcomes of first generation students who took the ACT in 2013. The report compares English, Reading, Math, and Science benchmarks for first generation students and the general population; evaluates course-taking patterns in relation to benchmark performance; and makes several recommendations for increasing college readiness including standards, rigorous curriculum, and out-of-school support.

Key Findings:
- Approximately 52% of all 2013 ACT-tested first-generation high school graduates did not meet any of the ACT College Readiness Benchmarks. This is 63% higher than for high school graduates from families where at least one parent received a bachelor's degree.

Chen, X., & Carroll, C. D. (2005). First-Generation Students in Postsecondary Education: A Look at Their College Transcripts. Postsecondary Education Descriptive Analysis Report. NCES 2005-171. *National Center for Education Statistics.*

This study examines the course-taking experiences of first generation students after entering college. Specifically, what do first generation students study in college, how well do they do in their coursework, and is their coursework different from that of their peers whose parents went to college? This report explores these questions by using data from the Postsecondary Education Transcript Study (PETS) of the National Education Longitudinal Study of 1988.

Key Findings:
- Compared with students whose parents attended college, first generation students consistently remained at a disadvantage after entering postsecondary education: they completed fewer credits, took fewer academic courses, earned lower grades, needed more remedial assistance, and were more likely to withdraw from or repeat courses they attempted
- The likelihood of attaining a bachelor's degree was lower for first generation students compared to their peers whose parents attended college. This finding also held after

taking into account variables related to degree completion including postsecondary credit production, performance, high school academic preparation, and student background characteristics.

- More credits and higher grades in the first year and fewer withdrawn or repeated courses were strongly related to the chances of students persisting in postsecondary education and earning a bachelor's degree.

Ishitani, T. T. (2003). A longitudinal approach to assessing attrition behavior among first-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education, 44,* 433-449.

This article presented the results of a study that investigated longitudinal effects of being a first-generation student on attrition. The study used a sample cohort of college students who matriculated in the fall of 1995 at a 4-year comprehensive public university in the Midwest. This sample cohort included 1,747 students and their fall and spring semester enrollment status for 5 academic years (nine semesters). Attrition in this study was defined as a student's first spell of departure from the institution, which includes different types of departure, such as dropouts, transfers, academic dismissals, and stopouts (i.e., some of departed students may return and resume their enrollment after a certain period of discontinuation).

Key Findings and Implications for Practice:

- Overall, the outcomes in this study were consistent with the findings from previous studies: first-generation students were more likely to depart than were their peers.
- The results exhibited more time-profile detail after controlling for factors such as gender, race, family income, and academic standing. The risk of departure among first-generation students was the highest in the first year.

Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *Journal of Higher Education,* 861-885.

This study investigated longitudinal persistence behavior of first generation college students and their timely graduation rates at four-year institutions. First generation students showed higher risks of leaving the higher education system than did students of college-educated parents in years one through four. First generation students faced the highest risk period of departure during the second year of college. Compared to students whose parents graduated from college, first generation students were 8.5 times more likely to dropout. The highest risk of departure for students whose parents had some college education also occurred in the second year. They were 4.4 times more likely to depart than their counterparts were. The risk of departure for first generation students waned over time after the second year. Overall, being a first generation student reduced the odds of graduating in 4 and 5 years by 51% and 32%.

Key Findings and Implications for Practice:

- First generation students with parents who had some college education were slightly more likely to graduate in a timely manner than were first generation students whose parents never attended college.

- High school academic attributes were pivotal in projecting the odds of timely college graduation among first generation students (demonstrating the importance of precollege characteristics).
- First generation students' departure risk varies both by intensity and timing according to gender, race, income, educational expectations, precollege academics, higher education institution, and financial aid. Accordingly, time-specific departure risks and associated policies and practices should be designed to strengthen college success.

Lohfink, M. M., & Paulsen, M. B. (2005). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development, 46*(4), 409-428.

Researchers examined and compared the determinants of first-to-second-year persistence for 1,167 first generation and 3,017 continuing- generation students at four-year institutions, using data from the Beginning Postsecondary Students Longitudinal Survey.

Key Findings and Implications for Practice:
- First generation students with higher incomes were significantly more likely to persist than those with lower incomes.
- Female first generation students—who constitute the majority of first generation students—were significantly less likely than males to persist.
- Attending a private institution was negatively related to persistence and institutional size was positively related to persistence for first generation students, although neither was related to persistence for continuing-generation students.
- Participating often in school clubs was significantly and positively related to persistence only for continuing generation students.
- Grant aid was unrelated to the persistence of continuing generation students, but had a significant positive effect on the persistence decisions of first generation students.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *Journal of Higher Education*, 249-284.

This study sought to understand how first generation students experience college and benefit from it in a comprehensive analysis of the National Study of Student Learning data that followed individuals through the second and third years of college. The study had three purposes. First, it sought to estimate differences between first generation and other college students along various dimensions of their academic and nonacademic experience of college. Second, it estimated the difference between first generation college students and their peers in select cognitive, psychosocial, and status attainment outcomes. These included standardized measures of science, reasoning and writing skills at the end of the second year, standardized measures of reading comprehension and critical thinking at the end of the third year, as well as measures of openness to diversity and challenge, learning for self-understanding, internal locus of control, preference for higher-order cognitive activities, and educational degree plans at the end of the second and third years of college. Third, the study sought to determine if the specific academic and nonacademic experiences influencing cognitive and psychosocial outcomes differed in magnitude for first generation versus other college students.

Key Findings and Implications for Practice:

- First generation students completed significantly fewer credit hours across the three years of the study and worked significantly more hours per week than did the non-first generation students. They were also significantly less likely to live on campus than other students
- Despite the disadvantages that accrued to them in the selectivity of the institutions they attend and the experiences they have once enrolled, first generation students who persisted in college had only trivial, chance differences between first generation and other students in second-year writing skills, third- year reading comprehension, third-year critical thinking, and both second- and third-year openness to diversity and challenge
- Level of engagement with institution's social and peer network is critical. Extracurricular involvement had stronger positive effects on critical thinking, degree plans, sense of control over (and responsibility for) their own academic success, and preference for higher-order cognitive tasks for first generation than for other students.
- However, first generation students were significantly less likely to be engaged in these activities during college.
- Not all college experiences, however, are beneficial for first generation students. Volunteer work, employment, and participation in inter-collegiate athletics all tended to have a negative impact.
- Federal and state financial aid policies may need to be reexamined on the extent to which they facilitate or impede the opportunities of first generation students to participate fully in the college experience.

Pike, G. R., & Kuh, G. D. (2005). First-and second-generation college students: A comparison of their engagement and intellectual development. *Journal of Higher Education, 76,* 276-300.

This study examines the college experiences of first generation and second generation students to see how their experiences affect their learning and intellectual development. The findings indicate that on some key indicators of college success first generation college students do not compare favorably with their peers from families where at least one parent graduated from college.

Key Findings and Implications for Practice:

- First generation students were less engaged overall and less likely to successfully integrate diverse college experiences
- They perceived the college environment as less supportive and reported making less progress in their learning and intellectual development.
- Previous studies of first generation students tended to attribute their lower levels of academic and social engagement and learning and intellectual development to being born to parents who did not go to college. The findings from this study suggest that low levels of engagement are an indirect result of being the first in one's family to go to college and are more directly a function of lower educational aspirations and living off campus.
- Admissions officers could design presentations and publications specifically for first generation students that emphasize the behaviors common to successful first generation students who have graduated from the institution.
- To raise educational aspirations, institutions could work with local school systems in implementing programs that focus on raising educational aspirations.

- Workshops for advisors and others who may work closely with first generation students should address issues that maybe particularly relevant to this group. At the least, advisors should know who among their advisees are the first in their family to go to college and should discuss on multiple occasions how students can get involved in activities inside and outside the classroom that will increase their overall level of engagement with learning resources and that will promote greater social and academic integration.
- If an institution is serious about improving first generation student success rates, then it should require them to live on campus at least for the first year of college. For low-income first generation students, such a policy will clearly require additional financial assistance. Innovative work-study should be explored as a way to offset differences in cost between living on and off campus or at home.

Somers, P., Woodhouse, S., & Cofer, J. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *NASPA Journal, 41,* 418–435.

This study examined the impact of background, aspirations, achievement, college experiences, and price on the persistence of first generation and continuing generation college students at 4-year institutions using the National Postsecondary Student Aid Study of 1995–96.

Key Findings and Implications for Practice:
- First generation students were more sensitive to financial aid and averse to student loans than their peers.
- High income, high test scores, and high grade point average, which similar studies have found to be significant and positively associated with persistence, did not influence the persistence of first generation students in this study.
- Early college awareness programs are critical: provide information as early as middle school on college costs, financial aid availability, and the economic and social advantages of a college education.
- Early academic achievement programs are effective in providing the academic preparation and encouragement that first generation students often need for college success.
- Financial aid is important in retaining first generation students. Both first generation students and their parents are loan averse.
- Social interaction, which can provide a sense of "belonging" on campus, is important to persistence for first generation students.
- Providing support for first generation students affords a way for student and academic affairs to partner new programs. Such programs could include academic support services, faculty mentors, use of faculty and staff role models who were the first in their family to attend college, and student/parent support services.
- First generation students often have conflicts with their parents on whether to attend college. In addition, they may feel "survivor guilt," particularly if they are from areas where few of their peers attend college. Personal, academic, and career counselors can be aware of these conflicts and work through these issues with students.

Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in higher education, 37*(1), 1-22.

This study sought answers to three questions: (1) Do the precollege characteristics of first generation students differ from those of traditional students? (2) Do first generation students' college experiences differ from those of other students? (3) What are the educational consequences of any differences on first-year gains in students' reading, math, and critical thinking abilities? Answers come from 2,685 students (825 first generation and 1,860 traditional students) who entered 23 diverse institutions nationwide in Fall 1992 and who completed one year of study.

Key Findings and Implications for Practice:
- First generation students are more likely to come from low-income families, to be Hispanic, to have weaker cognitive skills (in reading, math, and critical thinking), to have lower degree aspirations, and to have been less involved with peers and teachers in high school.
- First generation students also tend to have more dependent children, expect to take longer to complete their degree programs, and report receiving less encouragement from their parents to attend college.
- Only on the certainty of their academic major do first generation students have an advantage over their traditional peers.
- First generation students in this study not only brought to college background characteristics that put them at a potential disadvantage when compared to their traditional peers, the two groups also differed in their curricular, instructional, and out-of-class experiences, as well as in their perceptions of the environments of the institutions they were attending.
- First generation students took fewer courses in the humanities and fine arts and completed fewer total hours during their first year. They were also less likely to be in an honors program, and they reported studying fewer hours.
- There exists a need to smooth first generation students' transitions from work or high school to college and to extend active, targeted support throughout their first year, if not beyond. Bridge programs involving collaboration between high schools, community colleges, and four- year institutions have proven to be successful. The most successful programs have provided assessment and remediation, learning laboratories, tutorial services, intrusive advising, and monitoring of student progress.
- Validating experiences are critical, including encounters with administrators, faculty, and other students who send signals to first generation students that they are competent learners, that they can succeed, that they have a rightful place in the academic community, and that their background and past experiences are sources of knowledge and pride, not something to be devalued.
- First generation students are less likely than traditional students to perceive faculty as concerned with student development and teaching.
- Reaching out means more than advertising the availability of support services. It also means actively making contact with first generation students and changing current practices or policies that impede rather than facilitate their academic and social integration and success.

Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development, 46,* 223-236.

The researchers take an ecological perspective and include aspects of the person and of the environment in predicting achievement and adjustment after two years of college. Participants were 100 college students (84 Latino, all Mexican or Central American; 16 Asian, all Chinese or Chinese/Vietnamese; 70% women, 30%, men) who were part of a longitudinal study focusing on the experiences of ethnic minority students whose parents did not complete college. The participants attended an ethnically diverse urban commuter university on the west coast. This study was a short-term longitudinal study based on data collected in the fall and the spring of students' second year in college.

Key Findings and Implications for Practice:
- Motivation to attend college based on personal interest, intellectual curiosity, and the desire to attain a rewarding career was found to be predictive of college adjustment.
- Peer support (or lack of needed peer support) is a stronger predictor of college grades and adjustment than support from the family, when both family and peer support variables are included in a regression analysis. These results confirm that first- generation college students perceive their peers as better able than their family to provide the support they needed in order to do well at college.
- Having more individually oriented motivation to attend college at the beginning of the sophomore year is an important personal characteristic that predicts feelings of satisfaction with the college environment and commitment to finishing college at the end of the year.

Hutchens, K., Deffendall, M., & Peabody, M. (2011). Supporting first generation college students. *Kentucky Journal of Higher Education Policy and Practice, 1*(1), 4.

Hutchens, Deffendall, and Peabody detail efforts at the University of Kentucky (UK) to support first generation college students, including the establishment of the First Scholars program, a project funded by and affiliated with the Suder Foundation. This practitioner's brief first provides an overview of relevant literature related to serving first generation college students and then discusses programmatic efforts undertaken at UK designed to improve retention and graduation rates.

Efforts undertaken at UK regarding Scalability, Coordination of First Generation Services, and Establishment of First Generation Living Learning Community:
- Enhanced the university's attention to this student population through the establishment of a living learning community.
- Enhanced the awareness of first generation students through the UK First Generation (UK 1G) Stories Project, a collaboration between UK's Center for the Enhancement of Learning and Teaching and the First Scholars program. The purpose of the project is to record the unique stories of current faculty, staff, and students at UK who are first generation students to help inspire current UK first generation students who may be

dealing with some of those same challenges faced by the individuals featured in the Stories Project.
- Created a Director of First Generation Initiatives to help promote collaboration and coordination among those programs and individuals serving first-generation college students.
- Fostered collaboration to impact first-generation students across campus through the creation of a First Generation Advisory Board, which meets monthly to share information about program events, collaborate for trainings, and brainstorm regarding program challenges. This monthly gathering has resulted in shared resources during difficult economic times and the ability to partner for peer mentor recruitment and training, freshmen orientation, and the generation of ideas for expanding the reach of services to first generation students on a more campus-wide basis.

Suggestions for scalability of institutional initiatives serving first generation students include:
- Finding data for assessment.
- Instilling a sense of community. ·
- Responding to needs.
- Providing scholarships and financial aid.
- Engaging faculty and staff.

Stephens, N. M., Hamedani, M. G., & Destin, M. (2014). Closing the Social-Class Achievement Gap A Difference-Education Intervention Improves First-Generation Students' Academic Performance and All Students' College Transition. *Psychological science, 25*(4), 943-953.

Researchers investigated the impact of attending one of eight moderated panel discussions, all featuring the same panel of eight demographically diverse college seniors (three were first generation, five were non-first generation). Panelists were instructed to respond to questions differently depending upon the group of students in attendance. For the students in the intervention group, the panelists' responses illustrated how their social class backgrounds both positively and negatively shaped their college experiences and influenced the strategies they adopted for success in college. For students in the comparison group, the panelists' stories included general content and did not highlight the students' different backgrounds. After the panel, all students were invited to complete a survey and create a video testimonial about the panel's main teachings. The researchers controlled for race, ethnicity, gender, income, SAT scores, and high school GPA.

Key Findings and Implications for Practice:
- A one-hour difference-education intervention using personal stories of senior college students reduced the social-class achievement gap among first generation and non-first generation students by 63% at the end of their first year, as well as improving first generation psychological adjustment and academic and social engagement.
- At the end of their freshman year, the mean GPA of first generation students receiving the intervention was 3.47 in comparison to 3.17 for first generation students that did not receive the intervention.
- It is significant that the difference-education intervention improved psychosocial outcomes not only for the disadvantaged group but for mainstream students as well; indicating that an understanding of how people's different backgrounds matter is a

powerful insight that can improve all students' transition and success in postsecondary education.

The Council of Independent Colleges. (2013). *Making Sure They Make It: Best Practices for Ensuring the Academic Success of First-Generation Students. Washington, DC: Kerry J. Strand.*

This report highlights the institutional efforts of 50 colleges and universities on behalf of first generation students. Although the initiatives themselves vary, all are informed by an understanding of the distinctive challenges faced by first generation students and are targeted toward what research shows these students most need for academic success.

Implications for Practice:
- Academic success requires:
    o Connection: need to feel that they are a part of the campus community;
    o Preparation: need for basic academic skills;
    o Money: need for financial support for educational and living expenses.
- The report identifies best practices as:
    o Identifying, actively recruiting, and continually tracking first generation students.
    o Bringing students to campus early.
    o Focusing of first generation student distinctive features.
    o Developing a variety of programs to meet needs.
    o Using mentors.
    o Institutionalizing commitment.
    o Building community.
    o Involving family.
    o Acknowledging and easing financial pressures.
    o Keeping track of success and failures through ongoing assessment.

Comprehensive First Generation Studies

Engle, J., & Tinto, V. (2008). Moving Beyond Access: College Success for Low-Income, First-Generation Students. *Pell Institute for the Study of Opportunity in Higher Education.*

Using data from the U.S. Department of Education datasets, the researchers describe the ways in which this population participates in higher education. They discuss the barriers that low-income, first generation students face to achieving success in college, strategies that colleges and universities can pursue to address these barriers and improve students' chances of earning degrees, and recommendations for institutional and government actions that could close the access *and* success gaps that exist.

Key Findings and Implications for Practice:
- Problems faced by first generation students are as much the result of the experiences these students have during college as it is attributable to the experiences they have before they enroll.
- To increase success rates:

- o Improve academic preparation for college.
- o Provide additional financial aid for college.
- o Increase transfer rates to four-year colleges.
- o Ease the transition to college.
- o Encourage engagement on the college campus.
- o Promote (re)entry for young and working adults.

Institute for Higher Education Policy. (2012). *Supporting First-Generation College Students Through Classroom-Based Practices*. Washington, DC.

This report, which was commissioned as part of the Institute for Higher Education Policy's Walmart Minority Student Success Initiative, uses institutional examples to highlight how specific policies and faculty-driven, classroom-based practices can change in an effort to better support the academic and social success of first generation students. The report provides a brief summary of first generation students as defined in literature and national data, an overview of existing programs and resources that support first generation students, and a thematic breakdown of promising practices for improving first generation student success, supported by examples from participating institutions.

Key Findings and Implications for Practice:
- Students may not get the help necessary to complete college admission applications as well as financial aid forms.
- First-generation students appear to perceive the college experience differently, primarily as a way to get a good job.
- First-generation students are less likely to live on campus, less engaged with faculty members, work more hours off campus, and are generally less satisfied with the campus environment.
- Institutions need to amplify their capacity to identify and track first-generation students and other unique student populations.
- Engage faculty early in the process and provide continuous support.
- Embrace curricular change as a way to improve student success.

Ward, L., Siegel, M. J., & Davenport, Z. (2012). *First-generation college students: Understanding and improving the experience from recruitment to commencement.* John Wiley & Sons.

This book by Lee Ward (Director of Academic and Career Planning at James Madison University), Michael Seigel (Associate Professor and Director of the Administration of Higher Education Program at Suffolk University), and Zebulun Davenport (Vice Chancellor for Student Affairs at Indiana University-Purdue University Indianapolis) takes a comprehensive view of existing research and suggests promising courses for future action. Sections are divided into: Who are First Generation Students; the Transition into College; the Transition Through College; Class, Culture, Race, and Ethnicity; Transforming How We Work with First Generation Students; and A Holistic Approach to Student Success.

A critical review of this book concludes with the following:

A more complete picture of the educational experiences of first-generation students can be constructed by providing greater attention to their K-12 experiences and the underlying systemic issues that impact those experiences and influence their future academic success in college. Ultimately, first-

generation college students have every chance of being as successful as the next student, but certain unsupportive educational organizations do not make it easy to navigate the educational pipeline unscarred. *First-Generation College Students* purports to share the experiences of first-generation college students, but rather, the book simplifies the experiences of this group in an attempt to redirect the problem away from the institution and on to the students themselves. What could have been a win for all students instead turns into a loss for first-generation students and a clear conscience for educational administrators unwilling to critically examine higher education institutions. (Squire, Dian (2013) "First-Generation College Students: Understanding and Improving the Experience from Recruitment to Commencement," Journal of Critical Thought and Praxis: Vol. 2: Iss. 2, Article 1.)

Williams, C. R., & Butler, S. K. (2010). A new retention variable: Hope and first generation college students. *Counseling Outfitters*.

This article provides an overview of first generation college student's participation in higher education; outlines the unique issues that this student population possesses as a result of race and class; delineates Snyder's Hope Theory, which is utilized as the manuscripts working definition of hope, based on the theory's positive correlation with academic success; and provides suggestions and recommendations concerning activities and interventions that will assist in the development of a culture of hope on college campuses.

Key Findings and Implications for Practice:

- Traditionally based retention programs focus primarily on student's insufficiencies, are misguided and often fail because they only attempt to identify and treat student's remedial issues, defects, and academic shortcomings.
- Hope is an example of a strengths based variable, which the researchers expect may assist college administrators and practitioners in their efforts to create retention strategies and activities specifically for this population. The ultimate goal of creating a hope inspired retention model is to help students discover, develop and apply their strengths and talents so that they will persist, achieve and gain maximum benefits from the college experience.
- College counselors are most equipped to take a leadership role and serve as the catalysts for this modification to the current retention paradigm. Most administrators and faculty members are not trained to handle the variety of cultural influences and the different levels of oppression that first generation college students possess.
- The process of teaching, developing, and nurturing hope activities can be accomplished by using first year seminars. These courses may be an ideal avenue to train faculty and students about hope, positive psychology, and strengths based interventions.

Orientation, Transition, and Retention Annotated Bibliography

Prepared by Adrienne Harmer, Maggie Murphy, Kathryn Wilhite, and Dr. Stephanie M. Foote for NODA, the Association for Orientation, Transition, and Retention in Higher Education

Table of Contents

Adult Learners

Cox, E. M., & Ebbers, L. H. (2010). Exploring the persistence of adult women at a Midwest community college. *Community College Journal of Research and Practice, 34*(4), 337-359.

This study examined factors that influence persistence of adult female community college students. The authors used a phenomenological research method, focusing on how individuals develop meaning through social interaction, to investigate the educational experiences of adult female students at an urban community college in the Midwest. Five participants, all of whom were women 25 years of age or older and enrolled part-time, participated in a series of three semi-structured interviews with the researchers. The authors found several themes in their analysis of factors impacting the participants' decisions to persist, including the influence of friends and family, challenges with balancing obligations, and positive and negative aspects of their learning environments. Additionally, the authors consider the concept of "aspirational capital," derived from Bourdieu's (1977) theory of cultural capital, as it relates to the women's determination to persist in their studies. Throughout the discussion, the authors include many relevant excerpts from their interviews, which practitioners and researchers interested in adult learners at community colleges will find valuable. The authors found that positive support systems and campus experiences, as well as the participants' inner drives and motivations, greatly influence their decisions to persist. They conclude with a recommendation that community colleges evaluate their services, programming, and resources for adult female students and include students as stakeholders in the decision-making processes about the development of targeted interventions for adult learners.

Key words: Adult learners, college adjustment, friendships, parents and family, two-year institutions

Deschacht, N., & Goeman, K. (2015). The effect of blended learning on course persistence and performance of adult learners: A difference-in-differences analysis. *Computers & Education, 87*(2015), 83-89.

This study assessed the impact of blended learning on the persistence and success of adult learners in an undergraduate business program at a large Belgian university. Because the program introduced a blended or hybrid learning option for adult learners when they previously had only been able to take a traditional on-campus program, the authors were able to compare the exam results of adult learners before and after the introduction of blended learning and use a difference-in-differences research design to estimate the effect blended learning has on adult learners in the program with regard to dropout rates, exam scores, and credit attainment. The results of the study indicate that blended learning has a negative effect on course retention as evidenced by increased dropout rates and a positive effect on student performance as evidenced by higher exam scores and slightly

higher pass rates. However, they caution that the higher exam scores likely are impacted by selectivity effects, as students who persist to take exams may have characteristics that positively correlate with performance. The authors plan to engage in qualitative research among adult learners in the program, such as conducting exit interviews with students who elect to drop out, and evaluate interventions that are assumed to support student learning in blended environments. As blended or hybrid learning course and program offerings may increase to meet the needs of non-traditional students, practitioners and researchers are likely to be interested in the implications of this study and the future research directions it suggests.

Key words: Adult learners, online and blended learning, persistence, retention

Gast, A. (2013). Current trends in adult degree programs: How public universities respond to the needs of adult learners. *New Directions for Adult and Continuing Education*, 140, 17-25.

This article examines current trends and best practices in degree programs and services for adult learners, with a focus on public universities. The authors argue the needs of adult learners at public institutions are not given the same emphasis as they are at community colleges and for-profit institutions. The authors contextualize these trends within a discussion of factors impacting the growing enrollment of adult students at colleges and universities and the perceived barriers they face in both accessing higher education and completing degree programs. The authors also highlight how policies concerning transfer credit acceptance and prior learning assessments impact adult learners at public universities and make a case for specialized services in support of adult learners in those settings. The conclusion of the article emphasizes the need to track adult student retention and degree completion data, as the authors argue that 77% of institutions were not tracking those data for their adult student populations as of publication. Practitioners at public four-year institutions may be especially interested in this article's focus.

Key words: Adult learners, transfer credit, retention

Kim, K. A., Sax, L. J., Lee, J. J., & Hagedorn, L. S. (2010). Redefining nontraditional students: Exploring the self-perceptions of community college students. *Community College Journal of Research and Practice*, 34(5), 402-422.
Using role theory as a conceptual framework, this study is focused on determining which role most non-traditional students most closely identify with: student, employee, or family member. Learning which role is the primary identity for non-traditional students can serve as a launching point for a wider discussion of the limitations of the traditional definition of non-traditional students based on age and as a way to begin redefining our conception of what it means to be non-traditional. The study analyzed data available from the Transfer and Retention of Urban Community College Students database and conducted the analysis using two

different sets of variables. The most important finding was that using student self-perceptions of primary roles yields a more authentic way to identify non-traditional students. Using these self-perceptions also gives a fuller, more comprehensive, and holistic picture of the ways in which students see themselves as non-traditional. This study gives practitioners a new lens through which to view non-traditional students and a new working definition of what makes a student non-traditional. This enlarged definition can help educators plan services and programming that will reach this wider non-traditional audience, rather than continuing to focus only on the traditional non-traditional age distinctions.

Key words: Adult learners, self-image/concept, two-year institutions

Markle, G. (2015). Factors influencing persistence among nontraditional university students. *Adult Education Quarterly*. Advance online publication.

Citing nontraditional student enrollment and persistence statistics, the author signals the need for further investigation into the causes of poor persistence rates. Drawing on research and theoretical frameworks that examine the roles of students who have work and family responsibilities, the author presents the ideal of the academically committed student versus the reality of a student who is juggling many commitments. The author also reviews the demographic, academic, and situational factors that have been previously explored noting that demographics appear not to play a significant role in persistence for nontraditional students, while academic success and factors like full-time or part-time attendance, employment, and family roles, as well as confidence, have varying impact according to the number of studies conducted previously on the population. An embedded, mixed-method qualitative and quantitative study surveyed 494 nontraditional students at a large public institution in the southeast. The results are analyzed to assess differences between men and women; findings indicated that there was no significant difference in persistence between men and women; however, persistence barriers do differ by gender. Women cited inter-role conflict, the struggle balancing school alongside familial or work responsibilities, as their barrier to persistence while men cited the risk of taking time away from furthering their career as their barrier to persistence. Among men and women, the barrier of being different and feeling as if they do not belong was also cited as a barrier to persistence. Women also shared a lack of understanding from instructors about their family roles and both men and women express that the institution's bureaucracy and culture were not accommodating. Motivation emerges as the best strategy to overcoming barriers; men cite their career goals and women cite their determination to attain a degree for personal reasons. Nontraditional students in this study recommend institutions support this population better by creating more services, more opportunities, and more connections that accommodate their needs, lifestyle, and include them into the culture. It is recommended that practitioners and institutions recognize that female nontraditional students need to be recognized by their traditionally aged student colleagues as a part of the culture

while they want to be acknowledged by instructors as having multiple competing priorities; male nontraditional students need to have their time respected and to feel their investment is leading toward end-goals.

Key words: Adult learners, self-image/concept, sense of belonging

Rollins, L. L. (2014). Futuring for optimum outcomes in higher education: Addressing the needs of today's adult learners. *Journal of Social Sciences, 3*(2), 367-330.

Noting technology's increasing influence in higher education, coupled with trends that include the reduction of remedial course requirements and hours required to earn a degree, and citing the rising number of nontraditional and adult learners attending college, the author presents the case for designing classrooms to meet the specific and unique needs of these students. Focusing on the need to make coursework relevant to the lives of students who are nontraditional or adult learners and respecting the life experiences of these students in the development of assignments, the author suggests institutions develop surveys to identify adult learners, understand the unique needs of these students, and to find ways consider how the landscape of higher education can be designed to better serve the population. The author identifies strategies including scenario presentation and the "futuring" tree to prepare for the adult learner population specifically as related to the advising process.

Key words: Adult learners, advising, assessment, environment, technology

Wainwright, E. & Marandet, E. (2010). Parents in higher education: Impacts of university learning on the self and the family. *Educational Review, 62*(4), 449-465.

The researchers aim to understand how university students who have dependent children can achieve academic success in college. Recognizing that this population is often under-studied and underserved, the researchers' primary aim was to uncover needs and experiences of students who are also parents and with specific interest to differences between males and females. The researchers first identify that a significant motivation for learning is the perceived social mobility earning a degree affords and the desire to either provide that social mobility for one's family or to serve as a positive model of achievement for one's family. In terms of transition, the researchers identify emotionally charged responses regarding significant struggle for students who are also parents in relationship to time management. Students signal challenges in adjusting to their academic life and balancing their work or domestic responsibilities. Alongside barriers, students identify positive achievements in reflection and growth in their own identity; they also highlight their familial support as critical to their success even through the challenges to balance their time. The researchers call for further research to measure both

quantatively and qualitatively how successful students are in the college environment. Further the researchers advocate that barriers to success be examined and removed for these students to have a smoother transition and adjustment period because statistical data for the institution demonstrates that students from this population are not being retained.

Key words: Adult learners, college adjustment, parents and family, self-concept/image

Commuter Students

Biddix, J. P. (Ed.). (2015). Understanding and addressing commuter student needs *New Directions for Student Services, 2015*(150), 1-107.

This special issue of *New Directions for Student Services* is an essential read for practitioners who work with commuter student populations in both student and academic affairs. The authors take many different approaches to discussing commuter students in higher education that will help practitioners develop, improve, and assess commuter student programs and services. This includes examinations of theoretical perspectives and frameworks for understanding commuter student needs and experiences, examples for applying theory and research to practice with regard to commuter student engagement and well-being, and recommendations for supporting specific commuter sub-populations, such as students of color and students with disabilities. Additional chapters provide practical suggestions for addressing the unique needs of commuter students, such as developing robust online student services for students who spend limited time on campus and creating an academic advising model that encourages commuters to persist and make progress towards transfer and/or degree completion. Biddix concludes the issue with a chapter on strategies for designing effective assessment projects that focus on commuter students, which practitioners should find especially helpful in the present culture of assessment and evidence-based practice. Taken all together, this special issue provides readers with a holistic view of how institutions can positively impact commuter student success and offers both quick ideas and long-term strategies for supporting with this student population.

Key words: Commuter students, assessment, academic success

Brown, J. L. (2015). What can alumni tell us about persistence at commuter institutions? *College Student Journal, 49*(3), 405-414.

The object of Brown's study was to develop specific strategies for increasing persistence rates of undergraduate students within a specific college at a commuter institution. Brown used McTighe's Backwards Design Model (2004), which

involved first setting long-range goals, then creating objectives, and last planning activities to achieve the desired results, in order to determine predictors of success for student persistence at the institution. Informed by Tinto's Interactionalist Theory (1975, 1993, 1997), Brown deployed a Freshman Orientation Survey to assess pre-college characteristics of both incoming freshman who declared a major within the college and successful alumni of the college. The survey was divided into ten scales of pre-college characteristics, including Individual Aptitude, College Decision Basis, Family Attributes, and Academic Intentions. Using the pre-college characteristics of the alumni as a baseline, Brown analyzed the data to determine the differences between incoming students and alumni for each scale. Through this comparison he identified potentially positive and negative factors impacting the persistence of incoming students, allowing the college to develop interventions for students predicted to be unsuccessful based on the alumni baseline. One limitation of this study is that it relies on the ability of alumni to accurately report on their own pre-college characteristics after several years have passed.

Key words: Commuter students, assessment, persistence

Gianoutsos, D. & Rosser, V. (2014). Is there still a considerable difference? Comparing residential and commuter student profile characteristics at a public, research, commuter university. *College Student Journal, 48*(4), 613-626.

This article makes the case that to date studies about commuter students have been conducted largely at majority-residential institutions and seeks to address that gap by examining the differences between commute and residential students at one institution of higher education. Following a review of the relevant literature, the authors discussed how they are framing their study through the lens of status attainment theory. The study itself was conducted by collecting data from several institutional databases and was analyzed using descriptive statistics and discriminant function analysis. Results showed statistical significance in three major areas: demographic characteristics, prematriculation characteristics, and the factors that contribute to academic achievement and student success once students are enrolled in college. Findings indicated that aside from select demographic characteristics (primarily ethnicity/race) and amount of financial aid awarded there were few differences that separated residential and commuter students at this particular institution.

Key words: Commuter students, academic success

Disabilities, Students with

Asselin, S. B. (2014). Learning and assistive technologies for college transition. *Journal of Vocational Rehabilitation, 40*(3), 223-230.

This article examined the role of learning and assistive technologies for students with disabilities in the transition to college. The authors posited that while transition assessment and planning for students with disabilities often focuses on academic preparation, teaching students about emerging and assistive technologies during that process can help students better understand how their disability may impact them in college and advocate more effectively for accommodations. The authors highlighted many assistive technologies and aspects of accessible information technology that provide students with access to instruction and college services as well as support the cognitive and functional skills necessary for college success. In particular, the authors argued that innovations in accessible technology, such as built-in accessibility features in operating systems, portable software, universally-designed instructional materials, and organizational tools such as calendars and contact lists, have greatly reduced the need for assistive technology accommodations. In turn, this created a more inclusive and accessible experience for many students with disabilities.

Key words: Students with disabilities, environment, accessibility

Connor, D. J. (2012). Actively navigating the transition into college: Narratives of students with learning disabilities. *International Journal of Qualitative Studies in Education, 25*(8), 1005-1036.

This study focused on how students with learning disabilities navigate the academic, social, and personal/emotional aspects of their college transition. Specifically, the authors were interested in identifying student actions that contributed to their academic success, investigating student thinking about their identities as students with learning disabilities, and examining the ways in which students with learning disabilities respond to the social demands of college. Using narrative inquiry and disability study as mutually-supportive theoretical frameworks, the authors conducted qualitative interviews with three self-identified students with learning disabilities at a large urban university in the northeastern United States to determine the students' experiences with their first year of college. Each student was interviewed three times over the course of three months. Data from the interviews are analyzed in a "student narrative" section of the paper, in which each participant's narrative is presented separately. The authors made several recommendations for how practitioners and student and academic affairs can help students with learning disabilities navigate their first year of college, including developing peer mentorship programs, self-advocacy groups, and forums, panels, and lectures featuring students and/or guest speakers with learning disabilities.

Key words: Students with disabilities, college adjustment: relationships, academic success

Gelbar, N. W., Smith, I., & Reichow, B. (2014). Systematic review of articles describing experience and supports of individuals with autism enrolled in college and university programs. *Journal of Autism and Developmental Disorders, 44*(10), 2593-2601.

This article aimed to provide readers with a comprehensive review of the literature on college students with autism spectrum disorders (ASD) published since 1999. The authors found just 20 peer-reviewed articles on this topic, consisting of two experimental studies and 18 case studies. They argued this indicates a scarcity of research that limits researchers' and practitioners' understanding of how to create effective programmatic interventions for college students with ASD. The authors concluded that the case studies in particular indicate the presence of anxiety, loneliness, and depression among students with ASD and a need for more effective academic and non-academic supports. The article includes a table diagramming each article's contents, which can help researchers and practitioners review the articles in this body of literature that specifically interest them. As the authors stated, an increasing prevalence in the diagnosis rates for higher-functioning individuals with ASD, colleges and universities are likely to see increased enrollments by students in this sub-population. Without more research, practitioners may not have enough information to develop effective programs and support services for these students.

Key words: Students with disabilities, academic support

Oertle, K. M., & Bragg, D. D. (2014). Transitioning students with disabilities: Community college policies and practices. *Journal of Disability Policy Studies, 25*(1), 59-67.

This paper presents a literature review of scholarship relating to community college transition policy for students with disabilities. The authors' goal for the literature review was to provide a basis for an expanded conceptual model that also builds on the previous work of Garrison-Wade and Lehmann (2007, 2009). The conceptual model, Transition to Community College (TtCC), can be used by practitioners to guide development and assessment of disability policies, practices, and programs that support the transition to college for students with disabilities. Features of the model include coordination among P-16 educational settings to prepare students for transition to community college, collaboration between disability support personnel and classroom faculty, and the establishment of peer-support networks for students with disabilities. The authors made recommendations for both secondary education settings and postsecondary education settings, with a specific focus on community colleges, where students

with disabilities are enrolling at increasing rates as compared to four-year institutions. These recommendations include using a person-centered access and accommodation process and implementing universally designed instruction.

Key words: Students with disabilities, college adjustment, community college

Trevisan, D., & Birmingham, E. (2015). Examining the relationship between autistic traits and college adjustment. *Autism*. Advance online publication.

This study examined characteristics associated with autism spectrum disorder (ASD) as they relate to certain aspects of college adjustment in a sample of neurotypical college students. The authors analyzed data collected from a sample of 134 undergraduates at Simon Fraser University, none of whom self-identified as having ASD or an immediate family member with ASD, who took both the Student Adaptation to College Questionnaire (SACQ) and the Broad Autism Phenotype Questionnaire (BAPQ; Hurley et al., 2007). The characteristics associated with the Broad Autism Phenotype (BAP) included in the study are pragmatic language difficulties, aloof personality, and rigid personality. 18 students in the sample met the criteria for possessing the BAP by meeting cut-off scores in two of the three characteristics, with the remaining 116 making up the non-BAP comparison group. Students with the BAP scored significantly lower on academic and social adjustment to college and marginally lower on personal-emotional adjustment to college as indicated by their responses to the SACQ. The authors made suggestions for how each BAP characteristic relates to college adjustment, such as pragmatic language difficulties impeding social and academic adjustment because of the way the associated communication difficulties might impact formation and maintenance of relationships with peers inside and outside of the classroom.

Key words: Students with disabilities, college adjustment

Walpole, M., & Chaskes, J. (2011). Advising new students with disabilities: Challenges and opportunities. *The Journal of College Orientation and Transition, 11*(1), 37-48.

The authors began this article with articulation of the additional challenges new students with a disability (SWD) encounter during their transition as well as general exploration of the concept of disability. In reviewing general topics of transition, the authors explored the transition to self-advocacy and the evaluation of the need for advocacy, all alongside traditional college transition. Longitudinal quantitative data were analyzed over a period of six years; qualitative interviews were conducted with 18 students. The quantitative analysis examined the frequency in which SWD report meeting interacting with advisors and faculty and found that there were no significant differences between this population and their non-SWD peers. The data from the quantitative analysis indicated that SWD reported significantly less attainment of a degree or retention toward degree attainment than their non-SWD peers. The researchers found that self-advocacy

was closely related to how much and to whom SWD choose to disclose their disability and the nuance behind that choice. Additionally, in their interviews the authors found a theme of transitioning to advocacy for oneself from the advocacy a parent may have played in the past and the relationship to self-confidence in that transition. The other emergent themes were related to faculty response to self-advocacy, which was positive overall, and navigating the bureaucracy of college and the unexpected challenges that bureaucracy can present. Ultimately the authors advocated that institutions work to normalize disabilities as a component of diverse campuses and that these conversations occur early during orientation or other on-boarding experiences. Additional recommendations included orientation sessions designed for SWD or other services to help prepare students for self-advocacy and college bureaucracy.

Key words: Students with disabilities, college adjustment

Distance Learners

Chen, P.S. D., Lambert, A. D. & Guidry, K. R. (2010). Engaging online learners: The impact of Web based learning technology on college student engagement. *Computers & Education, 54*(4), 1222–1232.

The researchers investigated the impact of online learning on student engagement and educational achievement. Of particular interest is their research into whether the relative amount of technology used in an online course has a significant relationship to self-reported levels of learning and engagement. The study was conducted using aggregate data from the 2008 National Survey of Student Engagement (NSSE). The data were examined using multiple regression analysis of four of the five NSSE benchmarks (excluding "enriching educational experiences") as dependent variables. Findings indicated that the use of learning technologies within online courses has a positive and strong relationship to deep learning and educational gains and that course-related technology is important to student engagement. This study is of somewhat limited value in that the findings are dated and the study does not explicate which specific technologies increase student engagement or impact student learning.

Key words: Online and blended learning, engagement

Dumais, S. A., Rizzuto, T. E., Cleary, J., & Dowden, L. (2013). Stressors and supports for adult online learners: Comparing first- and continuing-generation college students. *American Journal of Distance Education, 27*(2), 100-110.

This article is an examination of the different experiences of first-generation and continuing-generation adult online learners. The authors began with a review of the literature on first- and continuing-generation students in general, online

education in general, and availability of support services for online learners. They then described the purpose of their study, which was to explore differing motivations of first- and continuing-generation adult online learners, their approaches to using institutional support systems, and similarities and differences between these two groups in terms of barriers to student success. The authors used data from the Center for Adult Learning in Louisiana to identify study participants. The study itself used a mixed-method approach, employing both web-based surveys and follow-up telephone interviews with select participants. Results of the study indicated that there are distinct differences between first- and continuing-generation adult online learners, for example first-generation students are more likely to say their primary motivation for attending school is for personal fulfillment, as opposed to the continuing-generation students who reported that employment and financial considerations were their primary motivations. The study also found that first-generation students were more likely to avail themselves of institutional support services and particularly to valuing the relationships with their advisors. Both groups of students reported that the biggest barrier to success was the need to balance work and school responsibilities.

Key words: First generation students, relationships, adult learners, online and blended learning

Shea, P., & Bidjerano, T. (2014). Does online learning impede degree completion? A national study of community college students. *Computers & Education, 75*(2014), 103-111.
Using the work of Tinto (1975, 1998), Bean & Metzner (1985), and particularly Falcone (2011), the authors sought to discover whether community college students who participate in online classes are retained at higher rates than those who do not. The study was conducted using data from Beginning Postsecondary Students Longitudinal Study conducted by the National Center for Education Statistics. In contrast to earlier studies and to the authors' own expectations, analysis of the data set revealed that students who participated in online courses obtained associates degrees at higher rates than students who did not participate in any online courses. These findings indicated that community college educators should re-dedicate their efforts and energies into developing high quality online classes as the evidence shows that online learning has a significant impact on degree completion.

Key words: Retention, technology, community college

Dual Enrollment Students

Bragg, D. D., & Taylor, J. L. (2014). Toward college and career readiness: How different models produce similar short-term outcomes. *American Behavioral Scientist, 58*(8), 994-1017.

This study analyzed positive short-term student outcomes in math and English associated with two community college sites, Prairie College and River College, participating in Illinois' College and Career Readiness (CCR) pilot initiative. This goal of this initiative was for high school and community college partners to develop programmatic academic interventions for high school students to be able to transition to college-level math and English without remediation. The authors used backwards mapping to evaluate the sites' respective programmatic models, taking a mixed-methods approach combining analysis of quantitative data captured from a student information system with semi-structured interviews with administrators, faculty, and support personnel, focus groups with students, and classroom observations. Conley's (2010) four dimensions of college and career readiness guide the authors' analysis of differences in the sites' CCR programs, including their approaches to academic interventions, curriculum alignment, giving students the "college feel," and addressing holistic readiness beyond cognitive development and student supports. The authors concluded that while their results do not explain program impact, they highlight program elements that may benefit students and impact their college-transition readiness and raise questions for future empirical research.

Key words: Assessment, academic, community college

Kim, J. (2014). Relationship of tech prep and dual credit to college readiness and retention. *College Student Journal, 48*(3), 337-447.

The author of the article argued that by analyzing the empirical data on tech prep and dual enrollment programs one can better understand the effect of high school college preparation education programs on the transition of students into community colleges. Astin's Input-Environment-Output model served as a conceptual framework, and the study was conducted using data from the Community College & Beyond dataset, in particular student record data on previous participation in either dual enrollment or tech prep and placement in developmental courses upon enrollment in college. Logistic regression analysis was used to determine whether participation in a secondary education program predicted the likelihood of enrollment in a developmental course. Data analysis revealed that students who participated in dual enrollment were less likely than their tech prep counterparts to need developmental courses in college and were particularly less likely to need development math. These findings indicated that high school educators might wish to include more dual enrollment courses into their tech prep programs.

Key words: Academic preparation, community college

Taylor, J. L. (2015). Accelerating pathways to college the (in)equitable effects of community college dual credit. *Community College Review, 43*(4), 355-379.

Citing an increase in institutions and students engaging in the dual enrollment model, the author examined the effect of dual credit in community colleges on college completion as well as the differential effects for students identified as low socioeconomic status and for students of color. The author identified historical inequities and previous research for dually enrolled students and presents Perna and Thomas' Conceptual Model of Student Success and Rawl's Theory of Justice as conceptual frameworks for viewing the research. Distinguishing, through policy, students who are dually enrolled versus participating at their high school in dual credit programs, the researcher demonstrates 26 individual variables that will assign the propensity score. Using enrollment data to examine the effect of the treatment of dual credit the researcher determined that those who participated in dual credit programming academically outperformed their peers who did not participate in dual credit programming. This finding holds true for students in the populations identified in the research question: students of color and students from low socioeconomic status, however, the effect is smaller than the average effect size. Additionally, the author highlighted that correlation in this study does not necessarily mean causation. As a result of the findings and comparisons to similar research projects, the author suggested that state policies don't equally affect students and from the standpoint of Rawls' Theory of Justice, dual credit/enrollment programs should be evaluated and designed to offer significant impact on those who are most marginalized in society. The author encouraged growth in programs that could better support underserved students to dismantle educational inequity.

Key words: Students of color, community college

English Language Learners

Janis, T. (2013). The community college: Bridge or roadblock to higher education for US adult immigrant English-language learners? *Research in Comparative and International Education, 8*(2), 149-165.

The author highlighted the increasing reliance from a number of populations on community college as an avenue to begin or complete their higher education and notes that for older, adult immigrant ESL students, community college is an often chosen path. The research sought to understand how this population was served by the environment citing discouraging retention, progression, and graduation and GPA data as cause for concern along with a lack of research on the population. The author attempted to learn more about the population and the identities within it as well as in what ways community college supports or inhibits these students' success. Turning to Becker's cultural capital as related to student identity and

Bourdieu's concept of habitus, the author asserted the important role the community college environment plays on the student identity of adult immigrant students. In reviewing the literature, social belonging was found to be critical to whether students persist in their coursework and those students who are able to identify connections between their lived experiences and the concepts in their courses will be more likely to persist. Semi-structured qualitative interviews were conducted among six students and three faculty. Themes among the students are similar to other studies of older students reflecting struggles with age, balancing familial priorities, and difficulty finding social connectedness with other students in addition to a lack of college knowledge. Themes from the faculty included the recognition that each student has specific needs and that learning in English is a driving factor of enrollment for these students. The author asserted suggestions including the need for community colleges to play a more intentional role as guide within the environment and attempts to increase sense of belonging and understanding within the environment.

Key words: Sense of belonging, international students, community college

Kanno, Y., & Cromley, J. G. (2013). English language learners' access to and
   attainment in postsecondary education. *TESOL Quarterly, 47*(1), 89-121.

Citing the growing number of English Language Learners (ELLs) in the education system and the lack of research about successful degree attainment at the post-secondary level, the researchers explored the factors, both linguistic and nonlinguistic, for ELLs access to post-secondary education and completion of a degree. A review of trends and research presented justification for the research questions which explored patterns of access and attainment as they differ from monolingual English speaker and the impact of linguistic background as a predictor as compared to other documented factors including socioeconomic status, high school preparation, and race or ethnicity. Bourdieu's theory of cultural reproduction was offered as a theoretical foundation for the 12-year longitudinal study. The analytical sample consisted of 10,300 students from 1,052 schools who participated in five waves of interviews between 1988 and 2000. The students are divided into three linguistic categories: English-monolingual students (EMs), English-proficient linguistic-minority students (EPs), and English language learners (ELLs). Variables included access to and attainment in post-secondary education which include a bachelor's institution/degree or higher, a vocational program/certificate, a community college/associate's degree, and high school completion. Results indicated that the patterns for access and attainment for EMs at bachelor's institutions is significantly higher, for EPs at vocational and community colleges is significantly higher, and for ELLs to neither attend nor complete was significantly higher. When compared against the other potential factors, ELL status was less of a predictor than demographics and family dynamics indicating that the largest barriers to access and attainment were not language but rather conditions for those

who are from families that have transitioned or are transitioning to the United States.

Key words: Access to higher education

First-Generation Students

Aspelmeier, J. E., Love, M. M., McGill, L. A., Elliott, A. N., & Pierce, T. W. (2012). Self-esteem, locus of control, college adjustment, and GPA among first- and continuing-generation students: A moderator model of generational status. *Research in Higher Education, 53*(7), 755-781.

The purpose of this study was to examine the relationship between college students' generational statuses, self-esteem, locus of control, college adjustment, and GPA. In order to investigate this relationship, a sample of 322 undergraduate students were surveyed using a combination of online instruments, including a demographic questionnaire, the Rosenberg (1965) Self-Esteem Scale, the Lefcourt et al. (1979) Multi-dimensional-Multi-attributional Causality Scale, and the Baker and Siryck (1984) Student Adaptation to College Questionnaire. The results suggested that generational status significantly moderates the relationship between psychological factors and academic outcomes. Furthermore, first-generation status may act as a sensitizing factor that amplifies both the positive and negative effects of locus of control. However, first-generation status was found to be a risk factor with regard to self-esteem, only exacerbating its negative effects. The authors positioned their findings as reflecting motivational differences between first-generation students and continuing-generation students. Additionally, the authors argued that practitioners should consider creating interventions for first-generation students that focus on personal and psychological factors, such as self-esteem, attributional style, and academic-self efficacy, in addition to informational support and academic remediation.

Key words: First generation students, college adjustment, self-image

Atherton, M. C. (2014). Academic preparedness of first-generation college students: Different perspectives. *Journal of College Student Development, 55*(8), 824-829.

This research study investigated whether first-generation status influences both objective measures and self-assessments of academic preparedness. The data were collected over a ten-year period from students at a public, 4-year university in Southern California who participated in the Cooperative Institutional Research Program survey. Logistical regression analyses were conducted on the relationship between generational status and both objective and subjective measures of

academic preparedness. The analyses found that continuing-generation students were significantly more likely to have higher levels of objective academic preparedness, yet there was no difference found between first-generation status and self-reported ratings of academic ability. The author cited Vargas (2004) in arguing that first-generation students have difficulty in making a connection between academic preparation in high school and academic success outcomes in college, which can lead to feelings of frustration and negative retention. The article concluded with recommendations for ways practitioners can address the disparity, including pre-collegiate and summer bridge programs that feature faculty- and peer-mentoring and first-year programs that provide academic support resources and address first-generation student transition.

Key words: First generation students, academic preparation

Davis, J. (2010). *The first-generation student experience: Implications for campus practice, and strategies for improving persistence and success.* Sterling, VA: Stylus.

This monograph serves as a primer on the first-generation student experience for practitioners in academic affairs, student affairs, and administration. Davis argued that while the success of first-generation students is a stated priority for many colleges and universities, these institutions have no agreed-upon definition for what constitutes a first-generation student. These lead to difficulties in both counting first-year students and developing targeted interventions to support them. While Davis's discussion of the unique behaviors and internal psychology of first-generation students will help practitioners understand why first-generation students need to be treated as a unique sub-population, the highlight of this work is a collection of first-person narratives from first-generation students, followed by narrative analyses that examines the major themes and issues raised by the narratives.

Key words: First generation students, persistence, academic performance

Ecklund, K. (2013). First-generation social and ethnic minority students in Christian universities: Student recommendations for successful support of diverse students. *Christian Higher Education, 12*(3), 159-180.

The goal of this study was to provide recommendations for practitioners at Christian colleges and universities with regard to supporting first-generation students. Ecklund argued that Christian universities are in the position to create better experiences and interventions for first-generation students than they currently offer. Following a review of the literature on first-generation students, most of which focused on students at secular institutions, the author shared her findings from observing structured dialogues between first-generation students at a Christian University. These dialogues took the form of both a semester-long

discussion group of 7 students and a two-hour long forum with 56 participants. Practitioners may benefit from considering Ecklund's recommendations, based on these student narratives, for issues such as parent involvement, self-efficacy, stress management, curriculum issues, and mentoring/advising.

Key words: First generation students, students of color, mentoring, self-image, parental involvement

Everett, J. B. (2015). Public community colleges: Creating access and opportunities for first-generation college students. *Delta Kappa Gamma Bulletin, 81*(3).

This short article discussed problems of access first-generation college students face in obtaining college degrees while also positioning public community colleges as the institutions that provide first-generation students with the best opportunities for access and success. Everett structured this discussion with Heller's (2001) five categories of access (financial accessibility; geographic accessibility; programmatic accessibility; academic accessibility; and cultural/social/physical accessibility) as they relate to first-generation students. While Everett touched on challenges that community colleges face with low retention, transfer, and graduation rates and the impact this has on first-generation students, these issues are not discussed in depth.

Key words: First generation students, access to higher education, community college

Garcia, V. (2010). First-generation college students: How co-curricular involvement can assist with success. *The Vermont Connection, 31*(2010), 46-52.

In this short article, Garcia introduced some of the characteristics and challenges that first-generation students experience and uses Astin's (1984) student involvement theory and Huang and Chang's (2004) research on co-curricular student involvement and academic success to discuss positive correlations between involvement, academic attainment, and persistence for first-generation students. In particular, Garcia highlighted studies by Pascarella et.al (2004), and Inkelas (2006) focusing on first-generation students and co-curricular involvement, including the impact involvement may have on critical thinking, sense of control, and self-confidence. The article concluded with a call for more research on how involvement affects first-generation students attending different type of institutions, such as four-year vs. two-year institutions.

Key words: First generation students, co-curricular involvement, academic success

Gibbons, M. M., & Woodside, M. (2014). Addressing the needs of first-generation college students: Lessons learned from adults from low-education families. *Journal of College Counseling, 17*(1), 21-36.

This qualitative study adds to the literature about first-generation college students by examining the work and career experiences of first-generation college students after college completion. The authors' goal was to investigate the influence of the participants' parents and families on their career development. Using data collected from previous phenomenological studies they had conducted on the experiences of men and women whose parents lack post-secondary education, the authors identified three common themes from their interviews with participants about their experiences. These themes were the significant role of the participants' fathers in their educational experiences and career choices, their expectations about attending and completing college as a means to a good job, and their expectations for their careers as a source of enjoyment and fulfillment. The authors discussed their findings in the context of their implications for college career counselors and advisors and conclude that the study offers important insights into the career directions of first generation students, such as that students who are in conflict with their fathers may have difficulty making career decisions. In turn, they suggested the new information could be used by college counselors to develop talking points for professional practice involving first-generation students.

Key words: First generation students

Grayson, J. P. (2011). Cultural capital and academic achievement of first-generation domestic and international students in Canadian universities. *British Educational Research Journal, 37*(2011), 605–630.

This paper examined the experiences and outcomes of first-generation students in Canada, a population the author argues has been relatively overlooked by scholars in that country. Using data from a longitudinal survey study of entering domestic and international students at four Canadian universities beginning in 2003 and ending in 2006, the author investigated whether first-generation students have less positive experiences than other students, and if so, whether those experiences have a negative impact on their academic achievement. The research objective was informed by aspects of both the college impact model and cultural reproduction theory. The author analyzed the data for differences in demographic data and student experiences between attendees of the different universities, differences between domestic and international students, differences in academic achievement between first-generation students and other students, and consider the campus experiences of participants over time, with a goal of identifying how campus involvement impacted academic achievement for both first- and continuing-generation students. While the impact of campus involvement on international students was less clear, the author concluded that first-generation domestic college students in Canada are less involved than their peers in campus activities and have relatively low levels of academic achievement, which puts them at a disadvantage as

compared to their peers. While this research is specific to the experiences of students at Canadian universities, it may be of interest to those investigating links between co-curricular involvement and educational outcomes or differences between domestic and international students, as well as those concerned about the experiences of first-generation students more broadly.

Key words: First generation students, international students, academic performance

Hawthorne, M. & Young, A. (2010). First-generation transfer students' perceptions: Implications for retention and success. *The Journal of College Orientation and Retention, 17*(2), 29-39.

In this study, the authors examined the perceptions of first-generation community college students who transferred to a four-year institution. Hawthorne and Young cite Tinto's (1975) student integration model as the basis of their hypothesis that low degree attainment rates for community college transfer students may impacted by the high percentage of community college students who are first-generation students, as first generation students tend to be less comfortable the college environment, less involved on campus, and less satisfied by their college experiences than their peers. A total of 178 undergraduate students from Texas A&M University-Commerce took part in this study, answering a satisfaction survey and demographic questionnaire. The authors found that first-generation students, transfer students, and African-American and Hispanic students all experienced lower levels of satisfaction than second-generation students, non-transfer students, and European-American students, respectively. However, as both first- and second-generation transfer students had low levels of satisfaction with the overall four-year university experience, they concluded that first-generation status is not the only important factor in community college transfer student attrition from four-year institutions. The authors found that first-generation minority transfer students had lower levels of satisfaction than second-generation minority transfer students, which suggested that first-generation status may negatively impact students and minority community college transfer students in particular.

Key words: First generation students, transfer students, students of color, community college

Inkelas, K. K., Daver, Z. E., Vogt, K. E., & Leonard, J. B. (2007). Living-learning communities and first-generation college students' academic and social transition to college. *Research in Higher Education, 48*(4), 404-434.

This paper is a seminal work about the impact of living-learning (L/L) communities on the transition to college. Living-learning communities are defined as residential communities with shared academic focus or other theme. In this study, the authors specifically focused on the role of living/learning communities in the perceived

academic and social transitions of first-generation college students. After analyzing responses from 1,335 first-generation students from 33 four-year institutions who participated in the 2004 National Study of Living-Learning Programs, the authors concluded there is evidence that living-learning communities support positive academic and social transitions for first-generation college students. However, they found that co-curricular involvement and informal peer interactions (as elements of L/Ls) are not as impactful on first-generation students as they have been found to be on other groups in previous studies of L/Ls, which may interest researchers. The authors' recommendations for academic and student affairs practitioners included targeting first-generation students for recruitment to living-learning communities and making accommodations for commuter student participation in L/Ls as many first-generation students live at home. The authors also suggested that future research on the topic should incorporate a longitudinal design.

Key words: First generation students, college adjustment, transition

Irlbeck, E., Adams, S., Akers, C., Burris, S., & Jones, S. (2014). First generation college students: Motivations and support systems. *Journal of Agricultural Education, 55*(2), 154-166.

The authors conducted a case study of first-generation college students within the College of Agricultural Sciences and Natural Resources at Texas Tech University. They began with a literature review on the challenges unique to first-generation students. The authors used Astin's (1993) I-E-O model to frame their case study, which was conducted using semi-structured interviews in which the authors asked questions designed to elicit information on how participants selected the institution, the extent of participation in co-curricular organizations and activities, the support groups and specific support systems the participants avail themselves of, and the participants reported levels of satisfaction with the institution and the academic program. Findings indicated that students valued parental and high-school agriculture teacher support systems and availed themselves of those supports much more often than they used on on-campus resources. On the other hand, students often reported that their parents' lack of "college knowledge" adversely affected the students' transition into college. The authors suggested that college personnel strengthen their relationships with local high school counterparts in order to provide potential students with more assistance in making a successful transition into college.

Key words: First generation students, relationships, parental involvement

Jehangir, R. (2010b). Stories as Knowledge: Bringing the lived experience of first-generation college students into the academy. *Urban Education, 45,* 533–553.

This article is a philosophical meditation on how the stories we tell about ourselves reflect our constructed realities and lived experiences. The author drew on data collected as part of a larger eight-year longitudinal study of first-generation, low-income students who have participate in a specific Multicultural Voices Learning Community (MVLC) to examine the ways in which first-generation students from low-income families both experience and overcome feelings of isolation and marginalization during the first year of college. The author began by discussing the challenges faced by first-generation low-income students and by providing an overview of the MVLC, a part of the institution's TRIO student support services program. Next, the author described how critical pedagogy and theories of multicultural education serve as the frames through which she analyzes her data sets. These data sets consisted of weekly reflective writings and a final reflective paper collected as part of the first-year seminar attached to the MLVC and a series of semi-structured interviews conducted both at the end of the seminar and three-four years later. The author coded this reflective writing and the interview transcripts for themes related to self-authorship and how these experiences created narratives of isolation and inclusion that persisted throughout the collegiate experience.

Key words: First generation students, relationships

Jenkins, S. R., Belanger, A., Connally, M. L., Boals, A., & Durón, K. M. (2013). First-generation undergraduate students' social support, depression, and life satisfaction. *Journal of College Counseling, 16*(2), 129-142.

The researchers were interested in how to improve college wellness and counseling services for first-generation students and in how tailoring these services to the stressors that are unique to this population might increase retention and improve academic performance for these students. This study was designed to compare traumatic stress reactions, use and availability of social support, depressive symptoms, and general life satisfaction of first- and non-first generation students. The researchers hypothesized that first-generation students would report less social support, more symptoms of PTSD and depression, and less general life satisfaction than their peers. Participants in the study were culled from the researchers introductory psychology courses and were asked to complete four online psychometric inventories (Multidimensional Scale of Perceived Social Support, PTSD Checklist–Specific, Quick Inventory of Depressive Symptoms–Self Report, & Quality of Life Enjoyment and Satisfaction Questionnaire). Responses were analyzed using statistical analysis software. Of the four hypotheses of the researchers, three were supported. First-generation students reported less social support, higher levels of PTSD, and less life satisfaction than non-first generation students. The results also indicated that this was particularly true for first-generation women, who fared worse on every psychometric measure. One of the major recommendations of the researchers was that college counselors begin regularly testing for PTSD, which this study indicates is widely prevalent and the literature

suggests is underreported. A second suggestion was to focus efforts on ameliorating the acculturative stress particularly for first-generation women.

Key words: First generation students, relationships, self-image

Marsden, L. M. (2014). The transition to college of first generation freshmen. *InSight: Rivier Academic Journal, 10*(2), 1-7.

This article presents the results of a literature review designed to explore the research on the transition experience and orientation programming available to first-generation students. The literature review was conducted by searching through several academic databases for relevant original research. Articles were selected for inclusion if they focused on the transition and orientation experience of first-time, first-year, first-generation students. General findings of the review of the literature confirm much of the previous and subsequent research in this field. The literature reviewed indicated that first-year, first-generation students experience at least four forms of transitional stress: social, emotional, academic, and feelings of incongruence (which led to feeling isolated and disconnected from the institution). The author discussed some of these findings in more depth and concludes by calling for more research on these topics and particularly on the orientation programming available for this sub-population.

Key words: First generation students, transition

Melendez, M. C., & Melendez, N. B. (2010). The influence of parental attachment on the college adjustment of White, Black, and Latina/Hispanic women: A cross-cultural investigation. *Journal of College Student Development, 51*(4), 419-435.

This study sought to discover how parental/familial attachment affects the adjustment to college of white, black, and Latina women in their first year of study. The article began with a review of the literature on student transition and adjustment and the relationship of these factors to retention. There is a particular focus on previous studies that highlight the combined impact of gender, race/ethnicity, and culture. This was followed by an introduction to the psychological theories of attachment and adolescent development. Finally, the authors looked at the literature examining the impact of adjustment on retention as experienced by different student sub-populations. Based on the literature review, the authors hypothesized that race and gender played a significant role on levels of parental attachment and that considering factors of race and level of parental attachment in conjunction with one another would be the strongest predictor of college adjustment. Surveys were administered women (under the age of 24) in the first year of college and included demographic questions and both the Parental Attachment Questionnaire and the Student Adaptation to College Questionnaire. The survey results were analyzed using descriptive statistics and stepwise multiple regression analysis. Findings indicated that familial attachment could play an even

more pivotal role in adjustment and retention that previously realized, particularly for women of color. Furthermore, the familial situation may (depending on that situation) have strongly positive or negative effects on college adjustment.

Key words: First-generation students, students of color, African-American students, Latino and Latina students

Nguyen, A., Hays, B., & Wetstein, M. (2010). Showing incoming students the campus ropes: Predicting student persistence using a logistic regression model. *Journal of Applied Research in the Community College, 18*(1), 16.

This study investigated whether participating in an eight-week orientation course increases retention and persistence to the second year for incoming freshmen. The data for the study was obtained from the institutional student enrollment records and analyzed using logistic regression analysis. The analysis revealed that enrollment in the orientation course significantly improved fall-to-fall retention rates for participants by a rate of almost 18% with all other things being equal. The effect was still significant, although less so, for retention and persistence to the third year. Based on these findings, the authors recommended that the orientation course be made mandatory on their campus.

Key words: Persistence

Padgett, R. D., Johnson, M. P., & Pascarella, E. T. (2012). First-generation undergraduate students and the impacts of the first year of college: Additional evidence. *Journal of College Student Development, 53*(2), 243-266.

This study was designed to examine the intellectual and personal development of first-generation students and to provide empirical evidence on the predictive nature of parental education across six different measures of cognitive and psychosocial development. The authors began with an examination of the research on the effects of generational status and parental education on student success and achievement. Next the authors discussed several of the theoretical models that support the importance of parental educational attainment on the social and cultural capital that students bring with them to college. This was followed by an extremely detailed examination of the Wabash National Study of Liberal Arts Education (WNSLAE) dataset, the inventories and scales, and the data analysis methods that the authors used to conduct their study. Results indicated that first-generation students, particularly those exposed to best practices in student success programming, were not disadvantaged in comparison to their non-first-generation peers in three of the cognitive outcomes (need for cognition, critical thinking, and moral/ethical development). However, first-generation students were significantly disadvantaged

when it comes to the fourth cognitive outcome (positive attitude towards literacy) and both of the psychosocial outcomes (psychological wellbeing and appreciation for diversity). These findings suggested that student success programming may be needed in order to offer additional support for the psychosocial development of first-year, first-generation students.

Key words: First generation students, college adjustment

Soria, K. M., Stebleton, M.J. (2012). First-generation students' academic engagement and retention. *Teaching in Higher Education, 17*(6), 673-685.

Assuming that first-generation college students have less social capital than their non-first-generation peers, the study attempted to determine how lower social capital affects student success in terms of persistence to second year and differences in academic engagement. Citing existing research on first-generation students the authors explored the factors that create barriers in transitioning to the college environment. The authors also examined existing research findings indicating poorer academic performance from first-generation college students and the attributions in this research to Bourdieu's social capital framework ultimately surmising that first-generation college students don't inherit this social capital from their parents. The lack of social capital was identified by the authors as debilitating in the academic setting because it made students less likely to ask for help or interact with faculty. A survey administered to 28,237 undergraduate students examined themes including academic engagement, community and civic engagement, global knowledge and skills, and student life and development. Academic engagement was weighed through questions about frequency of in class and out of class interactions and involvement. Logistic regression predicting retention analysis for students persisting to their second year uncovered a significant decrease in the likelihood of returning for a second year among first-generation college students. Further, first-generation students were found to be less academically engaged than their non-first-generation student peers. The authors cited sense of belonging as an important consideration when viewing the data through the social capital lens and recommend that institutions establish "communities of belonging" for first-generation college students. Additionally, the authors suggested that high-impact practices could be of unique and significant benefit to this population. Finally, collaboration across divisions and outreach directly to first-generation students from faculty was encouraged by the authors. Future research was suggested to expand the study beyond the single institution and to explore more about pre-college preparation's role in academic engagement.

Key words: First generation students, engagement, academic performance, retention

Stoll, E.B. (2013). First-generation college students: Navigating the worlds of school and home. *The Journal of College Orientation and Transition, 20*(2), 5-15.

In this article, the author reviewed existing research and literature on first-generation students and highlights that success in these studies is defined in relationship to retention, focusing on impediments of student success. The author recognized the attention first-generation students have received in literature and research since the 1980's and acknowledges that many institutions have utilized research to develop programs for first-generation students, focused on campus engagement. The review demonstrated that little existing research, literature or programming examines the home environment and family relationship first-generation students experience, which the author argued are important considering it is an aspect of their family's education that determines their status as a first-generation student. The article advocated for a holistic view of the first-generation student experience that includes their family context due to the nature of the differences in negotiating new relationships with parents as part of the transition to college. One theme that was explored is the feeling of "homelessness" as first-generation students navigate their new roles both at campus and with their family. The author reviewed seminal theories related to student engagement and determines that these theories have contributed to a notion that parent and family relationships have a negative impact on the student transition to college. Internal Resources and Validation Theory were presented as important in considering how to best help first-generation students navigate their transition to college and the author asserts that institutions and practitioners must be willing to learn from first-generation students, listening to their voices when determining their need. The author cited research that points to the need to foster understanding and participation between first-generation students and their families. Further, the author advocated that families be included in the ways achievement is recognized and celebrated. Further research on the delicate balance of home and school life for first-generation students is advocated with specific attention to the ways policies and programs support or detract from first-generation students' needs.

Key words: First generation students, relationships, parents and family

First-Year Seminars & Experiences

Bers, T., Chun, M., Daly, W. T., Harrington, C., Tobolowsky, B. F., & Associates (2015). *Foundations for critical thinking*. Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.

Building on the seminal 1995 work by William T. Daly, published by the National Resource Center for the First-Year Experience and Students in Transition, Beyond

Critical Thinking: Teaching the Thinking Skills necessary for Academic and Professional Success, the editor presents the continued need for an examination of the teaching of critical thinking skills to students in college coursework. The text is divided into two sections, the first beginning with a modified version of Daly's work and laying the foundations for examining critical thinking in the college setting. Theoretical, developmental elements, pedagogy, and independent thought are explored within the first section. Section two presents eight case studies from public, private, two-year and four-year institutions, examining assessment tools, professional development, seminars and programs designed to infuse critical thinking into the framework, undergraduate research, and graduate internships. The text offers a comprehensive and diverse snapshot of the landscape of critical thinking within courses in higher education and provides demonstrated applications for committing to the outcome of critical thinking performance among college students.

Key words: first-year students, community college, program evaluation

Young, D. G., & Hopp, J. M. (2014). *2012-2013 National survey of first-year seminars: Exploring high-impact practices in the first college year (Research Report No. 4)*. Columbia: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition.

This monograph reported on the triennial National Survey of First-Year Seminars (NSFYS). The survey findings offered insight into the state of first-year seminars nationally including the typology, the strategies, the pedagogies, and the trends. Specific foci of the 2012 version included the role of peer leaders, integration of other high impact practices (HIPs) into the first-year seminar, and explanation from institutions that had no seminar at the time of the survey. The sample was representative of responses from 896 institutions, 804 of which offered a first-year seminar at the time of the survey which is the highest response rate offering at least one seminar in the survey's history. The 896 institutions were disproportionately large, public institutions. One finding is that the majority of first-year seminars were extended orientation followed by academic seminars, then hybrid seminars, with pre-professional and study skills seminars offered least. Some institutions reported that seminars were mandatory while others did not but that majority of institutions report that 90% or more of their first-year students enrolled in a first-year seminar. Reportedly, seminars have increased academic rigor, increased peer leader participation, serve as an anchor for HIPs, and are taught by faculty, part-time instructors, and staff from areas on campus other than academic affairs. It is concluded that the ongoing value of the NSFYS is evident in the landscape of trends and characteristics of seminars nationally that are exposed via the survey.

Key words: first-year, academic performance, peer support

First-Year Students

Dalton, J. C., & Crosby, P. C. (2014). The power of personal coaching: Helping first-year students to connect and commit in college. *Journal of College and Character, 15*(2), 59-66.

This article discusses personal coaching as a relatively new student support service aimed at helping first-year students succeed and persist in college. The authors begin by contextualizing personal coaching within the broader contexts of student engagement and retention initiatives, first-year experience and transition programs, and the evolution of the life coaching movement for business and professional leadership. The authors highlight features of existing college student coaching programs and argue that the proactive role of personal coaches differentiates this service from the other passive supports colleges and universities already provide. The authors also highlight the appeal of personal coaching to students who have limited contact with an institution's physical campus, such as commuters, part-time students, and online-only students, as well as returning veterans and adult learners who may need extra guidance and extra motivation. While the authors argue that personal coaching has the potential to positively impact student success and institutional effectiveness, they also provide a list of critical issues that should be addressed before this support service is widely adopted, such as a small body of evidence-based research and lack of convincing theoretical framework associated with personal coaching. This article provides many points of consideration for practitioners debating whether a personal coaching program will be right for their students and institutions.

Key words: First-year students, academic coaching, engagement, retention, and success

Goenner, C. F., Harris, M., & Pauls, K. (2013). Survival of the fittest: What do early behaviors tell us about student outcomes? *Journal of College Student Development, 54*(1), 43-61.

This study investigates how some behaviors observed during the recruitment process may relate to student success and retention by comparing stop-out behavior of first-year students at a large public university to their pre-enrollment participation in college fairs, campus visits, and welcome weekend activities. In order to do this, the authors followed the enrollment history of first-time, first-year students over three consecutive fall semesters and attempted to control for several factors that might impact their results, such as previous academic ability, socioeconomic background, and state residency status (as it relates to the cost of tuition). The results of the study indicate that students who participated in the pre-enrollment events were less likely to stop out. The authors argue that participation in these events may reveal students' underlying motivation, preparation, and commitment to the institution, which positively correlate with persistence and

success, and that institutions can use student data to improve their understanding of how their early interactions with students may impact outcomes. Additionally, institutions may be able to identify at-risk students and develop targeted interventions by analyzing participation data. While the participants of this study were limited to a single institution, its implications will be of interest to any practitioner or researcher working in the area of student success.

Key words: First-year students, orientation and transition programs

Jenkins, G., Lyons, K., Bridgstock, R., & Carr, L. (2012). Like our page: Using Facebook to support first year students in their transition to higher education. A Practice Report. *The International Journal of the First Year in Higher Education, 3*(2), 65-72.

In this article, the authors discuss the implementation of a Facebook page as a communication channel between program staff, teaching faculty, and cohort of first-year students within the Creative Industries Faculty at the Queensland University of Technology. The article is structured with a series of questions and answers that address issues readers might raise about the decision to create a program Facebook page, such as posting content and frequency, risk management concerns, staff workload implications, and student participation activity and impact. Throughout the article, the authors give many specific examples of how the cohort Facebook page is used in their department for administrative communications, academic and social engagement with and between students, and assessment of student learning and satisfaction. The authors also highlight the importance of having the framework of a social media policy to guide and govern interactions with students on a platform such as Facebook. While the popularity of specific social media platforms with college students is always changing, this article introduces key issues for those considering whether an official social media presence may be useful for an institutional or departmental first-year experience program and may also be of interest to those researching social media, online teaching, innovative content delivery methods, and student behavior online.

Key words: College adjustment, first-year students, social media

Lane, F. C., Martin, G. L., & Henson, R. K. (2015). A multidimensional comparison of traditional, transfer, and online students' university attachment. *Journal of College Student Development, 56*(7), 746-751.

This study was designed to test the validity of the University Attachment Scale (UAS) to see if the UAS is an appropriate scale to measure engagement and institutional belonging at a four-year public institution with a large transfer population to delineate the differences measured by the UAS between traditional and transfer students in terms of connection to campus. Previously the UAS had only been administered on residential campuses with traditional students so the authors

were interested in how the UAS worked as a measure of attachment on a larger and less traditional student body. The researchers collected UAS surveys from 983 students, a little more of half of which were transfer students (evenly split among first-, second-, third-, and fourth-year students). Based on the analysis of the survey data, the authors concluded that the UAS is a valid instrument that can be used to measure the institutional belonging of transfer students, which expands the UAS scope of use. Practitioners interested in measuring the attachment and engagement of their students may find this study of use in determining an appropriate scale or measurement to use on their campuses.

Key words: Transfer students, engagement, sense of belonging

Mattanah, J. F., Ayers, J. F., Brand, B. L., Brooks, L. J., Quimby, J. L., & McNary, S. W. (2010). A social support intervention to ease the college transition: Exploring main effects and moderators. *Journal of College Student Development, 51*(1), 93-108.

The researchers hypothesized that a peer-led social support intervention would increase levels of perceived social support and interaction, reduce loneliness, and improve process of college adjustment. The study described in this article was conducted over a two-year period at a large, four-year commuter institution and participants were all first-time, first-year students. Participants were engaged in a 9-week intervention during which groups of students met weekly with peer-facilitators to discuss issues related to social adjustment to college. The article includes a detailed report of the demographic characteristics of the participants and of the instruments, procedures, and methods of analysis used by the researchers. The researchers found that their hypothesis was born out, particularly in the reduction of loneliness. Practitioners will find this study useful if they are interested in or working to add peer-support programming to existing first-year initiatives.

Key words: First-year students, peer support, sense of belonging

Stephens, C. M., & Beatty, C. C. (2015). Leading and Thriving: How Leadership Education Can Improve First-Year Student Success. *Journal of Leadership Education, 14*(3), 119.

This article is an examination of two theoretical models (Schreiner's Thriving Model and Social Change Model) in order to see where these two models intersect, specifically delving into whether using Social Change theory to improve student self-advocacy and the development of leadership skills has a positive impact on student thriving. The authors break down each theory into its component parts and carefully lay out the areas where they see the theories intersecting. Furthermore, the authors include a lengthy section describing what these intersections look like in terms of student learning and provide many examples of how these connections can be intentionally strengthened and implemented in leadership development

courses. A robust section detailing the implications of this research for practitioners, including a series of recommendations for best practices, and the authors conclude by suggesting that future empirical research can and should be conducted to test the validity of this theoretical model.

Key words: College adjustment, first-year students, development theory, thriving

Stephenson-Abetz, J., & Holman, A. (2012). Home is where the heart is: Facebook and the negotiation of "old" and "new" during the transition to college. *Western Journal of Communication, 76*(2), 175-193.

Acknowledging the usage patterns of college students in "emerging adulthood" (ages 18-25), the authors consider identity and Relational Dialectics theory to account for meaning-meaning making, negotiation of old and new identities and relationships, and to allow for the nuances that emerge during the transition to college. Using an interpretive research method of open-ended interviews 30 students meeting requirements of age, enrollment, and Facebook account ownership are interviewed. Results indicated tension for students as they experienced new identity development and new relationships during their transition and balancing those introductions to self and friendships with their old identities and their old relationships proved to require maintenance. The researchers identify that a need to connect with old and new friends creates a process of "Preservation and (Re)invention". Participants described how Facebook's social media platform provided a platform for personal preservation; participants also identified Facebook as a tool to reinvent themselves and demonstrate their new self to new friends. Additionally, participants express that social media is a place to perform their identity in a unique way. The most tension participants disclosed was in the consideration of which information should be revealed and which information should be concealed on Facebook and that this tension was grounded in the conflict between old and new. The researchers found that Facebook provides value for the student in transition as it helps them to maintain connections and form new connections even through the contradictory struggles that the processes of meaning-making and identity development.

Key words: College adjustment, first-year students, identity development, relationships, social media

Turner, P. (2016). Supporting freshman males during their first-year of college. *College Student Journal, 50*(1), 86-94.

This study acknowledges that the identity issues facing men in college may directly impact the high rate of dropouts, and therefore, the researcher sought to examine the first-year of college to understand strategies for supporting college men. Relying on Tinto's Integration model as a framework the qualitative study asked participants to reflect on engagement and support during their first year. Sixteen

semi-structured interviews are conducted with students who attended a large Southern institution. Participants included students who persisted to their second year, as well as several students who dropped out at the end of their first year. Themes that emerged in the study included: social connections, study skills, and the interactions between faculty and students. In the study, social relationships and study skills were factors that led to the choice to persist or not; while not as heavily weighted, interactions with instructors is noted by a majority of the participants as a positive influence toward persistence. The authors recognize that the study is limited because the pool of participants is limited to a specific institution with its own culture but assert that implications are valuable from the study recommending that institutions work to engage first-year male students with their peers and for instructors to form relationships with first-year male students, specifically aiding in the adjustment to college academic rigor. Further implications are connected specifically to supporting males in their academic transition providing study support but also support in the form of advising and early interventions.

Key words: College transition, first-year students, peer support, student-faculty/staff interaction, study skills

Vaccaro, A., Adams, S. K., Kisler, T. S., and Newman, B. M. (2015). The use of social media for navigating the transitions into and through the first year of college. *Journal of the First-Year Experience and Students in Transition, 27*(2), 29-48.

The authors share their findings from two constructionist qualitative studies that explored how students use social media to build connections to campus and to ease their transition into college. The authors include a review of the literature on both the impact(s) of social media and on how first-year students experience the transition to higher education. The authors describe the methodology and data analysis of both studies. Study A was predicated on grounded theory research and involved coding semi-structured interviews. Study B was an exploratory qualitative study in which data was collected from student focus groups. Findings indicate that students do in fact use social media as tools of transition before they arrive on campus and as a way to establish connections to campus and classmates during the first semester of college. Of particular interest is the finding that while students appreciate being kept aware of college events and resources via social media, they vastly prefer not to engage with student and academic affairs professionals as social contacts. Practitioners can use this research to inform their decisions as to the appropriate frequency, volume, and content of material they choose to post to institutional or departmental social media accounts.

Key words: First-year students, college adjustment, social media

Wojcieszek, J., Theaker, L., Ratcliff, M., MacPherson, L., & Boyd, J. (2014). Enhancing the first year student experience through academic and professional staff collegiality. A practice report. *The International Journal of the First Year in Higher Education, 5*(1), 143-151.

This study examined the development and effectiveness of a university-wide First-Year Advisor Network (FYAN). The FYAN bridges advisors embedded in schools across the university, and the new FYAN acknowledged that first-year advisors play both an academic and an extra-curricular role in supporting first-year students. Using surveys the researchers review staff perspectives on the success of the network as it relates to supporting first-year transition. The first round of surveys indicates that increased communication and enhanced involvement in institutional culture are positive outcomes. The second round of surveys indicates a small increase in the FYAN's ability to increase awareness of first-year student needs but subsequent surveys demonstrate continued awareness university-wide for best practices to support first-year students. Significantly, staff and faculty point to first-year advisors as an emergent resource to refer first-year student to or for themselves as staff and faculty.

Key words: Advising, campus culture, collaboration between academic affairs and student affairs, first-year students

Foster Care Youth

Day, A., Dworsky, A., Fogarty, K. & Damashek, A. (2011). An examination of post-secondary retention and graduation among foster care youth enrolled in a four-year university. *Children & Youth Services review, 33*(11), 2335-2342.

The study examined whether students who have formerly been in foster care are more likely to drop out of college than low income, first-generation students who had not been in foster care. The authors' aim was to compare outcomes of former foster-care college students to students from a similar socioeconomic background rather than to the general student population, which they argue is a new contribution to the literature. The study used administrative data from the Michigan State University student information systems database to compare outcomes between 444 undergraduates who self-identified as former "wards of the Court" and 378 low-income, first-generation students who had not been in foster care. Findings suggested that former foster care students are significantly more likely to drop out of college than non-foster care students, both by the end of the first year and before degree completion. The authors discussed several implications of the study for policy and practice relating to former foster care youth in post-secondary education, recommending that federal and state governments fund campus support initiatives

for former foster-care students and priority status for federal work study placements be given to this student population.

Key words: first-generation, policy, foster-care

Salazar, A.M. (2012). Supporting college success in foster care alumni: Salient factors related to postsecondary retention. *Child Welfare, 91*(5), 139-167.

This study investigated the factors that differentiate foster care alumni who drop out of college from those who complete college. The author examined the experiences of both groups through a survey of 329 participants who had received college scholarships aimed at youths in foster care between 2001 and 2009. Salazar highlighted findings from the study that suggest that having sufficient support in some facets of independent living, such as support for housing and transportation needs, was an indicator of increased college retention, while indicating that help with finding stable housing was not needed was actually associated with college attrition. The goal of this research was to help social workers and policy makers identify individuals in foster care or foster care alumni who will most benefit from independent living programs, college-based support programs, and other sources of support for postsecondary education, as well as help ILP providers and colleges with limited funding make informed decisions about programming.

Key words: retention, policy, programming, foster-care

Unrau, Y.A. (2011). From foster care to college: The Seita scholars program at western Michigan university. *Reclaiming Children & Youth, 20*(2), 17-20.

This article described the Seita Scholars Program at Western Michigan University as an example of a campus support program for former foster-care youth. The program offers a tuition scholarship that minimizes the need for student loans when combined with other available state funding for foster care alumni. Unrau describes Seita Scholars Program as intentionally student-centered, inviting students to participate in programming and planning decisions. The guiding principle of the program is to provide participants with strategies for transitioning into adulthood and college. A notable feature of the program is its use of a coaching model that matches each participant with both a Campus Coach (a master's level professional who helps students navigate their new environment) and a Department of Human Service Coach who advises students about public support services. Practitioners in student affairs who want to develop a campus support program for former foster-care youth may benefit from this program description.

Key words: programming, transition, foster-care

Unrau, Y. A., Font, S. A., & Rawls, G. (2012). Readiness for college engagement among students who have aged out of foster care. *Children and Youth Services Review, 34*(1), 3476-83.

This study examined differences in self-reported college readiness between first-year students who have been in foster care and the national first-year student population. The facets of college readiness for college engagement that the authors aimed to investigate include academic motivation, social motivation, receptivity to student services, and general coping. The authors used a one-group cross sectional survey that compared 81 former foster-care youth at Western Michigan University to the national population mean of freshman college students who had taken the Noel-Levitz College Student Inventory (CSI), Form A, during fall 2009 and 2010. They also compared institutional academic performance data between a sample of 79 former-foster youth and 6517 non-foster youth to determine differences in course withdrawals, credit hours attempted, credit hours passed, and GPA. The authors found that significant differences in readiness to engage in college exist between both groups. Former foster care youth reported higher levels of academic and social motivation and are more receptive to academic student support services, personal counseling, and social enrichment, but are less receptive to career counseling and report lower levels of family support. The study's findings also indicated that former foster youth were more academically underprepared for college than their peer and that this gap persists across the first semester of college. The authors argued that the combination of high motivation with low family support and academic preparedness may indicate a tendency towards optimism that can easily turn to frustration that puts former foster care students at particular risk of attrition.

Key words: first-year, foster-care, engagement

Graduate Students

Bourner, T., & Heath, L. (2014). The pedagogic potential of the pub quiz. Innovations in *Education and Teaching International, 51*(1), 105-114.

This paper presents a case study of a two-day student program orientation for a small professional graduate program in Great Britain that used a "pub quiz" as a way to efficiently present new students with a host of important program information while also facilitating new student peer interactions. The pub quiz activity was developed as a solution to the need to assess new graduate student familiarity with the contents of the student handbook. The 35-minute quiz was structured as a competition between two teams and was scheduled as the last event on the second day of the orientation. The authors evaluated the successfulness of this program in achieving its aims and reflect on both positive elements and drawbacks to the pub quiz model, as well as discuss the limitations of the model for larger programs, other disciplines, or cultural contexts outside the United Kingdom. The article closed with

a discussion of the pedagogical values and beliefs that support the idea of a pub quiz as a valid pedagogical device to support student learning in many educational contexts.

Key words: orientation programs

Crede, E., & Borrego, M. (2014). Understanding retention in US graduate programs by student nationality. *Studies in Higher Education, 39*(9), 1599-1616.

This study contributes to the literature on graduate student retention by investigating differences student characteristics and experiences related to retention and degree completion between students of different nationalities in U.S. engineering programs. International students comprise a majority of the graduates from U.S. engineering programs, which the authors argued makes this discipline uniquely suited for studying cultural differences as a facet of graduate student retention. The authors developed surveys to administer at four U.S. research universities in fall 2010, which resulted in responses from 685 graduate students from six international regions (including the United States). The survey explored several constructs related to doctoral student retention the authors identified from earlier studies by others and their own ethnographic observations of graduate engineering research groups. These constructs were expectations, individual preferences, project ownership, perception of value, organization, and climate. The authors analyzed differences in the construct mean for each nationality group and discussed the implications of their findings for research advisors and faculty members who work with culturally diverse research groups in doctoral engineering programs.

Key words: retention, international students

Curtin, N., Stewart, A. J., & Ostrove, J. M. (2013). Fostering academic self-concept advisor support and sense of belonging among international and domestic graduate students. *American Educational Research Journal, 50*(1), 108-137.

This study examined differences in beliefs about the importance of certain graduate school experiences between international and domestic doctoral students at a Midwestern U.S. research university. The goal of study was to investigate any relationship between retention outcomes and differences in beliefs about advisor support, sense of belonging, and academic self-concept, as international students complete graduate degrees at higher rates, in less time, than domestic graduate students despite facing challenges related to acculturation to the U.S. higher education system. The authors analyzed data from 841 students who responded to a Graduate Student Climate Survey and began their doctoral studies between 1998 and 2003. International students represented 22% of the sample. Among their findings, the authors discussed the high value placed on research and other

academic activities and strong sense of belonging experienced by international students as compared to their domestic peers. Another significant difference between the groups is that domestic students appear to associate sense of belonging with academic self-concept, while international students do not. However, advisor support was associated with a stronger sense of belonging and academic self-concept for both groups. The authors discussed possible explanations and implications for their findings for policy and student support interventions. This included graduate programs placing a focus on facilitating positive student-advisor relationships, perhaps above other student-experience concerns.

Key words: retention, college adjustment, policy

Di Pierro, M. (2012). Strategies for doctoral student retention: Taking the roads less traveled. *The Journal for Quality and Participation, 35*(3), 29-32.

This paper presents a short overview of a few initiatives and approaches that may support increased student retention in doctoral education. The author advocated for universities developing holistic initiatives for graduate student retention that incorporate enhanced advising and mentorship, technical support, and just-in-time training within the framework of an ongoing doctoral experience. The author argued that universities and individual departments need to assess and analyze the true causes of doctoral student attrition and focus on fixing flawed processes, not blaming unprepared students who cannot meet the academic challenge of graduate education. The author contextualized the critique within a discussion of the implication of continued heightened attrition of doctoral students for programs and universities with regard to funding, Carnegie classification, and the global standing of the United States in scientific and technological research and discovery.

Key words: retention, advising, mentoring, assessment

Gardner, S. K., & Gopaul, B. (2012). The part-time doctoral student experience. *International Journal of Doctoral Studies, 7*, 63-78.

This study was designed to identify the unique needs and challenges of part-time doctoral students. The authors began with a review of the existing literature, which indicates that the experience of the part-time doctoral student is in many ways dissimilar to the experience of the traditional full-time student. In particular, the research showed that part-time doctoral students are less satisfied with and less committed to their institutions and their specific doctoral programs. Part-time students are also less engaged as scholars and have less opportunity to act as researchers. The authors designed an exploratory case study to determine what particular challenges their part-time doctoral students face and to discover how these students can be better supported at their institution. The authors conducted in-depth interviews with ten part-time doctoral students and analyzed the transcripts using the constant comparative method. The themes that emerged were

issues part-time students face in terms of balance, support, and "fitting the mold". The authors' recommendations included creating cohorts and peer groups of part-time doctoral students, providing online and point-of-need support services for these cohorts, and keeping the challenges of balance in mind when developing and scheduling classes and program events.

Key words: *engagement, environment*

Jairam, D., & Kahl Jr, D. H. (2012). Navigating the doctoral experience: The role of social support in successful degree completion. *International Journal of Doctoral Studies, 7,* **311-329.**

This study explored the social support networks that can help mitigate the high attrition rate of doctoral students, particularly students in the first year of their programs. The authors began with an overview of some of the most common stressors for new doctoral students, including relative poverty, anxiety, sleeplessness, academic demands, fear of failure, examinations, time constraints, and social isolation. The authors then described the parameters of their research study. They administered an online open-ended qualitative survey to peers and colleagues who had successfully finished their doctoral programs in order to determine which social support networks doctoral student relied on and which behaviors of those support networks were most beneficial and most detrimental. The authors used the grounded theory method to analyze the survey data. Results indicated that there are three main types of social support networks: academic friends, family/friends, and professors (particularly doctoral advisors). The most positive behaviors from these groups included emotional, practical, and professional support. The most negative behaviors included competition between academic friends, lack of understanding from family, and lack of professional activity from faculty. Recommendations for doctoral students included forming and maintaining academic friendships (including the formation of study groups and/or research/writing groups), seeking specific assistance from family and alerting family members when they are being unsupportive, and reaching out early and often to their advisors. Recommendations for doctoral faculty included providing compassion and understanding, sharing practical advice and expert guidance, and involving/inviting students into research and professional networks.

Key words: *college adjustment, support*

Kozar, O., & Lum, J. (2013). Factors likely to impact the effectiveness of research writing groups for off-campus doctoral students. *Journal of Academic Language and Learning, 7*(2), **A132-A149.**

This article provides a comprehensive literature review that explored using Research Writing Groups (RWG) and how these groups can be best designed to mediate feelings of isolation and self-doubt frequently experienced by off-campus doctoral students. The authors were specifically interested in investigating how

computer mediate communication (CMC) can facilitate RWG for off-campus students. The review began by looking at the research on how RWG combat isolation and increase feelings of belonging and participation in academic communities of practice. Next the authors reviewed the literature on common challenges experienced by doctoral students and the role RWG can play in mitigating these challenges. Following this, the authors examined the relevant research on the role of CMC relative to cognitive and interpersonal development. The authors then moved on to examining the best practices in developing and implementing CMC RWG. These considerations include pedagogy, logistics, sustainability, administration, mode of delivery, and facilitation. The authors focused the rest of the review on examining best practices related to mode of delivery and facilitation. The literature suggested that a combination of asynchronous and synchronous tools is most effective for online RWG. In terms of facilitation, the existing research suggests that RWG can be effective whether they have professorial or student-led facilitation. Best practices for CMC RWG included voluntary participation, small group size, joint development of procedures and practices, distributing writing pieces in advance, and providing guiding questions for reviewers. Lastly, in order to be successful CMC RWG need to increase interpersonal relationships, cognitive skills and development, and need to work logistically for the group members. If these conditions are met, CMC RWG can be very effective and beneficial for off-campus doctoral students.

Key words: college adjustment

Litalien, D., & Guay, F. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources. *Contemporary Educational Psychology, 41*, 218-231.

This study aimed to develop and test a new model of what leads doctoral students to persist in their studies and, conversely, to examine what might be contributing to the high attrition rate of doctoral programs. The authors used the model of self-determination theory (SDT), which explores the motivational and support systems needed by doctoral students to succeed in their studies, to inform the development of their own model. The authors began by outlining the research on SDT and then review the literature on doctoral student motivation, retention, and persistence. This was followed by a discussion of the model the authors propose as a lens through which to study these phenomenon. Finally, the authors discussed the two studies they have conducted so far as a means of testing their model. Both studies involved surveying doctoral students and showed similar results. The first study focused on surveying both completers and non-completers and the second study surveyed current doctoral students as to their perceived likelihood of completion. Overall, findings supported the authors' model and indicate that self-determination and motivation are strongly increased when doctoral advisors take an active and interested role.

Key words: engagement, thriving

Greek Life Students

Moreno, D., & Banuelos, S. (2013). The influence of Latina/o Greek sorority and fraternity involvement on Latina/o college student transition and success. *Journal of Latino/Latin American Studies, 5*(2), 113-125.

The authors began with a literature review of studies conducted regarding affiliations with Latino/a Greek Letter Organizations as well as seminal research regarding the positive impacts of student involvement during the transition to college and the positive impacts of belonging for Latino/a students during the transition to college. The authors then facilitated a cross-case analysis of two Latino/a Greek Letter Organization studies that qualitatively explored students' experiences during their adjustment to college. Common themes from the two studies, which were both conducted via interviews with undergraduate students, included peer-to-peer support and encouragement, sense of belonging, and engagement with campus. Latina and Latino students responses were reviewed for how gender impacts the outcomes of the common themes but major differences between the two groups aren't emergent. Primarily, the common themes were asserted to be true for both Latina and Latino students involved in their culturally affiliated Greek Letter Organizations. The authors suggested continued exploration of the benefits of involvement in these organizations for Latino/a students and that the cross-case analysis be used as a foundation for further research.

Key words: Latino/a students, transition, peer support, college adjustment

Honors students

Scager, K., Akkerman, S. F., Keesen, F., Mainhard, M. T., Pilot, A., & Wubbels, T. (2012). Do honors students have more potential for excellence in their professional lives? *Higher Education, 64*(1), 19-39.

This study used Renzulli's (1986) Three-Ring Model to determine what student characteristics lead to professional excellence in later life. The authors were particularly interested in discovering if these characteristics are shared by both honors and non-honors students and if not, which of these characteristics have the greatest variance between the two populations. The authors began by discussing the predictive characteristics that lead to professional excellence as defined by Renzulli and developed further by various studies. They then discussed how they adapted the Three-Ring Model to fit their research questions and their student population. This was followed by an examination of the research on differences between honors and non-honors students, particularly focusing on studies and meta-analyses conducted in the last ten years. The authors then turned their attention to the

40

design of their own study. They first outlined the six characteristics that are under study: intelligence, creative thinking, openness to experience, the desire to learn, persistence, and the drive to excel. They next discussed how they developed their research questionnaire, which they did by using parts of several existing validated instruments that measure these characteristics. After administering the self-report questionnaire, the authors used SPSS to conduct multivariate analysis of variance between honors and non-honors students. The results showed that honors students did in fact score higher on five of the six characteristics (everything except persistence). Furthermore, the authors identified three characteristics that were rated substantially higher (desire to learn, drive to excel, and creativity) for honors students, while intelligence and persistence were the least differentiated. The authors recommended that practitioners use these findings to reexamine admissions criteria into honors programs.

Key words: honors student

Wawrzynski, M. R., Madden, K., & Jensen, C. (2012). The influence of the college environment on honors students' outcomes. *Journal of College Student Development, 53*(6), 840-845.

This study examined the influences that participating in an academic living learning community (ALLC) has on honors students' learning outcomes and peer relationships. The authors use Bronfenbrenner's (1993) ecological paradigm as their conceptual framework. The study data was pulled from a larger study of students' experiences of living in a residence hall. All residential students were asked to complete a web-based survey (Resident Hall Environment Survey), which is a 76 self-report questionnaire. The authors teased out data related to honors students and used MANOVA to analyze the survey results. The analysis revealed that honors students who participated in an ALLC reported higher levels on all five variable scales the authors tested. ALLC honors students reported that they felt a greater sense of belonging, had more academic interactions with peers, felt they were in a more enriching educational environment, had more frequent interactions with faculty, and had more frequent intellectual conversations with peers. These findings led the authors to recommend that faculty work to increase their presence in the living learning communities, particularly within the residence hall, and work to develop ways to encourage students to make and recognize connections between what happens in the classroom to what happens outside of class in their living spaces.

Key words: friends/friendships, student-faculty interaction, college adjustment, honors student

Immigrant & Undocumented Students

Hernandez, S., Hernandez, I. Jr., Gadson, R., Huftalin, D., Ortiz, A., White, M., Yocum-Gaffney, D. (2010). Sharing their secrets: Undocumented students' personal stories of fear, drive, and survival. *New Directions for Student Services, 2010*(131), 67-84.

This chapter illuminates the unique psycho-emotional barriers to success of undocumented students in higher education. The authors used a narrative qualitative research design and present the lived experiences of five Hispanic undocumented students as expressed by those students. The authors invited these students to reflect on and share their personal stories and then the authors examined those stories for points of commonality and to discover where those students had similar and dissimilar experiences. The narratives were further analyzed to uncover larger themes of college life as an undocumented student. Emergent themes included undocumented students creative use of available resources, the stress attendant on keeping their status secret, and the widespread sense that they must "give back" or "pay forward" to their communities because of the opportunities they've been able to take advantage of. Recommendations for student and academic affairs professionals included creating welcoming and supportive environments, the need to create trust and "safe spaces" where students can share their secrets, and the need to keep abreast of the latest legal regulations and policies that can impact undocumented students in order to provide the highest levels of service.

Key words: Undocumented students, academic, policy, support

Lopez, J. (2010). Undocumented students and the policies of wasted potential. In S. Gold & R. Rumbaut (Eds.), *The new Americans: Recent immigration and American society* (n.p.) El Paso, TX: LFB Scholarly Publishing.

This monograph exampled the educational challenges faced by undocumented students, particularly those seeking higher education in the state of North Carolina. This work is the published culmination of a multi-year ethnographic study undertaken by the author. Lopez was interested in exploring how state laws and institutional policies restrict access to undocumented students and how this restriction impacts the students, the institutions, and the state. The author also examined how these restrictive policies work against student and academic affairs professionals as they seek to form relationships with and serve as advocates for undocumented students. Lopez also discussed the ways in which these policies serve to disadvantage not only the students but the institutions and the state as well and she makes a compelling case that these policies are weakening the state economy by encouraging bright and dedicated future workers to move elsewhere in order to pursue their educational dreams. Individual chapters are devoted to reviewing the literature on undocumented students and providing overviews of

relevant theoretical models, detailed descriptions of current practices, and in-depth explorations of the effects of these practices on students and the state of North Carolina.

Key words: policy, undocumented students

Munoz, S. & Maldonado, M. (2012). Counterstories of college persistence by undocumented Mexicana students: Navigating race, class, gender, and legal status. *International Journal of Qualitative Studies in Education, 25*(3), 293-315.

This article is an examination of the lived experiences of undocumented Mexicana students in higher education. The authors found Critical Race Theory to be a useful lens through which to explore the factors that contribute to this subpopulation's rate of persistence and retention. The authors delved further into Critical Race Theory and use a sub-theory, Latino/a Critical Race Theory as the framework through which to examine how undocumented Mexicana students navigate the often unfamiliar and frequently hostile landscape of higher education, both in terms of how they create positive self-images and how they successfully progress through school. The authors collected data by conducting in-depth semi-structured interviews and a facilitating a follow-up focus group. The interview and focus group questions were designed to uncover the counter-narratives that the students use to contravene the stereotypical expectations of undocumented students and the strategies these students use to successfully increase their self-efficacy and success. The authors selected a small sample to serve as a case study in order to contextualize and document the experience of undocumented Mexicana immigrant women in higher education. The authors recognized the limitations involved in using such a small sample (four students), but argue that their aim is "not to make generalizations but to bring to the fore alternate stories of race, gender, class, and legal status" as lived experiences (p. 296). One of the most compelling emergent themes uncovered in these narratives was how undocumented Mexicana students view themselves as "silenced outsiders" in the college environment. Recommendations included ways to ensure the inclusion of the experiences, challenges, and needs of these students be met in order to increase a sense of belonging for undocumented students on campus.

Key words: undocumented students, retention, student success

Perez, P. (2010). College choice process of Latino undocumented students: Implications for recruitment and retention. *Journal of College Admission, 206,* 21-25.

This study specifically sought to understand the barriers to attendance of undocumented students at four-year institutions of higher education and to discover strategies that counseling, admissions, and outreach professionals can employ to help undocumented students move more smoothly through the

enrollment process. The author began by providing justification in the research literature for why such a study is necessary and the impact that the adoption of California AB 540 has had on college choice decisions of undocumented Latino/a students. He proceeded to discuss how factors such as the availability of financial aid, the costs of attendance, and how both socio-economic status and social support networks influence the decisions students make about where to apply to and where to attend college. Perez used a mixed-method approach including both qualitative interviews and quantitative demographic questionnaires to collect the data for his study. His key findings were that complications of cost are among the most salient and significant barriers to applying to selective four-year institutions and that college choice was disproportionately influenced by social support networks, particularly siblings and peers, among undocumented Latino/a students. Recommendations included exploring alternate funding models to offset the costs of attendance and targeting siblings and peers specifically with additional "college knowledge" particularly by creating high school to college bridge programs and peer groups.

Key words: undocumented students, Latino/a students

Nguyen, D. & Serna, G. (2014). Access or barrier? Tuition and fee legislation for undocumented students across the states. *Clearing House, 87*(3), 124-129.

The authors examined governmental policies that determine access to higher education for undocumented individuals. A review of federal policy was explored as well as state policies specifically related to in-state tuition policies. Implications presented by the authors indicated that the lack of a federal policy has implications for all states regardless of their own in-state tuition policies. Arguing that educational opportunities lay a foundation for success in one's future, the authors urged for federal legislation that allows for equal access to education regardless of the state one lives in. Specifically, the authors of this article reviewed research and policy in relationship to the DREAM Act and suggest that comprehensive policy such as the DREAM Act be enacted to reduce implications of the status quo piecemeal and varied state-by-state legislation.

Key words: undocumented students, policy

Learning communities

Chism Schmidt L., & Graziano, J. (Eds.) (2016). *Building synergy for high-impact educational initiatives: First-year seminars and learning communities.* Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience & Students in Transition.

Citing the trend among institutions to merge high-impact practices (HIPs), first-year seminars and learning communities, the editors called for a review of the practice to understand the trend and confirm the success of the combined programming decision. The text is split into two sections, the first examines the rationale behind the trend to combine these HIPs beginning with a historical perspective on the development of first-year seminars and learning communities and how they came to be identified as HIPs. There is further examination of how the combined programming might look, modeling the types of seminar courses that might anchor a learning community as well as more complex models. Further conversations in section one included those about program design and implementation and concepts related to course integration. Section two presented seven case studies that examined the combined approach and the practical success of the programming decision. The practical application present models at both two-year and four-year institutions, and one program that provided a bridge between two-year and four-year institutions, and provided examples of specific situations in which the combined approach has the ability to provide instructive data. Each of these cases focused on different measured outcomes ranging from cost-effectiveness for the institution, residential programs, institutional collaborations, metacognition, and the success of designing integrated programs between institutions, and all the approaches impacts on student success. The result is a comprehensive view of the outcomes of combining these HIPs. Findings in the text included the emergent intersections of community and integration among these HIPs and justified a deepened view moving forward to continue these core values while emphasizing assessment and the integration of additional HIPs in further design and research.

Key words: first-year students, learning communities, program evaluation, student success

LGBTQ+ students

Alessi, E. J., Sapiro, B., & Kahn, S. (2015). Exploring the Influence of Minority Stress on the Transition From High School to College Among LGBQ Young Adults. *Journal of Adolescent Health, 56*(2), S94.

This paper examined the impact of LGBQ orientation on the high school to college transition process for sexual minority first-year students. The authors' research was guided by Meyer's (2003) minority stress model, which attempted to explain why difficult social situations lead to chronic high stress levels for members of stigmatized minority groups. A total of 21 second-year students who self-identified as having a LGBQ orientation participated in qualitative focus groups and were asked questions on experiences of prejudice and stigma, internalized homophobia, and concealment of sexual orientation. The authors used Strauss & Corbin's (1994) grounded theory principles to analyze the interview transcripts and identify emerging themes in the participants' narratives. The data suggested that a minority sexual orientation amplifies the social challenges first-year students face in their

college transitions. Other results that have implications for practitioners included the range of coping strategies participants described for managing stress and the importance given to campus organizations that provide LGBQ students with "islands of safety" to their college transition.

Key words: transition, first-year students, orientation, LGBTQ students

Bazarsky, D., Morrow, L. K., & Javier, G. C. (2015). Co-curricular and Campus Contexts. *New Directions for Student Services, 2015*(152), 55-71.

This article discussed supporting students with LGBTQA+ identities in the co-curricular context of college. After providing historical and sociopolitical contexts for LGBTQA+ students in higher education, the authors discussed the importance of LGBTQA+ student inclusiveness across co-curricular departments and units as well as in the wider campus environment. The authors advocated for colleges and universities to adopt a universal design approach with a view that policies or changes that benefit LGBTQA+ students, such as "preferred" name policies and all-gender bathrooms, will have a widespread positive impact beyond that community. Furthermore, the author indicated that practitioners should take note stay engaged with the continuously changing nature of LGBTQA identities, terminology and language, community expectations, and social customs and be receptive to feedback from students instead of maintaining a fixed, authoritative idea of best practices in these arenas. To this end, the authors provided three example scenarios of how student affairs professionals may make students feel excluded or alienated based on assumptions about their identities or inconsistent application of well-intentioned practices. The author also provided suggestions for changes, from small tweaks in practice to big shifts in frameworks, that co-curricular departments and units can adopt to intentionally support LGBTQA+ students. These included offering staff training on baseline concepts relating to gender, sex, and orientation and the use of inclusive language, creating unit-specific LGBTQA+ services and supports for students and developing unit-specific expertise on LGBTQA+ topics, developing inclusive procedures and policies, and creating inclusive programming, marketing materials, and physical signage.

Key words: LGBTQ students, policies, support

Brazelton, G. B., Renn, K. A., & Stewart, D. (2015). Recommendations. *New Directions for Student Services, 2015*(152), 85-94.

This article presented recommendations from the authors for the future of scholarship and practice within the field of student affairs with regard to students with minoritized identities of sexuality and gender (MIoSG), a term that includes identities within the LGBTQ acronym while being inclusive of identities and experiences that other acronyms exclude. The authors' recommendations for directions for future research addressed both potential areas of focus and methodological approaches best suited for understanding the experiences and

outcomes of students with MIoSG. Their policy recommendations centered around the idea that policy changes should not create conditions that reify existing binaries and stereotypes, use exclusionary language, or focus on very limited identity categories. Finally, their practice recommendations included advocating for student affairs professionals to adopt critical philosophies and perspectives in their work and resist the development of "best practices" that assume a uniform experience for students with MIoSG. While this article does not provide readers with concrete suggestions for immediate application, it does offer some frameworks, overarching ideas, and topics for consideration that can guide their practice in supporting students with MIoSG and advocate for systemic and structural changes.

Key words: LGBTQ students, policy, support

Dugan, J. P., & Yurman, L. (2011). Commonalities and differences among lesbian, gay, and bisexual college students: Considerations for research and practice. *Journal of College Student Development, 52*(2), 201-216.

This study investigated within-group differences among lesbian, gay, and bisexual (LGB) students across a number of college experiences. The authors' goal was to examine the appropriateness of collapsing these three student groups into a single category in quantitative research designs, given that previous studies of campus climate, student identity, and collegiate experiences and outcomes for LGB students have rarely disaggregated the groups and considered differences between them. The authors analyzed data collected from a sample of respondents to the national Multi-Institutional Study of Leadership (MSL) consisting of 980 self-identified LGB students from 52 colleges and universities. The findings of the study suggested that LGB students are more similar than different across a range of 13 different college experiences and measures of engagement, such as perception of campus climate and participation in peer mentoring, study abroad programs, and internships. Significantly, the results indicate that bisexual students had lower scores for perceptions of campus climate and appreciation of diversity, which the authors suggest may relate to ostracism, discrimination, and oppression bisexual students often feel from both heterosexual and gay communities. A major recommendation of the paper is that researchers test to see if there are within-group differences before conducting their primary analysis when investigating the experiences of LGB students.

Key words: LGBTQ students, engagement, mentoring, environment

Ivory, B. T. (2012). Little known, much needed: Addressing the co-curricular needs of LGBTQ students. *Community College Journal of Research and Practice, 36*(7), 482-493.

This literature review examined the available research on LGBTQ students that is intended for student support personnel at two-year community colleges. It is somewhat surprising that this article, published in 2016, still argues that LGBTQ

students are invisible on college campuses. The author based this claim on a supposed dearth of relevant research in the literature but it is more likely that he has not conducted a particularly robust search of the available resources. Regardless, the author proceeds to review the literature he was able to unearth. The subsequent literature review was focused on research-based best practices for student support services and personnel who are involved in co-curricular programming for (or that includes) LGBTQ students. This review included research on problems in identifying LGBTQ students on campus, combating hostile campus climates, challenges to students in creating healthy sexual identities, and deterrents to staff establishing connections to LGBTQ students. Recommendations for creating more inclusive and welcoming campus environments include revising existing anti-discrimination and harassment policies and procedures, implementing new recruitment strategies for LGBTQ students, and creating "brave spaces" on campus. The author also recommended establishing and supporting LGBTQ student organizations and building connections to those organizations internally within student affairs, with the institution at large, and with outside organizations and national resources.

Key words: LGBTQ students, community college, support, environment

Jaekel, K. S. (2015). Recommendations from the Field: Creating an LGBTQ Learning Community. *Learning Communities Research and Practice, 3*(2), Article 8. Retrieved from http://washingtoncenter.evergreen.edu/lcrpjournal/vol3/iss2/8

The author noticed that even though her campus includes safe spaces and offers an LGBT Student Services office, many of the LGBTQ students in her courses fail to persist in her classes and at her college. To counter this attrition, the author designed and delivered an LGBTQ Learning Community (LBGTQ-LC). The author was hoping to determine if participation in such a peer learning community would increase the likelihood that students would persist in the course and at the institution. After establishing the rationale for the LBGTQ-LC, the author discusses the research on the efficacy of Learning Communities in general and the process she went through in creating the LBGTQ-LC. The LBGTQ-LC was designed to be welcoming and inclusive to all students and was therefore available for open enrollment to anyone who wished to explore and learn more about LBGTQ topics. However, as it turned out all of the participants identified as LBGTQ. Interestingly, the LBGTQ-LC was structured as a sequential series of courses, rather than the more traditional model of linked classes within a single semester. The author reported that on the whole the first class of the LBGTQ-LC was favorably received and that participants considered it to be a worthwhile experience. However, many of the participants did not enroll in the related spring course. The author also mentioned some other challenges related to the LBGTQ-LC. The most challenging aspect was recruitment into the LBGTQ-LC in the first place, partly because of the reluctance of advisors to recommend the LBGTQ-LC to students who weren't publically out and partly because students were unclear as to the value and structure of the LBGTQ-LC.

The author also found it challenging to link more courses into the LBGTQ-LC because of a lack of available courses that touch on LBGTQ topics. Recommendations for improvement included partnering more closely with student affairs, particularly advisors, to publicize the LBGTQ-LC and creating more meaningful links to a greater number of potential course pairings.

Key words: LGBTQ students, retention

Jourian, T. J. (2015). Evolving nature of sexual orientation and gender identity. *New Directions for Student Services, 2015*(152), 11-23.

This chapter examined how the fluid terminology in queer studies and in queer communities has evolved and argues that understanding this fluidity and the operational terms in use at the moment can help educators to better understand and communicate with LGBTQ students. The author was careful to point out that this chapter does not necessarily serve as an exhaustive treatment of the definitions and terminology of the queer community (although a great many definitions are offered) but rather as an opportunity for educators to develop an understanding of how students may identify themselves and to be able to appropriately respond to those students. After this introductory material, the author moved on to an historical overview of how people with queer identities have named and categorized themselves over time. The author then moved on to an examination of the foundational concepts of sex, gender identity, gender expression, and sexual orientation. Next was a discussion of why it is necessary to situate queer students within a cultural framework of systematic oppression and how these systems of oppression operate. This is followed by a discussion of how terminology relating to LGBTQ students has undergone a gradual "queering" and the shape and meaning of this new vocabulary. The next section explored the evolving nature of this discourse and the attendant complexity inherent in linguistic studies of emerging and evolving populations. The author closed by arguing that in order to more fully engage with our students the onus is on us as educators to be aware of the fluidity in queer terminology, to maintain an openness to shifting language conventions, and to participate in practices that promote individual and community identity formation so that we foster more equitable and inclusive campus environments.

Key words: LGBTQ students, engagement, academic, environment

Linley, J. L., & Nguyen, D. J. (2015). LGBTQ experiences in curricular contexts. *New Directions for Student Services, 2015*(152), 41-53.

The authors used Lattuca & Stark's ecological model to explore curricular contexts as intersections between learners, instructors, and course content, particularly with regards to how these dynamic interactions are experienced by LGBTQ students. The article began with an examination of the external sociocultural influences on curricular contexts and then moves on to a discussion of the ways in which specific institutions can influence the curricular contexts of their campuses, for instance in

the mission, campus climate, availability of services and resources, etc. This was followed by a look at how faculty and staff serve as microunits that can both positively and negatively influence the curricular context. The authors concluded with recommendations for how to create positive curricular contexts for LGBTQ students, including training for faculty and the inclusion of content that is responsive to the unique perspectives of LGBTQ students.

Key words: LGBTQ students, environment

Kirsch, A. C., Conley, C. S., & Riley, T. J. (2015). Comparing psychosocial adjustment across the college transition in a matched heterosexual and lesbian, gay, and bisexual sample. *Journal of College Student Development, 56*(2), 155-169.

This study explored the differences between and heteronormative students over five psychometric dimensions in order to see where these populations experience similar and dissimilar experiences as the transition into and through the first year of college. The authors used matched sampling to cull data from a larger, multi-year longitudinal study tracking the psychosocial adjustment during the transition into college. Participants complete an initial online survey at the beginning and end of the first year and are invited to complete yearly follow-up surveys. The authors used multiple validate and normed scales to create five broad composite measures of psychological development including psychological wellbeing, distress, cognitive-affective strengths and weaknesses, and social wellbeing. Both groups reported lower levels of wellbeing and increase psychological distress during the initial transition period and greater cognitive-affective strengths at the end of the first year. However, LGBTQ students had disproportionately higher levels of distress, greater cognitive vulnerability, and lower levels of social wellbeing. Recommendations were that all first-year students need additional psycho-educational resources and LGBTQ students in particular would benefit from specifically tailored services and programs.

Key words: LGBTQ student, transition, first-year students

McKinley, C. J., Luo, Y., Wright, P. J., & Kraus, A. (2015). Reexamining LGBT Resources on College Counseling Center Websites: An Over-time and Cross-country Analysis. *Journal of Applied Communication Research, 43*(1), 112-129.

The authors of this study conducted content analysis of college counseling websites (CCWs) in order to determine the amount of information available to LGBTQ students in regards to counseling and wellness services and resources offered by their institutions. The article begins with an introduction to the literature regarding the challenges of acceptance and engagement often experienced by LBGTQ students and the sometimes dire consequences of those challenges. Drawing from various information-seeking models and theories, the author sought to determine if the

information provided on CCWs was sufficient to help LBGTQ students get the counseling and mental health services they might require. This study updated and extended a previous study by the same authors. The authors compiled a representative sample of 10% of the institutions listed in the NCES and kept the variables consistent with their prior research. They trained undergraduate students to code the variant data using Scott's pi. Findings indicated that less than half (47%) of the institutions' CCWs in the sample mention specific services or resources for LBGTQ students, although a majority did at least indicate that they offered individual counseling for all students. Recommendations were to provide more specifically designed LBGTQ student support services and to better market, highlight, and promote these services through the CCW.

Key words: LGBTQ students, engagement, support

Mobley, S. D., & Johnson, J. M. (2015). The role of HBCUs in addressing the unique needs of LGBT students. *New Directions for Higher Education,* *2015*(170), 79-89.

This chapter serves as a literature review of the experiences of LGBTQ students at Historically Black Colleges & Universities (HBCUs). It begins with a look back at how HBCUs came into being and an exploration of their traditional role as disruptors of the status quo. Next the authors began to examine the available research to fill the gap in critical inquiry as to the experiences of LGBTQ students at HBCUs. The authors made recommendations based on the literature that include a suggestion that HBCUs re-examine their traditions and policies that inhibit the expression of individuality and that schools work to provide forums where diverse bodies can learn from one another and benefit from hearing others' perspectives. The final recommendation was a call to action for developing resources and services specifically for LGBTQ students.

Key words: LGBTQ students, HBCU, policy

Yost, M. R., & Gilmore, S. (2011). Assessing LGBTQ Campus Climate and Creating Change. *Journal Of Homosexuality, 58*(9), 1330-1354.

This article examined campus climate self-study around LGBTQ issues at Dickinson College, a small residential liberal arts college in Pennsylvania. The campus climate questionnaire was developed by the authors to assess sexual- and gender-based prejudice, perceptions of institutional climate and student/faculty experiences in the classroom, and whether student involvement in co-curricular activities was related to those perceptions. A total of 274 college employees and 562 students participated in the study, with most of the respondents in both groups being White, female, heterosexual, and cisgender. The authors compared the responses of heterosexual and cisgender respondents with LGBQ and transgender participants on all measures, and analyzed results separately for faculty, staff, administrators, and students. The discussion of the results included excerpts from survey responses

as examples of campus constituent experiences and opinions, which practitioners may find helpful to read. Overall, the authors found that most respondents expressed low levels of sexual prejudice and positive perceptions of campus, but that positive attitudes were stronger among heterosexual and cisgender participants than LGBTQ participants in the study. In particular, LGBTQ individuals were more likely to experience harassment on campus and many were less engaged in co-curricular activities. The authors concluded with a narrative of how the results of the campus climate survey were used to create a more inclusive environment for LGBTQ students, faculty, and staff in programs, departments, and systemically at the institutional level.

Key words: LGBTQ students, small-college, environment

Low-Income Students

Castleman, B. L., & Page, L. C. (2013). The not-so-lazy days of summer: Experimental interventions to increase college entry among low-income high school graduates. *New Directions for Youth Development, 2013*(140), 77-97.

This paper examined the impact of summer outreach and support from colleges on the successful fall matriculation of low-income students who have recently graduated from high school. The focus of this paper is a phenomenon called "summer melt," which described the process by which students who are accepted to college in the spring fail to enroll in the fall. Following a discussion of the possible causes of summer melt for low-income students in particular, the authors discussed the experimental interventions they designed to lessen summer attrition for these students. These interventions included proactive outreach by peer mentors or school counselors to provide individualized guidance and assistance and text messages from the intended institution that provide students with personalized reminders about administrative tasks they must complete to successfully matriculate. The authors suggested that proactive summer outreach may increase enrollment of low-income students by 3 to 8 percentage points at a cost of $7 to $200 a student.

Key word: low-income students, academic support

Condon, M. V., Morgan, C. J., Miller, E. W., Mamier, I., Zimmerman, G. J., & Mazhar, W. (2013). A program to enhance recruitment and retention of disadvantaged and ethnically diverse baccalaureate nursing students. *Journal of Transcultural Nursing, 24*(4), 397-407.

This article described and evaluated a model developed to promote academic success for undergraduate nursing students from ethnically diverse and disadvantaged backgrounds called Success in Learning: Individual Pathways Program (SLIPP). Disadvantaged and ethnically diverse nurses are often at a higher

risk for attrition than traditional nursing students who matriculate with stronger academic preparation. The SLIPP model was developed based on a study of 777 culturally diverse baccalaureate nursing students from 22 schools of nursing in California in combination with a review of nursing education research and literature. The model combined pre-entrance preparation, academic support, social support, financial support, and faculty development workshops. Between 1999 and 2003, 77 ethnically diverse and disadvantaged students, many of whom had applied but not met the requirements of a BSN program, participated in SLIPP. All 77 students were accepted into baccalaureate nursing programs, 90.9% graduated from a nursing program, and 98.6% of graduates passed the NCLEX-RN exam. To evaluate SLIPP, the authors used a summative evaluative design that considered student records, the results a survey instrument, and qualitative interviews with a sample of SLIPP participants. A significant finding of the evaluation was that SLIPP students felt they would not have been able to complete the program without the financial support it provided.

Key words: low-income students, academic preparation

Cox, R. D. (2016). Complicating conditions: Obstacles and interruptions to low-income students' college "choices". *Journal of Higher Education, 87*(1), 1-26.

This article explored barriers that low-incomes students face when planning on attending institutions of higher education. The author used data from a qualitative longitudinal study of black and Latino low-income students she conducted over three years (the last two years of high school and the first year post-graduation). The study consisted of a series of interviews and focus groups and was designed to elicit information on how decisions to attend college are made and how college going plans are disrupted. The author began by critiquing existing models of college choice that lack an accounting for paths and plans that include delayed enrollment and choosing to attend community colleges. The author contended that this critique is even truer when examining college choice for low-income minority students. The longitudinal approach allowed for the author to follow students as they made their initial college plans and how those plans changed as the students progressed through high school and graduation. Findings indicated that many economic and situational obstacles derailed the college choices and plans for participating students; complex familial relationships, unstable living arrangements, and the need to work and contribute financially to their families made it difficult to secure tuition, transportation, and financial aid. The author concluded by recommending that public two and four-year institutions strengthen existing programs and relationships with high school professionals in order to remove these barriers for low-income minority students.

Key words: low-income, students of color, community college

Jack, A. A. (2014). Culture shock revisited: The social and cultural contingencies to class marginality. *Sociological Forum, 29*(2), 453-475.

The lack of cultural and economic capital often make it harder for low-income students to successfully navigate and transition into college; however, some students respond by becoming "isolationists" while others become "integrationists". This study sought to add to the research on how different pre-college paths prime students' to have very different experiences in college, even when they come from similar low-income families and neighborhoods. Using the case study method, the author investigated the experience of black low-income students at an elite, urban, private college. In analyzing the data that author was able to identify to specific sub-groups, the Privileged Poor (those who were able to attend private or preparatory programs of secondary schools) and the Doubly Disadvantaged (those who attended local public high schools). The author detailed many of the differences between these two groups and includes both quantitative (e.g., SAT scores) and qualitative (e.g., excerpts from interviews) data in his findings.

Key words: low-income students, transition, students of color

McLoughlin, P. (2012). The Transition Experiences of High-Achieving, Low-Income Undergraduates in an Elite College Environment. *Journal of the First-Year Experience & Students in Transition, 24*(2), 9-32.

This study explored how low-income students on full financial aid packages navigate and experience the transition to and through elite colleges. The study used the phenomenology to elicit information about the lived experiences of the participants as they reflected on the college transition experience. The phenomenological approach allowed the author to ask questions about how socio-economic status (SES) affects the experience of attending an elite college, in which ways elite colleges are particularly challenging for low-income students, and how these students successfully negotiate those challenges. The author coded the responses to interviews and narratives into two major themes, recognizing class and SES differences and struggles with academic under-preparedness. Recommendations included making available support services more visible and easily understood so that low-income students can more effectively navigate the unfamiliar landscape of an elite college environment.

Key words: low-income students, transition, academic preparation, support

Soria, K. (2012). Creating a successful transition for working-class first-year students. *Journal of College Orientation and Transition, 20*(1), 44-55.

Citing the challenges and barriers that exist for students from lower socioeconomic backgrounds as well as the existing research on social integration and sense of belonging, the author presents the need to explore perceptions of campus climate, engagement, and interaction for students in this population. Bourdieu's theory of

social reproduction provided as a foundation for the study which sought to expose the experience of students from lower socioeconomic backgrounds as they transition to universities that have populations predominantly of middle/upper class socioeconomic status. It is noted that Bourdieu's theory has been used in previous studies as a foundation to explore social and cultural capital for these students and the previous research findings that indicate that socioeconomic status is invisible on campuses, leading to a deficit in attention for these students. The study utilized the spring 2010 Student Experience in the Research University to examine 23,331 first-year students from 11 large, public, Carnegie Foundation classified research institutions. The survey asked students questions related to their levels of engagement and perceptions of campus climate as they transitioned into their first-year. A review of the responses exposed statistic differences between lower socioeconomic status students and those from middle/upper socioeconomic statuses in terms of perceptions of campus climate, feeling welcome, engagement academically, and fewer academic interactions with their peers. Some of these differences are modest but the significant differences present themselves in the areas of academic engagement and perceptions of campus climate. The author suggested practitioners working in orientation and first-year programming attempt to make social class visible by talking about issues of power, privilege, and inclusiveness to strive for a more welcoming campus climate for students from lower socioeconomic backgrounds and encourages summer bridge programs as a potentially useful strategy to support students from this population citing a correlation between working class families and first-generation student status as additional justification for providing additional support. The author advocated that priorities be placed on attention to the academic adjustment to college for this population of students to encourage positive engagement and feature support services prominently.

Key words: low-income, college adjustment, environment, first-year students, orientation programming, support

Orientation (General)

Warywold, D.M., & James, J.J. (2010). First ascent wilderness orientation programs. *Journal of College Orientation and Transition, 17*(2), 40-51.

Considering the prominence of wilderness extended orientation programs, the researchers analyzed the perceptions of students participating in First Ascent, an extended orientation program for first-year students at Appalachian State University. A literature review examined outcomes found for those who participate in wilderness orientation programs and also provides Astin's and Barefoot's work on peer interactions' influence on student development. The four-day program was also examined to provide understanding of the depth and breadth of activities, interactions, and desired outcomes for first-year students participating in the program. The researchers conducted a qualitative evaluation and analysis of the

students' perceptions of the program and establish four themes. The first theme was interpersonal focusing on interactions and the positive effect on self-concept. The next theme was intrapersonal as students reflect on their personal accomplishments through the program. The third theme that emerged was that of natural world due to the mental and physical experiences students face in the outdoors. Finally the fourth theme was a theme of personal welfare is observed as students acknowledge their own physical limitations and the perception that they were unprepared for their experiences. The researchers asserted the positive influences overall and advocate for programs such as First Ascent to be part of a comprehensive first-year programming strategy.

Key words: Orientation programs, extended orientation, first-year students

Ward-Roof, J. A. (Ed.). (2010). *Designing successful transitions: A guide for orienting students to college (Monograph Series, No. 13, 3rd Edition).* Columbia, SC: University of South Carolina, National Resource Center for The First-Year Experience and Students in Transition.

A partnership between the National Orientation Directors Association and the National Resource Center for the First-Year and Students in Transition in its third edition is presented to assist orientation practitioners with evolving trends in the field. Divided into four parts, the first explored the history and need for orientation programs including theory and evidence of support. The second section provided organizational insight into structuring orientation programs and considers topics including community college orientation, parent orientation, and programs beyond orientation. In the third part of the monograph topics on inclusion and new trends are explored including diverse student populations, transfer students, and students who are not of traditional age. The fourth and final section discussed strategies for establishing orientation programs through partnerships and assessment for long-term success. The text concluded with parting thoughts from professionals in the field observing the evolution of orientation, transition, and retention programs.

Key words: first-year students, transfer students, parent and family programs, orientation programs, community college

Parent & Family

Englert, P. & Hume, J. (2011). Developing intentional and comprehensive parent programs utilizing an interdivisional approach-A case study of Bellarmine. *AHEPPP Journal, 2*(2), 18-34.

The authors shared insight behind the rapid growth of parent programming within institutions of higher education citing the relationship between millennials and their parents. The dynamic between these populations involved a level of trust that has required colleges and universities to developed initiatives that help to infuse the institution into this close relationship. Qualitative and quantitative questions on a

survey drove the design of inter-divisional collaborative parent and family programming at Bellamine University. The data from these surveys as well as National Survey of Student Engagement data informed the practice presented by the authors. Themes emerged as guidance for best practice, these themes include: thoughtful use of technology, intentional programs to help with appropriate participation, and diversity in programs offered. Specifically, the recommendations indicated that opportunities for a sense of belonging for parents was wanted, as well as opportunities for interaction with staff and faculty alongside their students. Implications from the authors included the value of inter-divisional collaboration for parent programs to increase resources and also to increase awareness across divisions of the important role parents play in their students' attitudes about their institution.

Key words: Parent and family programs, sense of belonging

Furry, A. N., & Sy, S. R. (2015). The influence of perceived parental expectations and pressures on women's academic achievement during the first year of college. *Journal of the First-Year Experience & Students in Transition, 27*(1), 49-67.

Referencing previous findings on the effects of parental expectations for students in K-12 education, the lack of findings on the effects of parental expectations for college students, and citing the need to account for cultural differences in familial dynamics the authors conducted a thorough review of the literature to present the findings and trends among perceived expectations and pressure. The authors proceeded to conduct a survey with 843 first-year, female participants from two large public institutions in Southern California to identify their 620 participants. The research attempted to uncover the relationship between ethnic group and parental expectation and pressure as well as how perceived pressure and expectations impact academic performance and if those impacts vary by ethnic group. Participants are students who identify as Latina, European American, or Asian American averaging 18 years of age. Conducting a one-way analysis and a multivariate one-way analysis the researchers uncovered a number of correlations. Results indicated the perceived parental pressure to complete and undergraduate degree and pursue a graduate degree is higher among Latina and Asian American populations. Among all participants, perceived parental expectations correlated with academic achievement, and those indicators are significant among Latina and Asian American students. Citing methodological limitations in the scope of ethnicities included in the study and a lack of depth in the exploration of culture, alongside the small pool of students surveyed, the authors cautioned not to apply these findings to all college students and advocated for more research on this topic. Regardless of limitations, valuable implications can still be drawn including acknowledgment of parental pressure and expectations by practitioners to assist students in coping with the psychological ramifications of the behavior and to be sure first-year programming presents students with the resources necessary to process their academic relationship with their families.

Key words: parents and family, parental expectations, first-year students, students of color

Self, C. (2013). Parent involvement in higher education: A review of the literature. *AHEPPP Journal, 4*(1), 1-11.

The author provided data points that verify parental involvement in college students' college selection and ability to attend college; further cited were the negative stereotypes of parental involvement in a student's academic career at colleges and universities and the need for a review of the literature to examine healthy parental involvements implications. Prior research was explored as related to parent-student communication, parent involvement and "helicopter parenting". Parent-student communication was found to be incredibly frequent between students and their parents, and students cite that they value this communication and that they rely on their parents for advice, guidance, and ultimately, influence. Research on parent involvement suggested students were interested in having involvement as they adjusted to college and they value their parents' interest; research also suggested that parents who are engaged with their students' transition support identity development. Simultaneously, studies indicated that some separation is beneficial for students in their adjustment to college. It is noted that low involvement from parents can have negative implications for academics. Implications of the research conducted on the term helicopter parents found overall that involvement isn't the problem, but how that involvement manifests is key. The author suggested that some of the research is conflicting and more research is necessary, particularly on how parent-student communication influences social choices, college experiences, and identity. Further the author suggested practitioners review theories on emerging adulthood alongside the literature reviewed and consider the best ways to support parents but also to support staff and faculty who may interact with parents so that positive relationships can be forged and negative myths can be dispelled. Finally, the author suggested practitioners view partnerships with parents through the lens of what is best for students, and in some cases that may be involvement from their parental support.

Key words: parents and family, parental involvement

Yazedjian, A., & Toews, M.L. (2016). Development, validity, and reliability of the parental support scale - student version. *Journal of The First-Year Experience & Students in Transition, 28*(1), 9-26.

The authors reviewed the changing dynamics in parent-student relationships as related to the college experience and the existing measures to examine these relationships, the Parental Attachment Questionnaire (PAQ) and the Inventory of Parent and Peer Attachment (IPPA). In reviewing studies that have examined the PAQ, the literature revealed that Hispanic and Black students at PWI's who have a secure attachment to their parents display better adjustment to college; gender was

also revealed as a factor for some racial groups. In reviewing studies that have examined the IPPA, the findings revealed further indication that parental attachment has influence on adjustment to college including themes such as social and emotional competence. Some literature in the review revealed that impacts may only be related to adjustment during the first year as students identify the security parents offer as a significant source of support. It is noted in the literature review that for some students this attachment can be reversed, with students responsible for providing support to their parents and indications that this behavior is a stress factor. The authors acknowledged that this previous literature does not adequately account for all layers of attachment and proceed to conduct a random sample survey with the newly designed Parental Support Scale-Student Version (PSS-SV) resulting in 1,351 completions of the survey. The PSS-SV intends to measure students' perceptions of their parents support. Using the PAQ and IPPA scales to measure the parental attachment and the Student Adaptation to College Questionnaire (SACQ) to measure adjustment, the authors' findings indicated that the PSS-SV is a valid measure of parental support for students in their college years. The findings also indicated the potential need for revisions of the understanding in the field of the dynamics of the parent-child relationship and the expectations of college students as these dynamics shift. Implications include the need for institutions to recognize the changing relationships of parent-college age child, the positive impact parental support can provide and the need to identify those for whom that support is vacant and identify alternate strategies for support, and the need for colleges and universities to prepare to address the mental health needs that stem from family dynamics. The limitations of the study included the limited sampling from one institution and the limitations of some of the sampling tools; the authors call for further research to take a deeper look at the nuances of various populations and for more research to use the PSS-SV to continue to validate it as a tool for measuring parental attachment and support and the impacts on students.

Key words: *Parents and family, parental attachment, college adjustment, students of color*

Retention (General)

Alarcon, G.M. & Edwards, J.M. (2013). Ability and motivation: Assessing individual factors that contribute to university retention. *Journal of Educational Psychology, 105*(1), 129-137.

The focus of this study was to investigate differences in ability and motivation factors of retention among first-year college students. The authors discussed ability as relating to standardized tests measuring achievement and past learning such as the SAT and ACT and grade point average while also outlining two potential motivation factors, conscientiousness and affectivity, as having a potential impact first-year student retention. A total of 584 students enrolled in an introductory psychology course at a Midwestern university served as the sample for this study,

and it should be noted that the students participated for credit. The authors used a quantitative methodology for this study, collecting the students' GPAS, SAT/ACT scores, and responses to a survey combining the Conscientiousness subscale of the Big Five Inventory (John & Srivastava, 1999), the Positive and Negative Affect schedule (PANAS; Watson et al, 1988), and questions about their parents' level of education during the first quarter of the semester, all of which was matched with student enrollment data over a series of quarters during their first academic year. The resulting data about relations among cognitive ability, conscientiousness, affectivity, and retention outcomes were analyzed with discrete-time survival mixture analysis (DTSMA; Muthen & Masyn, 2005). The authors noted that this is believed to be the first study that uses DTSMA to predict first-year student retention. The results of this analysis indicated that both ability and motivation are predictors of first-year student retention. Conscientiousness, however, was not a predictor when affectivity was added to the model, indicating it may not be the best aspect of motivation for predicting student retention. Given that no qualitative data were collected in this study, the authors cannot account for why students who left the university were not retained, nor did they attempt to disaggregate the data among students of different racial and sociodemographic backgrounds.

Key words: academic motivation, first-year students

Aljohani, O. (2016). A comprehensive review of the major studies and theoretical models of student retention in higher education. *Higher Education Studies*, 6(2), 1-18.

This article presented a critical review and analysis of theoretical models and empirical studies focusing on college student retention. The author aimed to highlight common patterns and themes in student attrition as well as best practices and emerging trends related to student retention for practitioners, researchers, and policymakers. Practitioners new to the field of student success and retention may find the author's discussion of the historical background and theoretical foundations of student retention models, as well as the typology of models, particularly useful context for the rest of the paper. Among the seminal retention models and theories reviewed were the Undergraduate Dropout Process Model (Spady, 1970, 1971), the Institutional Departure Model (Tinto, 1975, 1993), the Student-Faculty Informal Contact Model (Pascarella, 1980), the Student Attrition Model (Bean, 1980, 1982), and the Student Involvement Theory (Astin, 1984). Professionals seeking to apply research to practice may also take note of the author's discussion of some of the limitations of retention theories and models, such as a lack of range in research methodologies utilized in retention research as well as the limited generalizability of some of theories to other institutional settings and contexts.

Key words: retention, academic success

Bowman, N. (2014). Conceptualizing openness to diversity and challenge: Its relation to college experiences, achievement, and retention. *Innovative Higher Education, 39*(4), 277-291.

This paper explored openness to diversity and challenge (ODC) as a form of openness to experience, which the author argued is a student characteristic that may be predictive of student engagement, achievement, and retention. The author contextualized ODC, including student engagement with social, religious, cultural, and political values different from their own, as a desired outcome of higher education in a diverse and globalized society. To examine the relationship between ODC and student success outcomes, the author conducted a hierarchical linear modeling analysis with a large, longitudinal, multi-institutional dataset of first-year students, the 2006-2009 Wabash National Study of Liberal Arts Education, to determine whether ODC correlates with subsequent college experiences, first-year GPA, and first-to-second year retention. The author's goal was to isolate the unique effects of ODC in order to ascertain whether ODC is a more consistent predictor of student engagement and success than other more commonly considered variables. The results of the study indicated that ODC positively relates to engagement with academic challenge and diverse experiences as well as frequent faculty/staff interactions, high-quality peer interactions, and good teaching/learning experiences.

Key words: engagement, retention, academic achievement

Butler, L. (2011). Do we have a retention problem... Or do we have a problem "about" retention? *New England Journal of Higher Education.* Retrieved from http://www.nebhe.org/thejournal/do-we-have-a-retention-problem-%E2%80%A6-or-do-we-have-a-problem-about-retention/

This paper discusses what the author, an education consultant, described as the "meta-problem" of student retention. The paper's thesis is that this meta-problem arises from tensions between the way institutional leaders publicly frame concerns about student retention, the constraints of place and time, and the sometimes contradictory and ineffectual mandates and strategies administrators and faculty are expected to implement in order to improve student retention and completion. The author recommended that institutions reevaluate the approaches they are taking to solving perceived retention problems and determine what strategic response to student attrition is actually warranted. Readers are provided with a series of issues to consider and practical questions to ask in order to examine the causes and effects of student retention and attrition in their particular institutional context. In particular, institutional stakeholders are encouraged to determine the extent to which the reasons behind student attrition are beyond the institution's control and gauge the significance of student in the context of historical performance, peer institutions, forgone revenues, and the satisfaction levels of students who do reach completion.

Key words: retention, persistence

O'Keefe, P. (2013). A sense of belonging: Improving student retention. *College Student Journal, 47*(4), 605-613.

Drawing on data from studies conducted in the United States and Australia the author sought to uncover roots of student attrition considering attrition rates in both countries measure between 20 and 50 percent. The author cited problems with attrition including the cost to institutions and society and recognizing that those most at risk for not completing a degree are students who are from historically underrepresented populations, those who have less privilege, and those with mental illness. Previous research on the necessity of a "sense of belonging" was reviewed and correlated to persistence, examples include: the challenge for part time students to become engaged, diverse students with diverse needs struggling for balance, technology increasing remote learning, large class sizes, and a general lack of personalization in the education experience. Additional research is reviewed to understand the connection between feeling cared for and persistence, discovering that students who feel safe and valued are more likely to persist in the environment. Additionally, research indicating the correlation between student-faculty interactions was cited as a critical component in building relationships that keep students engaged is presented. A variety of research emphasized the necessity of support services and resources that address specific population needs, particularly related to those populations most likely to drop out. The author dedicated a final section of the research review to an acknowledgement to the individual student's' responsibility to adjust, connect, and engage. This final section presented research that indicates that this accountability is important, the institution is responsible for clearly communicating expectations and cultural norms and also acknowledging that this transition will come easier for some populations; additional research cautions that without attention, this mentality may encourage assimilation for some populations on campus and further advocacy is presented which argues that students should be able to remain true to themselves even as they adapt to the college culture. In conclusion, the author acknowledged the research suggesting the onus remains with the student to adjust to the institution but asserts the advocacy presented by the larger body of research supporting the responsibility of the institution to create a safe, welcoming, engaging, and comfortable environment for students in an effort to improve retention.

Key words: underrepresented students, students of color, engagement, persistence

Slanger, W. D., Berg, E. A., Fisk, P. S., & Hanson, M. G. (2015). A longitudinal cohort study of student motivational factors related to academic success and retention using the College Student Inventory. *Journal of College Student Retention: Research, Theory & Practice, 17*(3), 278-302.

Considering the troubling trend over 20 years of decreased persistence toward degree attainment the researchers explore the impacts of the climate of low

retention rates including the economic implications and the disproportionate effect on individuals from lower socioeconomic statuses. Utilizing the data from the Noel-Levitz College Student Inventory (CSI), an assessment designed to identify early intervention needs for first-year students who demonstrate risk for academic challenges and potential for attrition. A literature review examined theories related to social and academic integration, levels of commitment, attrition factors, and cognitive behaviors. Additional literature highlights the factors that predict academic success including high school performance, socioeconomic and demographic characteristics, and factors from institutions like the support resources provided and financial aid assistance, as well as the culture of an institution. Additionally motivation factors related to student disposition were reviewed. With all the factors for consideration the researchers sought to further understand the motivational factors that predict college success and retention utilizing the CSI to uncover which CSI measured variables are most predictive and over what time frame are they relevant. The CSI was issued to ten first-year cohorts at one medium sized, public, research institution over ten years for a total of 6,043 students measured against academic performance variables from the institution and the CSI. Consistently, motivational factors were predictive of academic achievement and retention, as well as ration of credits earned to credits attempted, semesters attended, and GPA. The findings verified the CSI as an effective tool in predicting GPA, persistence, and progression toward degree attainment. The researchers recommended utilizing the CSI throughout students' academic careers to determine the need for intervention and support via academic advising. The researchers called for future research to analyze this recommendation. They further advocated for using the CSI data to examine motivation and consider ways to encourage motivation institutionally. Ultimately, the researchers asserted the value of the CSI over self-selected surveys for determining the specific outcomes related to GPA, course load capacity, confidence, motivation, and defining proactive interventions for student success.

Key words: retention, low-income students, academic performance

Soria, K.M. & Stubblefield, R. (2015). Knowing me, knowing you: Building strengths awareness, belonging, and persistence in higher education. *Journal of College Student Retention: Research, Theory & Practice, 17*(3), 351-372.

Citing trends in Student Affairs practice toward positive psychology and strengths-based initiatives intended to assist students in focusing on their strongest qualities rather than their deficits, the authors called for an examination of the assessment of these trending methods. Beginning with a review of the philosophy and guiding principles of a strengths-based approach to practice, the authors presented Lopez and Louis' five principles of strengths-based education: measuring strengths, offering individual educational opportunities based on students' strengths, creating space for students to network with others to articulate and understand their own and others' strengths, designing opportunities inside and outside the classroom for

students to utilize their strengths, and fostering students ability to design their own strengths-based experiences in new arenas. The philosophy of strengths-based initiatives is connected to the individual student but grounded in the active participation of practitioners to encourage dialogue among students to foster their own understanding of their own strengths as well as their relational dynamics. For purposes of their study, the authors chose Gallup's *Clifton StrengthsFinder Assessment,* an online assessment that measure individuals talents and presents them with their top five strengths out of 34 themes. The researchers asserted that 1 million college students in the United States have taken this assessment to uncover their top five strengths but little research has been conducted to verify that the approach is valid. The researchers present two goals of their study, to understand how strengths-based practice can influence students' sense of belonging and to examine whether these initiatives play a role in student retention. Piggybacking off of activities related to strengths-based initiatives at a large, public, research institution in which all incoming first-year students took the *Clifton StrengthsFinder Assessment* and participated in a variety of strengths-based programming during welcome week, the authors issued a survey to all participating students which had a response rate of nearly twenty eight percent. Survey responses were compared against the following measures: sense of belonging, awareness of strengths, interactions related to strengths, demographics/personal characteristics, interactions with the institutions such as living situation and major, and academic achievement and persistence. The quantitative analysis demonstrated that regardless of demographics, characteristics, and interactions with the institution, students expressed positive associations with sense of belonging, awareness and interactions related to strengths, and positive persistence to the second year. The researcher's qualitative analysis demonstrates positive indicators toward self-awareness and confidence, forming connections and building relationships, and creating community around a common understanding lending toward a strong sense of belonging. The researchers acknowledged that there are limitations to the data considering respondents were overwhelmingly female, and predominantly white. However, the findings provided empirical evidence for the positive impacts related to positive psychology in student affairs practice and specifically strengths-based initiatives and warrant for further understanding of the positive influence that these initiatives can play for students.

Key words: academic strengths, persistence, sense of belonging

Spirituality and/or Religious Affiliation

Brooks, J. E., & Allen, K. R. (2014). The influence of fictive kin relationships and religiosity on the academic persistence of African American college students attending an HBCU. *Journal of Family Issues, 2016*(37), 814-832.

This study examined how fictive kin relationships and religion impact retention and graduation rates of African American college students. Fictive kin relationships are defined as relationships with individuals within a family system and support system but of no biological relation. The authors positioned this study in addressing a gap in the literature around how cultural factors influence academic persistence among African American students. Using a life course perspective as their conceptual framework, the authors interviewed 14 juniors and seniors at a Historically Black University in the Southeastern United States about their college experiences. After analyzing interview transcripts, the authors argued that fictive kin relationships and religiosity might be seen as coping mechanisms that contribute to the academic persistence of African American students. In particular, the authors discuss the students' relationships with community members, peers, and faculty/staff members as fictive kin and aspects of their religiosity and faith, including prayer and religious service attendance. A highlight of the article is the inclusion of many interview excerpts through the discussion, allowing readers to experience the participants' own words about these themes.

Key words: African American students, persistence, relationships, retention

Spring Admits

Brady, K., & Sliuzas, R. (2014, July). Mid-year entry students: Their expectations and experiences. The International First Year in Higher Education Conference, Darwin.

The authors conducted a small-scale study that examined the specific transition and orientation needs of mid-year entry students. Mid-year students completed a mandatory online survey at the conclusion of a new mid-year orientation program and were invited to participate in follow-up interviews. Challenges specific to this population included social isolation and administrative barriers and errors. However, the most challenging aspect of mid-year entry students as reported in this study happened in the classroom and was rooted in faculty behavior. Students reported that the faculty assumed that all of their students were now in the second semester of college and thus incorrectly assumed that the mid-year entry students had more institutional knowledge and college readiness than they did, and further (incorrectly) assumed that students had already acquired content knowledge that would have been covered in a previous semester. Recommendations included making general improvements to mid-year orientation programming to remove or reduce administrative difficulties and specifically focus on awareness-training for faculty to remind them of the fact that their courses should stand on their own unless prerequisites are specified and to increase awareness of the unique challenges that mid-year entry students face in their classes.

Key words: transition, orientation, orientation programs

Sliuzas, R., & Brady, K. (2015). A mid-year orientation program: Addressing the needs of mid-year entry students. *The International Journal of the First Year in Higher Education, 6*(1), 61.

The authors detailed the design and development of a new mid-year orientation program at their university, which was intended to introduce mid-year entry students to their new academic and social environment. The authors began with an overview of their institution, a review of the literature on the general characteristics and expectations of mid-year entry students, and a description of their new mid-year orientation program. This was followed by a brief description of the small-scale study in which students took an online survey as part of the orientation program and participated in two follow-up interviews. Results indicated that the mid-year orientation program was well received by the students and that they felt the program was beneficial both academically and socially. Recommendations included retooling the program to offer additional support and resources to help students better manage their family, work, and academic commitments.

Key words: mid-year students, orientation programs, environment

Student Athletes

Comeaux, E., Speer, L., Taustine, M., & Harrison, C. K. (2011). Purposeful engagement of first-year Division I student-athletes. *Journal of the First-Year Experience & Students in Transition, 23*(1), 35-52.

This study explored how first-year student-athletes form academic and athletic identities as part of their college transition and how engagement in educationally purposeful activities may influence those self-conceptions. A sample of 147 student-athletes from four NCAA Division I public universities participated in the study by answering a questionnaire developed to help the authors understand the first-year transition experiences of student athletes. The authors used Astin's (1984) theory on student involvement and Chickering and Gamson's (1987) "Seven Principles of Good Practice in Undergraduate Education" as a guiding framework for the questionnaire. In their analysis of the questionnaire results, the authors found differences between student-athletes participating in revenue-generating sports (men's basketball and football) and student athletes playing non-revenue sports. Notably, first-year nonrevenue athletes report a high academic identity as compared to the other group. The authors also discuss findings that indicate that Black student-athletes may have higher self-perceptions of leadership and academic identity than White student-athletes. The article concludes with recommendations for how head coaches and student affairs professionals might use the study's results to create more opportunities for transitioning student-athletes to engage in educationally purposeful activities.

Key words: Athletes, college adjustment, engagement, first-year students, involvement, self-concept/image

Gayles, J. G., & Baker, A. R. (2015). Opportunities and challenges for first-year student-athletes transitioning from high school to college. *New Directions for Student Leadership, (147),* 43-51.

This article highlights many of the unique challenges and opportunities first-year college athletes face in their transition from high school to college, including balancing athletic, academic, and social demands of the college experience. The authors argue that it may be a challenge for student athletes to make the same gains in learning and personal development that their non-athlete peers are expected to make due to the time and energy required by athletic training. However, athletic participation also creates an environment that supports the transition and development of first-year students. This includes reducing anxiety around social belonging through teammate bonding and creating opportunities for students to form relationships and become effective communicators with people different from themselves. Practitioners may be interested in the authors' discussion of how coaches, athletic administrators, and student affairs professionals might consider theories of psychosocial, cognitive, and moral development in order to better support student athlete transitions.

Key words: Athletes, college adjustment, first-year students, sense of belonging, development theory

Higbee, J. L., & Schultz, J. L. (2013). Responding to the concerns of student-athletes enrolled in a first-year experience course. *Contemporary Issues in Education Research, 6(2),* 155.

Researchers asked weekly reflective questions in their large lecture first-year seminar for student athletes. The answers were summarized and used to provide direction for future class meeting, as well as insights into the student transition. This article describes this process and presents the responses to one such weekly question: What is the biggest unanswered question you have about college? (p.159). Responses were coded into one (or more) of ten themes, including faculty and academic expectations, time management, balance, and stress, athletics, majors and careers, and future concerns. Individual examples of each theme highlight the individual and group challenges of first-year student athletes.

Key words: Athletes, college adjustment, first-year students, first-year seminar

Johnson, J. E., Wessel, R. D., & Pierce, D. A. (2013). Exploring the influence of select demographic, academic, and athletic variables on the retention of student-athletes. *Journal of College Student Retention: Research, Theory & Practice, 15(2),* 135-155.

This study was designed to determine which demographic, academic, and athletic variables most strongly predict student attrition and which variables increase retention of first-year student athletes. The researchers gathered demographic, academic, and retention data on the participants from the student information system. Findings indicate that African American students in revenue-generating sports who are more than 250 miles away from home are at the greatest risk of attrition. The authors indicate that students in that sub-group may need more support and specific programmatic efforts in order to be successfully retained.

Key words: African American students, Athletes, first-year students, retention

Students of Color

Adelman, H., Taylor, L., & Nelson, P. (2013). Native American students going to and staying in postsecondary education: An intervention perspective. *American Indian Culture and Research Journal, 37*(3), 29-56.

The focus of this article is the postsecondary education gap for Native Americans in the United States, which the authors argue begins in the primary education system, and includes aspects of poverty, cultural identity, and language. The authors inventoried and discussed existing recruitment, transition, and retention efforts targeting Native American high school and college students, as well as analyzed research that has specific applicability to the barriers to success and completion that Native American college students face. This article's main critique of existing policy and practice around access, transition, and retention of Native American students in higher education is that there is no cohesive system of support for this sub-population. Rather, the authors argue, existing policy has resulted in a fragmented and piecemeal approach to programs, initiatives, and projects. To that end, the authors offer three recommendations for a comprehensive system of student and learning supports and interventions for Native American students from pre-kindergarten through college graduation. These recommendations will be of great interest to practitioners who already work with Native American students or who aim to expand access and retention efforts for Native American students at their institution.

Key words: Access to higher education, Native American students, policy, retention, transition

Bosse, S., Duncan, K., Gapp, S., & Newland, L. (2011). Supporting American Indian students in the transition to postsecondary education. *Journal of The First-Year Experience & Students in Transition, 23*(2), 33-51.

This qualitative study used an ecological systems approach to examine the ways in which micro- and macro- systems impact the persistence and retention of American Indian students. The study builds upon earlier research by gathering further insight into factors that increase retention of American Indian students and by comparing the sometimes competing perspectives of students and student affairs personnel as to existing barriers and available support systems/programs. Results indicated that the level of a student's academic preparation, academic self-efficacy, and interpersonal and culturally relevant relationships on campus were the primary factors in successful persistence and retention. The study reinforces previous research that demonstrated the strong positive impact that supporting cultural connectedness can have for American Indian students.

Key words: Academic preparation, campus environment, Native American students, relationships, persistence, retention

Brooks, M., Jones, C., & Burt, I. (2013). Are African-American male undergraduate retention programs successful? An evaluation of an Undergraduate African-American male retention program. *Journal of African American Studies, 17*(2), 206-221.

The researchers' goal in this study is to assess the effectiveness of academic programs designed to support and retain African-American male students beyond their first year of college. The authors provide context for this study by reviewing the literature on the factors impacting the retention and completion rates African-American males in higher education and inventorying existing retention strategies for this sub-population. Using a mixed-methods research design, the authors attempted to evaluate the impact of academic intervention program they designed on 136 African-American male first-year students at a large Southeastern university. This program consisted of a weekly freshman orientation seminar paired with peer mentoring by upperclassmen students and academic monitoring by program staff, academic advisors, and retention coordinators. During the study, participants took pre- and post-test survey assessments designed to quantitatively measure academic acculturation, social integration, and self-esteem at the beginning and end of the semester. Additionally, participants wrote responses to open-ended questions about the mentor/mentee relationship at the conclusion of the semester, while mentors kept logs on their interactions with mentees for program staff to review. The results of the study indicated that participants had better academic acculturation and social integration and increased GPAs as compared to a control group. Over all, the authors conclude that there is evidence that academic retention programs may positively impact African-American male first-year students when they include elements of mentoring, supplemental non-academic instruction, and academic monitoring. Notably, they suggest peer mentoring is important tool institutions can utilize to help African-American male students overcome challenges and provide them with a sense of belonging and purpose.

Key words: African American students, first-year students, mentoring, orientation programs, sense of belonging

Carter, D. F., Locks, A. M., & Winkle-Wagner, R. (2013). From when and where I enter: Theoretical and empirical considerations of minority students' transition to college. *Higher education: Handbook of theory and research, 28*(2013), 93-149.

This chapter addresses many areas of interest and concern related to the transition to college for students of color, including Asian American, Latina/o, African American, and Native American students. The authors begin with a review of traditional theories and approaches to student transitions to college and discuss the limitations of this scholarship with regard to students of color. Then, they analyzed two emergent theories, academic capital formation and validation models, and their relevance to students of colors' transitions. The chapter then moves to a discussion of the common themes that emerge from this scholarship about challenges racial and ethnic minority students face, including financial barriers, academic preparation, and negative racial climates at predominantly White institutions (PWIs), as well as interventions and supports that can help students succeed in spite of these challenges. The chapter closes with the authors' recommendations for future research concerning students of color and their college transition, including the need for research that disaggregates students by racial and ethnic group, gender, socioeconomic status, and immigration status and considers differences between them.

Key words: African American students, Asian American students, development theory, Latino/a students, Native American students, transition

Cerezo, A. & McWhirther, B. T. (2012). A brief intervention designed to improve social awareness and skills to improve Latino college student retention. *College Student Journal, 46*(4), 867-879.

This study evaluates the effectiveness of an intervention program aimed at increasing retention of Latino students by positively impacting their social awareness and skills. The program, called the Latino Educational Equity Project (LEEP), was tested with a group of 40 Latino students at three predominately White institutions (PWIs) in the Pacific Northwest. The design of LEEP was informed by the Villalpando's (1994) Critical Race Theory framework, using peer facilitators and dialogue to build Latino student social skills and overcome structural and institutional barriers to success. Delivered in a single one-day session, the LEEP curriculum specifically focused on helping Latino students build supportive peer networks, understand university culture and how to balance academic and family demands, and increase their political awareness of race, higher education, and the importance of their individual success for the entire Latino community. Participants took both pre-test questionnaires and post-tests at the three- and eight-week marks, and the researchers compared the results against

a control group. While the results of the study were mixed overall, the researchers found that LEEP participants demonstrated significantly improved social adjustment to college. In their conclusion, the authors emphasize that student affairs practitioners can help Latino students adjust to college by encouraging them to join organizations that will allow them to build relationships with other Latinos.

Key words: College adjustment, Latino students, development theory, relationships

Costen, W. M., Waller, S. N., & Wozencroft, A. J. (2013). Mitigating race: Understanding the role of social connectedness and sense of belonging in African-American student retention in hospitality programs. *Journal of Hospitality, Leisure, Sport & Tourism Education, 12*(1), 15-24.

This study focused on how social connectedness and sense of belonging may impact the retention of African-American students in undergraduate hospitality and tourism management programs, particularly at predominantly White institutions (PWIs) where the large majority of hospitality and tourism programs are located. The authors recruited both black and white students from a hospitality program at PWI in the Southeastern United States to participate in the study. They chose a qualitative focus group methodology with a semi-structured interview protocol to examine how connected students' felt to their university, college, and department. The authors' findings suggested that connectedness to the program and the university, supportive relationships with faculty, and the presence of ethnic minority faculty in the program may positively impact African-American student retention in hospitality management programs. The authors position this study as being important to both PWIs and the hospitality and tourism industry, as African-Americans are underrepresented among total graduates at PWIs and the ranks of hospitality management, the latter of which serves a diverse clientele all over the world. While the scope of this study is limited to the experiences of students in a single program at a single university, these findings may have broader implications student success and retention research in general, particularly for those concerned with the experiences of minority students at PWIs.

Key words: African American students, college adjustment, student-faculty/staff interactions, retention, sense of belonging

D'Lima, G. M., Winsler, A., & Kitsantas, A. (2014). Ethnic and gender differences in first-year college students' goal orientation, self-efficacy, and extrinsic and intrinsic motivation. *The Journal of Educational Research,107*(5), 341-356.

This research study considered ethnicity and gender differences in early student motivation in order to determine how it may impact student retention and graduation rates for different ethnic groups and genders. Specifically, the authors were interested in three aspects of motivation, goal orientation, self-efficacy, and intrinsic/extrinsic motivation. The aim of this study was to examine differences in

students' motivation levels varied over time during their first semester of college and links between motivation and student academic performance. Using a quantitative research design, the authors recruited nearly 600 participants enrolled in 100-level courses at an ethnically diverse mid-Atlantic university to take a survey with subscales aimed at assessing these different aspects of motivation. Most of the students were in the first semester of their first year at college. The survey was administered in the first three weeks of the semester, and again during the last two weeks of the semester. Additionally, the authors obtained student GPA data to measure student academic performance during this period. The results of the study indicated that significant differences in early student motivational profiles for students of different ethnicities and genders do exist, and the authors posited that college instructors should assess these different aspects of motivation in their students in order to identify which students may need support and assistance.

Key words: College adjustment, first-year students, motivation, retention

Farmer, E. D. & Hope, W. C. (2015). Factors that influence African American male retention and graduation: The case of Gateway University, a historically black college and university. *Journal of College Student Retention: Research, Theory & Practice, 17*(1), 2-17.

This article presents findings from a study designed to identify which pre-college and first-semester of college variables have the greatest impact on retention to the second semester of African-American males at an HBCU. The study used archival academic data on the quantitative rates of GPA, retention, and graduation data from a pre-selected cohort. The data were analyzed using logical regression and other statistical methods. Findings are in line with other published studies in that higher GPAs (both pre-college and first-semester) predict greater rates of retention and that in-state students are retained at higher levels that out-of-state students. Furthermore, and not surprisingly, in-state students with higher GPAs are the most likely to be retained to the second semester and graduate at much higher rates.

Key words: Academic performance, African American students, HBCUs, retention

Flynn, S. V., Duncan, K., & Jorgensen, M. F. (2012). An emergent phenomenon of American Indian postsecondary transition and retention. *Journal of Counseling & Development, 90*(4), 437-449.
http://dx.doi.org/10.1002/j.1556-6676.2012.00055.x

The purpose of this study was to identify and describe themes that impact the retention rate of American Indian students entering postsecondary education. The authors used a phenomenological approach in which they interviewed students in addition to reviewing the relevant journal literature and counseling codes of ethics. The interviews were semi-structured and were coded for generalized themes and emergent phenomena. Three dominant themes emerged: institutional barriers, financial barriers, and social/interpersonal barriers. Understanding how these

barriers are experienced by American Indian students may help OTR professionals design and develop more culturally appropriate interventions in order to increase feelings of inclusion and to increase rates of retention.

Key words: College adjustment, Native American students, retention

Hoston, W. T., Graves, S. L., & Fleming-Randle, M. (2010). Individual practices to increase the graduation rate of African American students at predominantly white colleges and universities. *The Journal of College Orientation and Transition, 18*(1), 69–77.

This article presents the results of a qualitative study designed to elicit recommendations from faculty as to the most successful individualized, as opposed to institutionalized, retention strategies for African-American students at predominantly White colleges (PWC). The authors addressed common barriers to success and institutional strategies that work to help students overcome these barriers in addition to the more individual strategies that are the main focus of the article. The authors then detailed ten individual strategies that faculty suggest are the most productive in terms of helping African American students in particular to succeed in their classes. While the recommendations reinforce student success strategies from existing research (i.e., sitting in the front of class), this article may be useful to those who are looking for a readable and succinct set of recommendations to share with students.

Key words: African American students, academic success

Ingram, P., Chaudhary, A. K., & Jones, W. T. (2014). How do biracial students interact with others on the college campus? *College Student Journal, 48*(2), 297-311.

This study explored the unique needs of bi- or multiracial students and provided recommendations for inclusive and supportive initiatives for multiracial students. The study was conducted via an online survey developed by the author and the resultant data were analyzed using descriptive statistics. Findings were mixed, with some students advocating for specific multiracial student organizations and services and other strongly suggesting that such organizations and services would serve only to make multiracial students more segregated and stigmatized. The authors recommend that decisions about organizations be left to the students on individual campuses. They further recommend that all campuses work to be more welcoming to and inclusive of multiracial students by incorporating both awareness training for faculty, staff, and students and inclusion of multiracial issues into classes and curricula. The open-response comments included in the article are particularly of interest to faculty and staff working with multiracial populations, as they provide the most insight into the lived experiences and expressed desires of the students surveyed.

Key words: Bi/Multiracial students, transition programs

Johnson, L. (2013). The benefits of a comprehensive retention program for African American students at a predominately White university. *Interdisciplinary Journal Of Teaching And Learning, 3*(1), 38-54.

This article presents the findings of a qualitative research study designed to assess the experiences of African-American students, faculty, and staff involved in the on-campus retention program at a predominantly white institution (PWI). The study sought to determine how those experiences impact the effectiveness of the retention initiative. The author details some of the most prevalent issues faced by African-American students and gives a brief overview of retention efforts at PWIs before delving into the specifics of her study. The study was conducted through taped interviews with selected retention program staff/faculty and with students who participated in that retention program. The data was analyzed using a grounded theory approach to coding and triangulation. The retention program included both peer and faculty/staff mentoring, both of which were found to be beneficial to the students.

Key words: African American students, mentoring, retention

Lee, J. A., & Barnes, A. R. (2015). Predominately White institutions: Transition programs to address academic under-preparedness and experiences of discrimination. *Translational Issues In Psychological Science, 1*(4), 401-410.

This review article examined the literature on the history and development of transition and orientation programs designed to specifically address the needs of black students at predominantly white institutions (PWIs). The authors synthesized research dealing with various factors that disproportionately and negatively impact black student success and retention, such as academic under-preparedness, discrimination, and oppression. The authors then turned their attention to the relevant literature related to building successful transition programs for black students, including a lengthy discussion of the most prevalent academic and social outcomes reported in the literature.

Key words: African American students, orientation, transition programs, academic success

Lee, J., Donlan, W., & Brown, E. F. (2010). American Indian/Alaskan Native undergraduate retention at predominantly white institutions: An elaboration of Tinto's theory of college student departure. *Journal of College Student Retention: Research, Theory & Practice, 12*(3), 257-276.

This article reports the results of a research study undertaken to determine the factors that influence the persistence and retention of American Indian students. The authors use Tinto's integration-commitment model of attrition as both the lens through which the study was designed and through which the findings are interpreted. The authors used four different methodological tools (statistical analysis of institutional data, a survey, interviews, and focus groups) to conduct their research. The authors used these methods to identify the most common reasons why American Indian students decide to leave school and potential strategies that could reverse those decisions. The findings indicate that having financial difficulties was the most frequently cited reason for leaving school. Competing family obligations were also frequently mentioned. The authors use the qualitative narrative data to further illuminate these findings. The authors concluded with a discussion of institutional strategies that may help alleviate these challenges for American Indian students.

Key words: Native American students, retention

Mayhew, M., Stipeck, C., & Dorow, A. (2011). The effects of orientation programming on learning outcomes related to academic and social adjustment with implications for transfers and students of color. *Journal of the First-Year Experience & Students in Transition, 23*(2), 53-73.

This study explored the impact of orientation programming on the academic and social adjustment of first-year and transfer students of color at a predominantly White institution (PWI). The authors used one of the StudentVoice validated survey instruments to collect their data. The survey was completed by over 40% of the incoming freshman and transfer students in the study period. Results of the survey indicate that orientation programs are more valuable at increasing social adjustment than academic adjustment for first-year students. This was particularly true for students of color. However, the data indicates that the opposite is true for transfer students (i.e. they reported more gains in academic rather than social adjustment). The authors suggest that these findings can be used to improve orientation programs for specific audiences, for example, increasing the academic content for first-year students and increasing the social content for transfer students. Student affairs professionals in particular may find this article helpful as it details many of the ways in which orientating programming can contribute to creating a welcoming environment for students of color.

Key words: College adjustment, first-year students, orientation, transfer students

Musoba,G. D., Collazo, C., & Placide, S. (2013). The first year: Just surviving or thriving at an HSI. *Journal of Hispanic Higher Education, 12*(4), 356-368.

This study was designed to elicit information about the unique challenges and opportunities faced by students of color at a Hispanic serving institute (HSI). The study also sought to discover the unique needs that met by existing first year experience (FYE) programming and which needs were not met. The study was conducted through qualitative interviews and the findings are presented in the case study model. The interviews were evaluated and coded for emerging themes individually by all the researchers and the responses were then triangulated and analyzed. The two most dominant themes that emerged were the critical importance of a sense of institutional belonging and the value of an institutional mentor. The researchers also found that a lack of major and career planning was a particular challenge for students of color and that students of color often feel that the institution is not adequately communicating important information to the students. The article is strongest in illustrating how FYE personnel can serve as mentors and as ambassadors of the college culture.

Key words: Latino/a students, mentoring, transition programs

Pino, N. W., Martinez-Ramos, G. P., & Smith, W. L. (2012). Latinos, the academic ethic, and the transition to college. *Journal of Latinos and Education, 11*(1), 17-31.

The research described in this article examines factors that contribute to the academic ethic for Latino/a students. In this study, the authors examined survey results from 679 Latino/a undergraduate students, which was as a segment of a larger study on academic ethic and the transition to college. Factor analysis was conducted on 29 items about behavior in college and study habits and that was compared to survey responses about high school academic ethic. Findings from the study indicated that high school academic work ethic did not specifically affect GPA but did affect whether a student engaged in pro-academic or anti-academic behaviors. Whether a Latino/a student was first or second-generation appears to influence academic ethic, particularly for Latinas. Prior research and findings from this study indicate a need for additional research on the potential significant differences of Latinos and Latinas.

Key words: Academic success, Latino/a students

Sandoval-Lucero, E., Maes, J. B., & Klingsmith, L. (2014). African American and Latina(o) community college students' social capital and student success. *College Student Journal, 48*(3), 522-533.

This article examined factors that contribute to the attrition, success, and the cultural implications for African American and Latino/a students. Focus group interviews were conducted to explore success as related to grades, retention and enrollment, progress to graduation, and to eventual graduation. Only students with a 2.5 GPA or higher and who had previously identified as African American or Latino/a are selected for the research. Emerging themes for successful students

included a positive relationship with faculty, support from family, and campus engagement and support. An unintended finding, the researchers discovered that African American students who were full-time are more successful than African American students who were part-time; conversely, Latino/a students who were part-time are more successful than Latino/a students who are full-time. The researchers assert that the three themes indicated that positive outcomes in terms of cultural and social capital are achieved and noted that the study was limited because there are no African American males in the focus groups. The authors asserted that previously held notions about diverse student family support is more diverse and nuanced. Other cultural capital is exposed as positive factors and assertions are made about consideration of perspective when designing retention initiatives for these populations of students.

Key words: African American students, Latino/a students, parents and family, retention

Wilson, D. (2014). Follow me to the baccalaureate: Reflections and advice from African American community college transfer student journeys. *The Community College Enterprise, 20*(2), 72-84.

An examination of enrollment statistics demonstrates increased enrollment trends but not degree attainment trends for African American students motivating the author's study. Beginning with literature reviews focused on the intention to transfer, the transition to community college, and graduation rates for community college students degree attainment, the author presents Padilla's model of minority student success and Yosso's community cultural wealth model as conceptual frameworks to examine the experiences of African American college students who have transferred to four-year institutions and attained a degree. The author conducts interviews and surveys to attempt to understand the students' experiences. Findings indicate that those who have successfully transferred as intended and earned a baccalaureate degree are those who utilize academic support services, are invested in their academic and campus experience, and share positive reflection regarding their identity development and confidence specifically as related to culture and support. The author recommends African American students develop strong academic habits and get engaged in campus activities that will foster learning and personal growth.

Key words: Academic success, African American students, transfer students, community college

Wortham, F. B. (2013). Social networking: Engaging prospective and admitted African American and other minority students before they arrive on campus. *About Campus, 18*(1), 21-24.

Charged with supporting the needs and success of minority students and educating the campus community around inclusivity, the author reviews the success of an implemented program combining social media interactions with prospective students and ongoing mentoring relationships for students who ultimately enroll. The Connector program ran for five years and minority students served as mentors to small groups of incoming students. Using peer to peer interaction via Facebook to develop a relationship between incoming minority students and Connectors; the program provided a space for candid conversations between students whose commonalities bonded them. Using the established connection, the program resulted in increased attendance at events and programs designed for minority students. Those who participated in the program indicated satisfaction and recommended the program continue. The author suggests continuing to explore the ever-changing landscape of technology to find ways to use social media opportunities as a foundation for relationship building between incoming minority students and peer mentors.

Key words: Academic success, African American students, Students of color, Peer support

Transfer Students

Allen, J. M., Smith, C. L., & Muehleck, J. K. (2013). What kinds of advising are important to community college pre-and post-transfer students? *Community College Review, 41(4), 330-345.*

This study focused on academic advising of community college transfer students. In order to find out more about what aspects of advising are particularly helpful to students who transfer from community college to four-year colleges and universities, the authors investigate the importance ascribed to 12 different advising functions by both pre- and post-transfer students. Participants in the study consisted of a sample of 1,932 students from two community colleges who intended to complete bachelor's degrees (pre-transfer students) and 7,172 students from five public 4-year institutions who had transferred from community colleges (post-transfer students). Participants completed a survey instrument, the Inventory of Academic Functions-Student Version, developed by the authors intended to assess experiences with 12 functions of academic advising falling into four general areas: integration functions, referral functions, information functions, and shared responsibility function. The authors found that both groups of students rated all advising functions above a 4 on a 6-point scale, which they suggested meant that advisors who work with pre- and post-community college transfer students need to be prepared to offer a comprehensive set of advising skills and experiences. Another highlight among the findings was that students rated receiving accurate information about degree requirements and transfer policies, timelines, and procedures very highly. Also of interest is that pre-transfer students ascribe importance to advising

that assists them with choosing among general education options and deciding what kind of degree to pursue.

Key words: transfer students, academic advising

Allen, J. M., Smith, C. L., & Muehleck, J. K. (2014). Pre- and post-transfer academic advising: What students say are the similarities and differences. *Journal of College Student Development, 55*(4), 353-367.

This paper presented the results of a study on the pre- and post-transfer academic advising experiences of community college students who either intend to transfer or have transferred to four-year institutions. The study used a concurrent nested research design that employs both qualitative and quantitative methods but is guided by a predominant method, which in this case is quantitative analysis. Participants in the study consisted of 1,932 students from two community colleges and 7,172 students from five public four-year institutions who took a survey instrument with both Likert-type scales and open-ended questions. In their analysis of the data, the authors examined whether students differ in satisfaction with the advising they receive pre- and post-transfer, whether either group of students is less satisfied with academic advising than with their overall educational experience, and what factors might explain their findings. The results suggested that pre-transfer students are more satisfied with their advising experiences than post-transfer students, but that both groups are less satisfied with advising than with their overall educational experience. Practitioners at four-year institutions in particular may be interested in the finding that post-transfer students report experiencing more dire consequences for advising errors at their four-year institutions. Other factors that contributed to relatively low satisfaction levels with academic advising for both groups include receiving inaccurate and inconsistent information from advisors, the inaccessibility of advising at their institutions, and the lack of individuation they receive in their advising experiences. The authors concluded the paper with a discussion the implications of the study for practitioners. They also provided recommendations for addressing student concerns, such as advising departments experimenting with the use of advising e-portfolios for students across the transfer process.

Key words: academic advising, transfer students

Bahr, P. R., Toth, C., Thirolf, K., & Massé, J. C. (2013). A review and critique of the literature on community college students' transition processes and outcomes in four-year institutions. In Higher education: Handbook of theory and research, Vol. 28 (pp. 459-511). Springer Netherlands.

This chapter examinedd scholarship on the transition experiences and outcomes of community college transfer students at four-year institutions. The authors argue that while much has been written about the community college side of the transfer equation, relatively little scholarship has focused on the role that four-year

institutions play in the transition, retention, and degree-completion of community college transfer students. To this end, the authors' aim for this literature review is to identify common concepts that emerge in the literature about students' post-transfer transitions, situate these concepts within the literature on student retention and success in higher education, critique and summarize the findings for each concept as they relate to students' post-transfer experiences, and provide recommendations for future scholarship and inquiry in this area. The concepts that the authors discussed included baccalaureate degree completion, academic performance, academic and social integration, involvement, environmental pull, capital, and transfer receptivity. Dozens of articles are carefully analyzed so that the authors are able to define each concept, discuss how it may be measured, and examine related findings.

Key words: transition, transfer students, retention

Chin-Newman, C. S., & Shaw, S. T. (2013). The anxiety of change: How new transfer students overcome challenges. *Journal of College Admission, 2013*(221), 14-21.

This study examined challenges faced by community college transfer students at a four-year institution. The authors conducted structured qualitative focus groups with 14 new junior-level transfer students at a regional four-year university in order to identify common obstacles the students experienced before and after the transfer process. Findings from the focus group interviews are presented into two different stages: prior to acceptance to their transfer institution, and after acceptance. The authors included significant excerpts from the interviews so that readers can experience the students' narratives in their own words. Students described feeling frustrated with receiving incorrect information from community college counselors and advisers pre-transfer, and feeling overwhelmed by unfamiliar systems at their new university post-transfer. A major source of anxiety for participants in the study was not knowing which of their community college credits would be accepted by their new institution. This related to concerns over the time it took for their transcripts to be evaluated and fears about having to take more classes than they expected, leading to a delay in their graduation. The authors noted that much of the stress and anxiety students feel during the transfer process is due to students not having needed information readily available to them. To this end, they make several recommendations that both community colleges and four-year universities can implement to help transfer students make the transition and acclimate to their new settings with less stress.

Keywords: transfer students, community college, college adjustment, transition, two-year institution

Clark, K. M., & May, I. C. (2015). Upper-division transfer students: Designing a supplemental instruction program for nursing students within a

science based curriculum. *Community College Journal of Research and Practice, 39*(6), 499-514.

This paper presented an assessment of an academic support initiative developed for a cohort of junior-year transfer students in a nursing program at a public university in the University System of Maryland. The initiative, which consisted of Supplemental Instruction, workshops on accelerated learning techniques, and individual tutoring, was specifically developed to help new transfer students succeed in pathopharmacology, a challenging course with a high withdrawal/fail rate for new juniors in the program. The authors conducted a retrospective quantitative study on a sample of 55 first-semester nursing juniors in the fall 2006, 78% of whom were community-college transfer students, to investigate whether transfer students who participated in academic support initiatives performed better in the required pathopharmacology course after considering previous academic success and preparation. The data suggested that participation in the academic support program positively impacted transfer students' GPAs at the end of the first semester and contributed to a reduced rate of failure or drop out (from 15% to 7%) in subsequent semesters. Study participants indicated that peer tutoring was the most useful intervention in the academic support program. While the results of this study are not generalizable to other programs or institutions, the authors suggested that the academic support program assessed in this paper could serve as a model for similar academic support initiatives for transfer students in other contexts.

Keywords: transfer students, academic support

Clausen, C. & Wessel, R.D. (2015). Transfer shock: Predicting academic success after transition. *The Journal of College Orientation and Transition, 23*(1), 15-27.

This article focused on the transfer shock phenomenon which is the observation that transfer students experience difficulty adjusting to their new academic environment resulting in decreased grade point average as students adapt to the new academic structures of the institution; the study examined predictors of post-transfer GPA and graduation rates for students transferring to Ball State University (BSU). A literature review explored Tinto's theory of individual departure and the nature of social integration as related to transfer students. The sample of the study was comprised of 1,857 BSU transfer students entering between 2004-2006 and was analyzed via a statistical quantitative analysis. The study found that the average post-transfer GPA dropped significantly from the pre-transfer GPA and that nearly sixty percent completed their degree in six years. Predictors for post-transfer GPA were found first to be pre-transfer GPA, followed by age with older students having higher GPAs than younger transfer students, and then by the type of institution students transferred from with those executing a vertical transfer earning better post-transfer GPAs than those executing a horizontal transfer. Examination of predictors for six-year graduation began with age again indicating that older students are more likely to achieve degree attainment, followed by sex with

indicators that women are more likely to graduate in six years, and then by transfer institution type, which indicated that horizontal transfers were more likely to graduate in six years. While major did not play a significant role in this study's findings for post-transfer GPA, some majors did show statistically significant graduation rate predictors; those majors are Nursing, Journalism and Telecommunications, and Education. Some of these findings confirm previous transfer research while other data is in conflict with some previous research. The researchers recommended that these predictors be analyzed at the point of admission and that transfer students connect early with academic support to have a continued, stable point of contact. Additionally, the researchers suggested conducting qualitative studies to align with the statistical data for a more robust picture of the indicators of success for transfer students.

Keywords: transfer students, college adjustment, academic performance

Coston, C. T. , Lord, V. B. , Monell, J. S. (2013). Improving the Success of Transfer Students: Responding to Risk Factors. *Learning Communities Research and Practice, 1*(1), Article 11. Retrieved from http://washingtoncenter.evergreen.edu/lcrpjournal/vol1/iss1/11

This study examined the impact of participation in a disciplinary-specific transfer student learning community on student stress levels. The focus of the study was a Criminal Justice Transfer Learning Community with 15 student participants at a large southeastern public university. Students in the Criminal Justice Transfer Learning Community took two linked courses, participated in structured study groups, volunteered with criminal justice agencies, attended lectures on job skills, and interviewed professors in criminology and criminal justice about their teaching and research initiatives. The authors were interested in any changes in transfer student stress levels over the course of the two-term learning community as well as the means of coping students developed in response to their stressors. Students identified stressors at the beginning of the first term and rated the intensity of that stressor at the beginning of the first term, beginning of the second term, and at the end of the academic year. Common stressors identified by students include limited number of transfer credits accepted, navigating a new campus, and the expense of books. The authors found that reduction in stress levels occurred over the course of the learning community, and that students reported the feeling of belonging in their learning community cohort and university community had the largest impact on stress reduction.

Keywords: transfer students, sense of belonging, college stress, learning community

Gard, D. R., Paton, V., & Gosselin, K. (2012). Student perceptions of factors contributing to community-college-to-university transfer success. *Community College Journal of Research and Practice, 36*(11), 833-848.

This study focused on the actual mechanisms of the process of transferring from a community college to a four-year institution. Building on the work of Townsend (1995), this study used semi-structured interviews, a focus group, and a follow-up survey to elicit information on transfers students' perceptions of the transfer process. Student responses were coded and categorized into themes of issues with advising, psychosocial integration, development courses, and financial aid. Academic advisement was by far the most commonly mentioned challenge and the authors detailed the many ways in which advising was problematic for the transfer students. These findings were consistent with the work of Townsend (1995) and others. Recommendations called for increased communication and partnerships between the advising offices of 2- and 4-year institutions.

Keywords: community college, transfer students, academic advising

Harper-Marinick, M., & Swarthout, J. (2012). Developing a culture of transfer and student success in Arizona. *New Directions for Community Colleges, 2012*(160), 79-89.

This article is an in-depth examination of the Arizona statewide transfer model. This model was initiated by the formation of an Academic Program Articulation Steering Committee (APASC), which was overseen by a council of the presidents of all the institutions of higher education in the state. The APASC is charged with providing oversight to the transfer policies and procedures of all the public 2- and 4-year institutions in the state. This body also oversees several sub-groups that determine course sequencing and content to ensure a streamlined credit transfer process. The APASC is also responsible for the APASC Consortium for Transfer and Alignment (ACTA) which works to foster collaboration among k-12 and higher education in the state (the "P-20 Continuum") in order to enhance curricular alignment between pre-, elementary, secondary, and postsecondary institutions. APASC is ultimately responsible for Arizona's general education curriculum and its transfer pathways. This article detailed not only the history and work of the APASC and its many sub-groups and sub-committees, but also highlighted some of the most promising and innovative practices, such as the Shared Course Numbering System, that these groups have developed and implemented.

Keywords: two-year institutions, four-year institutions, transfer students

Handel, S. J. (2013). The transfer moment: The pivotal partnership between community colleges and four-year institutions in securing the nation's college completion agenda. *New Directions for Higher Education, 2013*(162), 5-15.

This chapter began with a brief overview of the OECD data and the United States' ranking of 6th among developed nations in percentage of working-age adults with an associate degree or higher. The author then went on to describe the national call for increased educational attainment, which led into a discussion of the role of the

community college in the college completion agenda and of how the traditional transfer pathways need to be reexamined and revised to meet national educational goals. Then followed a description and overview of the research on the current status of these transfer pathways and includes areas for improvement. The article concluded with a lengthy justification of the importance of the community college system to the college completion agenda and a call for more research in this area.

Keywords: community colleges, two-year institutions, transfer process

Hoover, S. C. (2010). Designing orientation and transition programs for transfer students. Designing successful transitions: A guide for orienting students to college, 181-192.

This chapter began by describing the different definitions of a transfer student and how transfers can be multi-directional (vertical, horizontal, and reverse), which makes defining a "typical" transfer student exceedingly difficult. The author then moved on to an exploration of the challenges of the transfer student experience and of programs that can mitigate these challenges. The next section detailed ways in which institutions can work to encourage successful transfer experiences, including defining the typical transfer student at your institution, designing effective local orientation programs for transferring students, and developing parent and family orientation programming. The chapter highlighted the importance of having peer transfer student leaders and the roles they can play in transfer student seminars. Recommendations included establishing transfer offices to oversee all of these programmatic efforts and developing state and institutional articulation agreements to ease the transfer process.

Keywords: transfer students, college adjustment, engagement, peer support

Hope, J. (2016). Facilitate transfer, degree completion with concurrent enrollment program. *Recruiting & Retaining Adult Learners, 18*(7), 1-7.

This article described an innovative new model of transfer between a community college and a partnering four year institution, This model was truly revolutionary in that it eliminates the "transfer" altogether. The Degree Partnership Program enables students to be admitted to both institutions simultaneously. Students are able to take classes at both institutions throughout their academic careers. The article went on to detail how this program works and how it benefits not just the students but also both institutions. The article concluded with concrete examples of partnership programs, support services, and events.

Keywords: community college, two-year institutions, four-year institutions, transfer students

Jackson, D. L., & Laanan, F. S. (2015). Desiring to fit: Fostering the success of community college transfer students in STEM. *Community College Journal of Research and Practice, 39*(2), 132-149.

This study sought to find ways to enhance the STEM student transfer pathway between 2- and 4-year institutions. Using Weidman's (1987) Socialization Theoretical Framework, the authors conducted an ex post facto survey research design to examine the factors that influence the transfer and acculturation experiences of STEM transfer students. Data were collected using the Transfer Student Questionnaire and was examined using exploratory factor analysis. Findings indicated that STEM transfer students experienced academic distress (lower grades, increased stress) in the first semester post transfer but that this leveled out over time. The same was true for social adjustment. The authors recommended developing STEM transfer student peer mentors and tutors to mitigate the specific challenges faced by transferring STEM students.

Keywords: two-year institutions, four-year institutions, academic performance, peer support

Jain, D., Herrera, A., Bernal, S., & Solorzano, D. (2011). Critical race theory and the transfer function: Introducing a transfer receptive culture. *Community College Journal of Research and Practice, 35*(3), 252-266.

In this article, the authors used the lens of critical race theory (CRT) to develop a theoretical framework for creating a transfer receptive culture (TRC) that can inform and examine the ways in which 2- and 4-year institutions can foster inclusive and welcoming transfer experiences. Using CRT allowed the authors to include factors such as the racialized experience of education in their model, which they feel is often left out of the relevant literature on transfer students. The authors gave a detailed introduction to CRT and a comprehensive review of the literature on the transfer experience of all students (and particularly of students of color) as move from 2- to 4-year institutions. The authors then discussed the development of the TRC framework and its five distinct elements (establishing transfer as an institutional priority, providing outreach and resources, offering financial and academic support, acknowledging the lived experiences of transfer students, and creating an institutional framework to assess and assist in the creation of a TRC and related programs and initiatives.

Keywords: transfer programs, two-year institutions, four-year institutions

Lester, J., Leonard, J. B., & Mathias, D. (2013). Transfer student engagement: Blurring of social and academic engagement. *Community College Review, 41*(3), 202-222.

Citing seminal and traditional thinking about the link between student success and student involvement and painting a picture of community college students that

allowed for the diversity of their experiences, the authors asked for a more nuanced consideration of student involvement and student development for community college students hoping to transfer from two-year to four-year institutions. Recognizing that tools like the National Study of Student Engagement and the Community College Survey of Student Engagement report on the experiences of students in either a two-year or four-year environment but do not specifically address the transfer student experience, the authors conduct a study of transfer students at one four-year institution to measure social and academic engagement and also to ensure that research captures the differences in transfer engagement from their peers who have maintained enrollment only at one institution; ultimately the researchers wish to discover how engagement affects sense of belonging for transfer students. The authors justified the need for a focus on transfer students citing various social and economic systems that have increased the appeal of beginning one's college career at a two-year institution. A literature review was conducted to demonstrate that traditional measures of student engagement for transfers indicates low campus engagement but highlights the possibility that transfer students ways of engagement may differ in ways that previous research has been unable to capture. Participants were recruited via email and must have matriculated to the institution within the three prior years and members of Tau Sigma National Honor Society were also invited to participate and 31 students participate in semi-structured interviews. These interviews focused on themes related to academic preparation and experience at their current institution and their previous institution, their transition to their current institution, and their own perceptions of academic and social engagement. The transfer students interviewed conveyed that social engagement is critical to their success academically and suggested that they view any and all social engagement, whether directly connected to the campus or not, as productive and valuable to their college experience. Student development outcomes related to self-efficacy were reported and reflection regarding the learning available from these interactions is positively reinforced, even though they aren't necessarily on campus. While they report positively on social engagement, the transfer students interviewed did not specifically cite these social situations as critical to their transition. The participants in this study reported respect for the academy and for meaningful interaction with faculty but also report low faculty interaction; ultimately, students report feeling engaged academically because they feel challenged academically and view this challenge as positive. Sense of belonging was the least consistently similarly viewed factor in the surveys. The authors asserted that transfer students could be more motivated by academic engagement than by social engagement and that practitioners may choose to consider efforts related to academic involvement over social involvement. Ultimately the researchers called for more research for transfer student needs and success strategies to be assessed.

Keywords: *community college, two-year institutions, four-year institutions, transfer students, engagement, sense of belonging*

Transition (General)

Brooman, S., & Darwent, S. (2014). Measuring the beginning: A quantitative study of the transition to higher education. *Studies in Higher Education, 39*(9), 1523-1541.

In this study, the authors aimed to gain an understanding of the impact of certain early interventions on first-year students by measuring changes in self-efficacy, autonomous learning, and social integration during their transition to higher education. These three factors were identified by the authors in their previous studies as influencing the success of first-year college students. The authors collected quantitative data from questionnaires at two different response points from cohort of first-year undergraduate law students participating in a required module of academic interventions during the first five weeks of the semester at a university in the United Kingdom. These interventions included lectures, tutor-led workshops, group information sessions, reflective writing prompts, and a group-work assignment. The authors reported that the results of the study did not align with their predictions that self-efficacy, autonomous learning, and several aspect of social integration would increase between the two data collection points. Rather, they found that student responses in these areas indicated no change or even a decrease for some factors. However, they did find that students who reported greater support from staff also reported higher self-efficacy, autonomous learning beliefs, and study habits, as well as a greater sense of belonging, during the course of the study, indicating the importance of early connections with academic program staff. The authors also considered the impact of gender, work, and accommodation as independent variables that may have influenced the outcomes of their study, and discuss the need for future research that measures the impact of interventions integrated into the curriculum over the course of a semester rather than in a standalone module during the first weeks of the semester.

Key words: first year students, transition, academic performance

Two-Year College Students

Barnes, J. (2012). The first-year experience impact on student success in developmental education. *Journal of Applied Research in the Community College, 20*(1), 27.

This study examined differences in academic performance, retention, and persistence between community college students in developmental education who participated in a First-Year Experience (FYE) program and those who did not participate. The conceptual framework of this study was based on work on integration, involvement, validation, and retention by Tinto (1993), Astin (1984), and Rendon (1994). The authors used a mixed-methods, quasi-experimental design to investigate success outcomes for 148 developmental-education students who participated in a FYE program at an urban community college between 2007 and

2009. The FYE program included required assessment, placement, and orientation as well as enrollment in Personal Growth courses taught by college counselors. In addition to analyzing student data, the authors conducted focus groups with 16 participants in the program in order to collect qualitative data on student experiences and perceptions. A major theme that emerged from the focus groups was support and validation, which students discussed in reference to peer support and counselor support in the FYE program. Notably, the authors found that participants in the program persisted at higher rates compared to developmental education students who did not participate. The persistence of Latino participants in particular was highlighted by the authors, which has significant implications for community colleges that have Latino student populations with low persistence levels.

Keywords: community college, first-year experience, two-year institutions, peer support, Latino students

Bers, T., & Younger, D. (2014). The first-year experience in community colleges. *New Directions for Institutional Research, 2013*(160), 77-93.

This article focused on characteristics of first-year experience programs at community colleges and their impact on student success. The authors first analyze scholarship about core first-year experience components at community colleges, including first-year seminars, learning communities, early alert systems, and student engagement and success initiatives, before identify strategies community college practitioners can use for integrate research into program delivery and make data-driven decisions about program improvement. These strategies included identifying data sources, assigning responsibility for collecting and storing data, and encouraging collaboration and respect between institutional research professionals and first-year experience program personnel. The authors also discussed challenges with designing, implementing, assessing, and conducting research about first-year experience programs specific to the community college setting, such as working with transient student populations that are difficult to track and part-time students who exhibit low engagement levels with the college. A major consideration for community college practitioners that the authors noted early on is that research about what works at four-year institutions may not be relevant for impacting student success at community colleges.

Keywords: first-year experience, community colleges, two-year institutions, first-year seminars, engagement, academic performance

Blaylock, R. S., & Bresciani, M. J. (2011). Exploring the success of transfer programs for community college students. *Research & Practice in Assessment, 6*(2011), 43-61.

The focus of this paper is an outcomes-based assessment evaluation of Transfer Bridge, a free transitional summer program designed to aid underrepresented

California community college students transfer to a regional public university. As part of the evaluation, the authors identified four learning outcomes associated with transfer student transition support and outlined both direct and indirect measures of student learning to assess in relation to each outcome. The learning outcomes the authors identified were in the areas of academic advising, library literacy, financial literacy, and peer mentor relations. Additionally, they collected student feedback through a survey with questions aligned to each learning outcome. The authors outlined the program elements, detailing how each learning outcome was addressed in the program design and including student feedback on program components. They concluded the article with a narrative of how they used the assessment to improve Transfer Bridge for subsequent participants, provided a step-by-step outline for outcomes-based assessment program evaluation planning, and offer recommendations to student affairs practitioners about data-driven program decision making.

Keywords: community college, transfer students, transition programs

Crisp, G., & Taggart, A. (2013). Community college student success programs: A synthesis, critique, and research agenda. *Community College Journal of Research and Practice, 37*(2), 114-130.

This article provides readers with a narrative review and critique of empirical research on three common programmatic interventions offered at community colleges: learning communities, student success courses, and supplemental instruction. The authors considered empirical research and assessment published in academic journals, conference presentations, dissertations, policy reports, and book chapters as part of this review. After reviewing the available research, the authors concluded that more work is needed to understand the impact of these specific interventions on community college students. Then, they offer a critique of the current body of literature, discussing limitations of different studies, research methods and strategies used, differences between program the ways programs were described and subsequently implemented and measured, and the prevalence of selection bias among the studies they reviewed. A main critique by the authors was that a large number of studies on program effectiveness are not published in peer-reviewed journals but rather remain unpublished, appear only online, and are not easily accessible by practitioners.

Keywords: community college, student success, learning communities

Crosta, P. M. (2014). Intensity and attachment: How the chaotic enrollment patterns of community college students relate to educational outcomes. *Community College Review, 42*(2), 118-142.

This paper presented institutional researchers with a way to visualize the relationship between student enrollment patterns and student outcomes, such as degree completion and transfer, at community college. The author used data from

two cohorts of students at five colleges to illustrate community college enrollment patterns and performs a cluster analysis that groups different types of enrollment patterns based on their features. The resulting clusters can be used to find correlations between enrollment behavior and the probability that students will earn credentials and transfer to a four-year institution. This data visualization method may help institutional researchers make sense of enrollment patterns at their own community colleges and analyze the behaviors of groups of students who made the same enrollment decisions. The author suggested that performing this kind of analysis on historical data in particular will help faculty, advisers, and student affairs professionals more clearly understand student pathways and identify points in the pathways at which students may have encountered barriers. Recommendations for future research included studies that examine how certain enrollment patterns (such as switching from full-time to part-time or vice versa) impact students and what characteristics are associated with specific enrollment transitions. The author also acknowledged that research on enrollment patterns has implications for policy makers, as policies related to financial aid, tuition, and placement testing may push students to take suboptimal enrollment pathways.

Keywords: community college, two-year institutions, transition

Dudley, D. M., Liu, L., Hao, L., & Stallard, C. (2015). Student engagement: A CCSSE follow-up study to improve student engagement in a community college. *Community College Journal of Research and Practice, 39*(12), 1153-1169.

This paper presented a qualitative case study at a Los Angeles community college that focuses on gaps in student engagement levels. The authors used Yin's (2009) framework for using a case study as a research method to investigate why students' engagement levels were persistently low in key areas identified through analysis of results from the Community College Survey of Student Engagement (CCSSE). Additionally, the authors wanted to examine disparities in student engagement as reported by students in the CCSSE and by faculty in the Community College Faculty Survey of Student Engagement (CCFSSE). As such, they conducted nine focus groups with a total of 63 students to better understand student perceptions and behaviors as they relate to student engagement. Themes that emerged from the focus group interviews include students' high expectations of faculty, students' low preparation and effort in relation to faculty expectations, the impact of faculty standard-setting and encouragement on student engagement, the impact of course subject area and difficulty level on student engagement, and the role of institutional support in student engagement. The authors highlighted that while students often admit to putting forth minimal effort in their courses, they still express high expectations for challenging work and high standards from faculty. Other notable findings from the focus group indicated that students want clear and constructive feedback from faculty in a timely manner, that faculty expressiveness and enthusiasm for the subject matter influences their motivation levels, and that faculty encouragement has a positive impact on student engagement levels. The authors concluded the

article with several recommendations that have implications for teaching faculty, academic affairs staff, and student affairs practitioners. These included creating interventions that highlight the importance of effort and time management for first-year students, offering professional development opportunities for faculty to explore instruction methods and activities that promote active and collaborative learning, including class participation as a portion of course grades, and advertising student support services in a way that minimizes any stigma associated with seeking help.

Keywords: engagement, community college, two-year institutions

Hatch, D. K., & Bohlig, E. M. (2015). An Empirical Typology of the Latent Programmatic Structure of Community College Student Success Programs. *Research in Higher Education, 57*(1), 72-98.

This article sought to create a common framework and vocabulary and to define a consistent terminology to describe student success programming at community colleges. Data were collected from responses to the Community College Institutional Survey and was analyzed using a mixed method hybrid combining factor and latent class analysis. The authors found five programmatic elements distributed over four types of student success programs (minimalist, student success, collaborative academic, and comprehensive). The authors argued that using this common terminology and framework to describe these programs and their elements will help synthesize and generalize the research in this field. They further suggested that adopting this framework and vocabulary could help practitioners to unify the research and the programs for student success in community colleges.

Keywords: student success, community college, two-year institutions

Jaeger, A. J., Dunstan, S. B., & Dixon, K. G. (2015). College student access: How articulation agreements support rural students. *Peabody Journal of Education, 90*(5), 615-635.

The article begins by setting the stage for the increased need for access to higher education in the wake of President Obama's America College Promise and the college completion agenda. The authors point out the need to improve access to and transfer processes of community colleges as the entrance point to higher education so that students receive "seamless education". The authors then discussed why this is particularly true for rural students and move into an examination of the numbers of rural and transfer students in the state of North Carolina. The authors reviewed the literature on the role of the community college in education in general and for rural students specifically. Then followed a discussion of the college access barriers for rural students, including a lack of academic preparation, issues of affordability, and a lack of college going support and resources. The authors used this information to argue for the place of the community college to serve as a bridge into higher education and a pathway into a four-year institution. The remainder of the article

was spent examining the development, structure, and impact of the Comprehensive Articulation Agreement (CAA) between University of North Carolina and the North Carolina Community Colleges systems. The authors particularly stressed the importance of academic advising and the guaranteed transferability of courses as foundational to a successful articulation agreement. The authors highlighted specific benefits and limitations of the CAA and finish by calling for practitioners and researchers to continue to study how community college and comprehensive articulation agreements can support access to and attainment of bachelor's degrees for rural students.

Key words: Access to higher education, community college, rural students, transfer students

McKinney, L. (2010). Evaluability assessment: Laying the foundation for effective evaluation of a community college retention program. *Community College Journal of Research and Practice, 34*(4), 299-317.

This article argued that educators need to improve their evaluative methods for measuring the impact of their student success initiatives (SSIs), particularly because as funding has been increasingly tied to retention, progression, and graduation (RPG) rates, widespread efforts have been made to increase those rates at all levels. However, while SSIs have increased on campuses at large, they have not always been appropriately evaluated. The SSIs need to be evaluated, McKinney argues, at the programmatic level in order to begin to judge the SSI's impact on RPG and to give stakeholders useful data so that they can make informed decisions about allocations of resources. McKinney recommended implementing an initial evaluability assessment (EA) to determine whether an SSI is even capable of being assessed at a level that will yield meaningful and useful data before attempting to conduct a costly and time-consuming comprehensive program assessment. He is also interested in reporting on the value of using EA as a planning and assessment tool. McKinney introduced EA as a three-step process in which the values, resources, activities, and outcomes of an SSI are described, analyzed, and studied for scalability and sustainability. McKinney detailed this process with one of the SSIs on his campus and ends with a recommendation to include EA as part of a sustainable and comprehensive plan for developing, administering, and assessing an SSI on any campus.

Key words: community college, assessment, program evaluation

McKinney, L., & Novak, H. (2013). The relationship between FAFSA filing and persistence among first-year community college students. *Community College Review, 41*(1), 63-65.

This article examined how the Free Application for Federal Student Aid (FAFSA) serves as a gatekeeper to higher education and in particular how this is disproportionately true for community college students. The article began with a

comprehensive review of the literature that shows that community college students are much less likely to file a FAFSA than their peers at four-year institutions, which is particularly troubling as the research also shows that community college students are more likely to need such aid. The review continues to examine the research on why community college students are more likely to fail to fill out and file a FAFSA and the detrimental effects of such failures on community college persistence and retention rates. The data for the study itself was pulled from the Beginning Postsecondary Students Study (BPS) from the NCES. The researchers used data showing inter-year rather than year-to-year attrition because the research shows that financial considerations are more likely to disrupt studies mid-year while academic considerations are more likely to affect year-to-year attrition. The data were analyzed using descriptive statistics and logistic regression to determine the relationship, if any, between filing a FAFSA and the likelihood of retention in the second semester. Findings indicated that there is indeed a negative relationship, in that students who do not file for a FAFSA are less likely to persist to the second semester. Recommendations included strengthening the working relationships between advising, financial aid, and enrollment management to ensure that all students who are eligible for federal financial aid complete and file a FAFSA each semester. The authors also called for qualitative studies that might explain why eligible students fail to file.

Key words: community college, financial aid, persistence

Mertes, S. (2013). Community college retention: A critical race theory perspective. *Journal of Applied Research in the Community College, 21*(1), 21-26.

This review article examined the extant theories and models of student retention through the lens of Critical Race Theory (CRT) to determine where these theories fall short, particularly in describing the experiences of minority students at community colleges. The author began with a review of several of the leading theories of student retention and their applicability to two-year colleges. This was followed by an examination of CRT as a critical perspective through which to assess these models of student retention and progression. The author suggested that the prevailing models, as viewed through the CRT lens, fail to account for, and in some ways further marginalize, minority students. The author recommended various ideas for improving these theoretical models and includes strategies to put into practice (e.g., including family dynamics in student retention theories and as a result creating smaller orientation programs that include parents and families).

Key words: community college, students of color, retention

Mertes, S. J. (2015). Social integration in a community college environment. *Community College Journal of Research and Practice, 39*(11), 1052-1064.

This study was conducted to explore the differences and similarities between various theoretical models of social adjustment in college. The researcher noticed

that the leading theorists differed in their constructs of social adjustment, particularly between the experiences of students and 2- and 4-year institutions. He sought to determine if the models of Maxwell (2000) and Deil-Amen (2011) support or undermine Tinto's (1975, 1987, 1993) seminal model. The researcher surveyed a representative sample of students enrolled at his 2-year institution and coded the resultant data to a simple numerical value, which he analyzed using SPSS. Results indicated a high degree of correlation between the constructs of Maxwell, Deil-Amen, and Tinto, and suggested that these constructs are similar in practice, with one exception. Female students tended to report higher scores in relation to faculty caring and concern, which would not be predicted in Tinto's model, but was evident in the other models. Recommendations were for faculty to increase their interactions with all students, in and out of class and for program directors to develop and encourage more opportunities for faculty participation in the social life of the college.

Key words: community college, college adjustment, student-faculty/staff interaction, relationships

Monaghan, D. B., & Attewell, P. (2015). The community college route to the bachelor's degree. *Educational Evaluation and Policy Analysis, 37*(1), 70-91.

This study sought to determine if the prevailing theories of the educational attainment of transfer students adequately explain the disparity in bachelor's degree attainment between students who begin at community colleges and students who begin at four year institutions. The researchers presented decades of research that overwhelmingly indicate that students who begin at two year institutions are less likely to go on to earn a bachelor's degree than equivalent students who begin at four year intuitions. However, the researchers point out that recent scholarship has debunked many of the older rationales for why this is true. In looking for new explanations, the researchers designed a study to examine a more recent national cohort of transfer and traditional students to see if there is still a higher attrition rate once at the four year institution, and if so, why that disparity exists. Using the most recent Beginning Postsecondary Student Survey (BPS) from the NCES, the researchers collected transcript, transfer, and graduation data and analyzed that data using the counterfactual model of causal inference. The researchers found that contrary to previous findings, community college transfer students are on average as likely to graduate with a bachelor's degree as equivalent students once they have successfully transferred to a four-year institution. The findings also indicated that students who pay a larger "transfer penalty' (the loss of non-transferable credits), are less likely to earn their bachelor's degree than both other transfer students and those who began at a four-year institution. Recommendations included creating programs and policies that increase the facilitation of the credit transfer process and entering into more effective and stronger articulation agreements between institutions.

Key words: community college, transfer students, performance, degree attainment

Moschetti, R. V., & Hudley, C. (2015). Social capital and academic motivation among first-generation community college students. *Community College Journal of Research and Practice, 39*(3), 235-251.

The authors of this study noticed a dearth of research on White, working class, first-generation students at community colleges and designed a study to fill that gap. They began with a literature review that covers the challenges of being a first-generation student, the challenges of being a low-income student and how those challenges are compounded by being both. The authors went on to provide an overview of the theory of social capital and how that is experience on college campuses. They also included information about how hard it can be for all students at community colleges to form social bonds and why this is particularly detrimental to first-generation students. The authors conducted a qualitative interview study to discover how white, working class, first-generation students at one community college managed their social and academic integration, their biggest challenges to integration, and the factors these students considered most valuable in making a successful transition into college. The interviews were semi-structured and featured open-ended questions which were taped and transcribed. These interview transcripts were then analyzed using the grounded theory approach. Categories that emerged fell into four general themes, institutional support, personal characteristics, family support, and financial resources. The findings support previous research that indicates that the lack of college knowledge experienced by many first-generation students impacts the amount of social capital that these student bring with them to college, which in turn negatively influences their rates of persistence and retention. Of particular interest to the authors was the finding that working-class White first-generation students were more likely than their minority peers to believe that it was their individual responsibility to make it through college and that they were less likely to seek support from their families, peers/friends, and the institution. Recommendations included creating supportive peer groups targeted specifically at this population in order to educate these students as to the value of social support and how to increase their social capital.

Key words: community college, peer support, academic motivation

Nakajima, M. A., Dembo, M. H., & Mossler, R. (2012). Student persistence in community colleges. *Community College Journal of Research and Practice, 36*(8), 591-613.
The authors of this article argued that existing retention models (specifically Tinto (1993) and Astin (1987)) are not sufficient for explaining retention at two-year institutions primarily because the students at two-year colleges differ so considerably from students at four-year institutions. The authors also found the previous research on retention at two-year schools somewhat limited in that is usually focused on single variables or single institutions. The authors designed a study in response to these limitations in order to assess what background,

financial, academic, and psychosocial variables have the greatest influence on student persistence at two-year colleges. A random sample of students were invited to compel a pencil and paper survey and the researchers used institutional enrollment data to identify which of the participating students were still enrolled in college three semesters later. The survey was assembled using questions from several available national instruments and data was also collected from the Cooperative Institutions Research Program (CIRP) Freshman Survey. The data from the researchers' survey and the CIRP survey in conjunction with the institutional enrollment data were analyzed using MANOVA to predict student retention based on a number of individualized and composite variables. Findings indicated that cumulative GPA is the strongest single variable predictor of student retention. Contrary to the researchers' expectations, with the exception of faculty concern, academic and psychosocial variables played little to no role as single variables on student retention. The major finding of this study was a reaffirmation of how interrelated all of the variables are and the degree to which this study showed that attrition is almost always a combination of multiple factors. Recommendations were to increase institutional early-warning alerts tied to GPAs to identify at-risk students and that retention strategies for community college students will be more successful if they are introduced in the classroom.

Key words: community college, persistence, academic performance

NODA, Association for Orientation, Transition, and Retention in Higher Education

Annotated Bibliography

Access to Higher Education. (April 13, 2006) Steven J. Rosenstone presentation to "Thursdays at Four." Institute for Advanced Study. University of Minnesota.

This published presentation states that the disparity of college attendance as a result of income is only increasing. As the college participation rate for those in the top quartile increases, the percentage of bottom quartile participants is decreasing. For example, in 2003 students from wealthier families were 8.3 times more likely to attain a bachelor's degree. A reason for this may be because colleges have shifted the focus of financial aid from need-based to merit-based in order to attract students with strong academic profiles. The publication includes numerous statistics that show disparities as a result of income, financial aid, academic preparedness, class, and highest degree obtained. [FINANCIAL ISSUES]

Arnold, J. (December 2006). "Changing the Measure of Success." Inside Higher Ed. www.insidehighered.com

How can one measure success in tradition measures when more and more students are becoming non-traditional? Through personal stories and candid confessions, Arnold challenges the old model of achievement based on residential colleges and describes how students that would be viewed as failures because they enrolled but did not obtain a degree may be considered successful when taking their personal triumphs into account. Specifically looking at community colleges, Arnold argues that success must be measured differently and that, "success means students achieve what they came for: one class, one semester, or a degree that takes ten years." Especially for students attending community colleges, measuring success is not as easy as looking at the graduation rates but rather, goals change quickly and success can be celebrated small steps and gained experiences. [COLLEGE STUDENT RETENTION AND SUCCESS]

Association of American Colleges and Universities. (2005). *Liberal Education Outcomes: A Preliminary Report on Student Achievement in College.* Washington, DC: Association of American Colleges and Universities.

This report reviews a set of general education outcomes that are valued by business and government leaders as well as by faculty and academic institutions. Using data from the National Survey of Student Engagement, it provides an overview for student achievement in college. Achievement is defined as critical thinking, quantitative literacy, communication skills, ethical reasoning and civic engagement. However, despite progress, there are still gaps in documenting and evaluating these important factors of student success that are regarded as key to economic opportunity and citizenship. Therefore, the report includes recommendations on how to include learning outcomes that can help to increase student success in those critical areas, and ways faculty and college staff can assess and track the outcomes of achievement of students through the college years. [COLLEGE STUDENT RETENTION AND SUCCESS]

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Brainard, J. (February 13, 2006). "U. of Minnesota Expands Scholarships for Low-Income Students." *The Chronicle of Higher Education.* Accessed: August 21, 2006. http://chronicle.com/daily/2006/02/2006021303n.htm

The article announces that the University of Minnesota is expanding the program that provides scholarships for those eligible to receive federal Pell Grants by matching the Pell awards. The action is in response to the increasing cost of tuition, but the stagnation of the Pell Grant for the last 3 years. The change may affect the 37,015 full time undergraduates attending the 4-part University of Minnesota system. The scholarship is part of the University's efforts to be a leading research institution in the nation while still maintaining a commitment to Minnesota to provide the opportunity for access to higher education. Currently, the award is only for incoming first-year and transfer students. [MINNESOTA SPECIFIC, FINANCIAL ISSUES]

Callan, P.M, J.E. Finney, M.W. Kirst, M.D. Usdan, & A. Venezia. (September 2005). *The Governance Divide: A Report on a Four-State Study on Improving College Readiness and Success.* San Jose, CA: The National Center for Public Policy and Higher Education.

This report offers recommendations for state leaders interested in effective K-16 reforms. It is based on findings from Partnerships for Student Success, a four-state study that analyzed educational governance and policies at the state level, focusing the research on students attending broad-admission institutions (not highly selective in the admission criteria). As the report explores different ways to implement a sustainable P-16 directive, the researchers identify opportunities and challenges that are a result of the efforts to make the transition from high school to college easier for students. There is no formula for putting into action P-16 reforms in each state, but it is clear that a vision for change and the leaders in place that can inform those changes is essential. Research also identified key policy levers that are helpful for states that are planning to implement K-16 reforms, including assessment and curricula, finance, data systems and accountability. [COLLEGE ACCESS SPECIFIC]

Carey, K. (January 2005). *Choosing to Improve: Voices from Colleges and Universities with Better Graduation Rates.* The Education Trust. Washington, DC: The Education Trust.

Together with "One Step from the Finish Line," this document approaches the issue of graduation rates by providing examples of schools that are doing a good job at graduating their students. Alarmingly, the national graduation rate is 56.4% of all students that enter a higher education institution. Institutions that have addressed graduation rates directly have demonstrated that it needs to be an issue that the whole college or university addresses—faculty, staff, and administration. Some institutions highlighted are University of Northern Iowa, St. Mary's University, Syracuse University, Alcorn State, and Notre Dame. [COLLEGE STUDENT RETENTION AND SUCCESS]

Carey, K. (January 2005). *One Step from the Finish Line: Higher College Graduation Rates are Within our Reach.* The Education Trust. Washington, DC: The Education Trust.

Hand in hand with "Choosing to Improve" this article highlights a newly developed online resource called College Results Online (www.collegeresults.org). The article points out that even among colleges that are comparable in size, demographics and admissions guidelines, graduation

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rates can vastly vary. However, the fact that some colleges are graduating students at a much higher rate than the national average indicates that there are practices that colleges and universities can implement to increase student graduation rates. The report encourages everyone to see college graduation as a goal—not just colleges and universities—but all parts of the community: policy makers, K-12, businesses, and campuses. The economic future of the United States depends on it. [COLLEGE STUDENT RETENTION AND SUCCESS]

Carnevale, A. P. (September 22, 2006). Discounting Education's Value. *The Chronicle of Higher Education.* **Volume LIII, Number 5. Washington, DC: The Chronicle of Higher Education, Inc.**

The article is an opinion piece arguing that the debate over the value of education is more political than merely based on facts. Carnevale provides the evidence that some college-educated—even college professors—are claiming that a college education is not necessarily the key to a higher income nor are jobs that require a college education increasing at a rate faster than colleges are producing graduates. These constituents argue for more vocational job training and higher wages as a means to solve the global outsourcing of jobs. However, Carnevale argues that based on the facts, a college education is not only the preferred route to the middle class, but rather the only way. Indeed, the difference of wages of a high school graduate and a college degree is a $45,000 spread, not including the increased access to jobs that provide benefits. Overall, the bond between improving income distribution and higher education is a strong bond, and for this reason, higher education institutions are being called on for higher accountability measures. Therefore, access to higher education for all students, not just the wealthy and middle class, is essential. [http://chronicle.com/weekly/v53/i05/05b00601.htm] [FINANCIAL ISSUES]

Choy, S. P. (2002). *Access & Persistence: Findings from 10 Years of Longitudinal Research on Students.* **American Council on Education. Washington, DC: ACE Fulfillment Service Item #309375.**

This report provides a plethora of statistics and information regarding college students and current college enrollment and persistence trends. The study was conducted at the behest of the U.S. Department of Education's National Center for Educational Statistics in order to synthesize the data that colleges and universities collect about their students into a systematic, cohesive report. The report looks at such factors as income, high school curriculum, parent education, as factors that contribute to (or take away from) a student's success in accessing and succeeding in college degree attainment. Some studies followed the students that had completed a bachelor's degree to determine who went onto graduate school, what salaries college graduates were earning, and how much student loan debt they had left to pay. The ultimate conclusion is that hard work and rigorous coursework in high school is perhaps the best way to level the playing field of all students, regardless of income or parent's education. In fact, parent degree attainment is considered a key indicator in whether or not a student will persist to B.A. degree attainment and pursue graduate school. Detailed descriptions of the surveys can be downloaded at http://nces.ed.gov. [COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS]

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Citizens League. (May 2005). *A New Vision for Saint Paul Schools: Preparing All Students for Success in Higher Education.* Citizens League Study Committee on High School to Higher Education.

This report addresses the St. Paul Public Schools and the preparedness of the graduating students for continuing in higher education. The purpose of the report is to raise awareness within the public sector specifically in St. Paul, but including all Minnesota residents, of the changes that need to be made, programs that need to be implemented and support networks that need to be in place to help raise expectations—and reality—of students continuing on to success in higher education. The report cites an eye-opening statistic that the more money each individual makes, the more money that gets put back into the Minnesota community which calculates to about 1.4 billion per year in lost income from those that are not college graduates. [COLLEGE ACCESS SPECIFIC, MINNESOTA SPECIFIC]

Closing the Expectations Gap 2006. (February 2006). **American Diploma Project Network. Washington, DC: Achieve, Inc.**

The report examines the gap between the assessment and high school requirements and the entry level requirements for post secondary success in higher education institutions or the work force. A summit in 2005 sponsored by the National Governors Association brought together governors and leaders in education to discuss how high schools can better prepare students for college level work, especially as our nation's demographics are changing. Achieve, then, conducted a survey of the 50 states to see what sort of steps they are taking to link high school graduation requirements and college admissions guidelines. The trickle down effect is that if more students are having a smoother transition to college, they will more likely persist and obtain the post secondary degree. Through the American Diploma Project, 22 states are bringing together governors, state education officials, business executives and higher education leaders to raise high school standards, strengthen assessments and curriculum and align expectations to ensure successful college students and an educated work force. (Minnesota is one of the states participating in the American Diploma Project.) [COLLEGE ACCESS SPECIFIC]

Conley, David T. (2003). *Understanding University Success: A Report from Standards for Success, a Project of the Association of American Universities and The Pew Charitable Trust.* University of Oregon. Eugene, OR: Center for Educational Policy Research.

Conley describes the skills needed to succeed in entry-level college courses, including English, math, natural sciences, social sciences, second languages, and the arts. The report recognizes the different levels of high school preparedness of first year university students, and attempts to standardize and publicize general advice for how to successfully complete a required, entry-level college course. It does not claim to be a guarantee for all students, but rather serves as a starting point to help guide students and educators toward a more successful college attending population, especially because there appears to be very little alignment between state high school achievement exams and entry-level college standards. [COLLEGE STUDENT RETENTION AND SUCCESS]

Crist, C., M. Jacquart, D.A. Shupe. (March 2002). *Improving the Performance of High School Students: Focusing on Connections and Transitions Taking Place in Minnesota.* Office of Vocational and Adult Education. Washington, DC: ED-99-CO-0160.

This paper was prepared for the 2002 "Preparing America's Future: The High School Symposium" held in Washington, DC. It identifies that, although the college going rates have increased to 70% of U.S. high school graduates, we are not keeping pace with our international competitors. Not only that, but the percentages of low-income students participating in college has declined, therefore widening the participation gap even further. Perhaps the largest need for concern is that even the students who manage to make it onto a college campus are not prepared academically for the rigors and challenges of entry-level college courses. Despite the overwhelming evidence that B.A degree attainment doubles if the student completes a challenging math course in high school, and academically intense classes are the single greatest predictor of college completion for African American and Latino students, too many parents and students view the senior year of high school as a pivotal 'rest stop' between high school and higher education, and do not take the classes that would prepare them for collegiate courses.

The authors suggest that partnerships, both formal and informal, between higher education and K-12 institutions, at the regional, state and national level are a means to create that 'seamless transition' that is key to student success in college. Minnesota emerges as an example of a state that has started to put energy and resources into place to address the transition challenges. Some of the initiatives identified are: the MnSCU's P-16 partnership for the 34 colleges and universities that are under the MnSCU umbrella; Tech Prep and School to Work transitions; Post Secondary Enrollment Options (PSEO); more Advanced Placement courses (AP); and an increase in charter schools, to name a few. Overall, the report identifies Minnesota as a leading state for providing replicable 'best practices' for other states but recognizes that there is still room—and an increasing need—for improvement. [MINNESOTA SPECIFIC, COLLEGE ACCESS SPECIFIC]

Draper, N. (October 24, 2006). *Minnesota above average in college cost increases.* Minneapolis, MN: Star Tribune.

According to a report released by the College Board, the cost of attending a higher education institution in Minnesota is higher than the national average. Tuition rose 7 percent for public two-year institutions, 8 percent for public four-year institutions, and 7 percent for private schools; compared to the national average that rose 4, 6 and 6 percent, respectively. On the bright side, tuition raises have slowed down in Minnesota for the last three years. If the U of M approves the 4.5 percent raise in tuition for 2007-2008 school year that would be the lowest increase in the past decade. [MINNESOTA SPECIFIC, FINANCIAL ISSUES]

Editorial Projects in Education. "From Cradle To Career: Connecting American Education From Birth Through Adulthood (Minnesota)." (2007). Quality Counts 2007. Bethesda, MD: Editorial Projects in Education, Inc.

As a supplement to the annual Education Week report, Editorial Projects in Education includes a guide highlighting each state's performance in educational achievement at different age levels and how well the system is aligned with others for continuity. Overall, Minnesota ranks third in the nation in the "Chance for Success" category (meaning that Minnesota residents have a significantly

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above average chance succeeding in nearly all 13 indicators. For example: family income, parental employment, middle school mathematics, and post-secondary participation). While this is positive for the state, there is much work that still needs to be done in order to align the education policies in a seamless, systematic way—currently Minnesota ranks 39th with only 4 policies in alignment out of a total of 15 measures. [MINNESOTA SPECIFIC]

Edmonds, K., McDonough T. (October 30, 2006). *Students of Color Make Dramatic Gains in College Enrollment but still Trail Whites in the Rate at Which They Attend College.* **ACE: American Council on Education. Washington, DC: American Council on Education.**

This report, summarizing the findings of a much more in-depth publication entitled, *Minorities in Higher Education Twenty-second Annual Status Report*, is full of data pertaining to minorities in all levels of higher education. The numbers, consistent with the changing demographics, show that there is an increase of minority high school graduates, yet they still trail white students in the percent that enrolls in higher education institutions. Hispanics have made the largest gains in college enrollment, up 68.8 percent; African American's enrolled 42.7 percent more, Asian Americans up 43.5 percent and 50 percent increase for American Indians. Despite an increase in the enrollment rates for minority students, the completion rates are another story. Interestingly, Asian Americans have the highest completion rate with 62.3 percent receiving bachelor's degrees in 6 years. At the bottom fell the African American students, with only 36.4 percent graduating in 6 years. Also included in the report are statistics relating the increase in master degree attainment, professional and doctorate degrees, and the percentage of minorities working in higher education. [COLLEGE STUDENT RETENTION AND SUCCESS]

"Effectiveness of programs to improve postsecondary education enrollment and success of underrepresented youth: A literature review." (November 2006). Prepared by: Schultz, J.L., and Mueller, D. for NorthStar Education Finance. St. Paul, MN: Wilder Research

The literature review conducted by the Wilder Foundation in St. Paul, MN looks at a variety of college access programs that had previously been researched and evaluated in *Paving the Way*, a 2001 publication that reviewed 13 college access programs. The programs were re-evaluated by the researchers to determine the effectiveness of the evaluations and therefore the effectiveness of the programs. Seven additional programs were included in this new evaluation. While the publication provides ample evidence about each of the access programs, the intended purpose of the research was to present the need for effective methodology and quality in measuring the success of the program. Of the twenty programs that were researched, only one stood out from the others as 'strong' in the category of 'quality and strength of evidence' (Quantum Opportunities); five were listed as 'promising' (Upward Bound, 21st Century Scholars, Gateway to Higher Ed, Sponsor-A-Scholar, and Talent Search); six as 'suggestive, and the remainder as having 'limited' data analysis to support success claims. Through the in-depth analysis of the evaluation methods, new programs can glean information about how to incorporate successful evaluation tools into the program from the start of the program. [COLLEGE ACCESS SPECIFIC]

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Ewell, Peter, et al. (2005). *Student Success in State Colleges and Universities: A Matter of Culture and Leadership.* **American Association of State Colleges and Universities. Washinton, DC: American Association of State Colleges and Universities.**

AASCU, the National Association of System Heads, and Education Trust issued this report on a study of twelve campuses with higher-than-predicted graduation rates or higher-than-predicted improvement in graduation rates. It shares the wide variety of strategies these campuses use to promote student success and underscores the importance of a campus culture that is inclusive, communicates high expectations, and builds a sense of common purpose. The study underlines that no 'best practice' can be applied across the board to improve graduation rates, but rather, each campus was successful by promoting a campus culture that allowed the programs to flourish and sustainable. The three elements that were consistent with the twelve campuses that were studied include an attitude that all students can succeed, an inclusive sense of belonging and familial-like ties to one another, and a distinctive institutional mission. Executive summary is at www.aascu.org/GRO/docs.htm. The publication can be purchased for a small fee through the AASCU website. [COLLEGE STUDENT RETENTION AND SUCCESS]

Fischer, K. (May 12, 2006). **Elite Colleges Lag in Serving the Needy: The institutions with the most money do a poor job of reaching the students with the least.** *The Chronicle of Higher Education.* **Accessed August 21, 2006.**

A special report from the Chronicle of Higher Education highlights the statistics about where low-income students tend to enroll for a postsecondary option. Of the 59 wealthiest private schools in the country, only 14 percent of the undergraduates enrolled were Pell Grant recipients. As college going rates have increased, the competition at more prestigious schools has increased the selectivity of the school and therefore will most likely push out the lower-income students. In fact, at the top 146 colleges, only 3 percent came from the bottom income quartile, and 74 percent came from the top income quartile (incomes of $95,000 or more). Recent research conducted by Alan B. Krugger (Princeton) and Stacy Berg Dale (Mellon Foundation) discovered that low-income students are the one group that benefited the most financially by attending a more selective school. Therefore, schools such as Harvard and Amherst College are stepping up their financial aid programs and increasing admissions slots for low-income students. It is elite college leaders, such as these, that will lead the movement in order to change the class divisions that have become prevalent in higher education institutions. [FINANCIAL ISSUES] (http://cronicle.com/cgi-bin/printable.cgi?article=http://chronicle.com/weekly/v52/i36/36a00101.htm)

Flowers, L. (2006). **"The Impact of Community Service on African American College Students' Academic Achievement."**

Research has provided evidence that engaging students in community service and service-learning opportunities that link to the classroom have a positive effect on academic achievement. However, the question driving this research was whether or not African American students in particular benefited from community service, measured by GPA. The findings reported that African American students who performed community service had significantly higher GPA's than those that did not. Therefore, it is beneficial for college classrooms and service-learning offices to engage more African American students in academically linked service learning activities.

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While forming these opportunities, it is important for these campus leaders to keep in mind activities that resonate with African American students, including: faith-based initiatives, tutoring Pre K-12 students and providing leadership in diverse settings. [CULTURE SPECIFIC-AFRICAN AMERICAN STUDENTS, COLLEGE STUDENT RETENTION AND SUCCESS]

Francis, D.J. (July 17, 2006). *Seeds of Success.* **Minneapolis, MN: Star Tribune.**

This article profiles Paul D. Jones, a local multimillionaire who has started aiming the sights high for some inner city youth in Minneapolis. He started in 2004 by giving $60,000 worth in scholarships ($3,000 a piece) to disadvantaged youth for a more promising future. The stipulation is that they complete high school and continue on to a post-secondary institution. Taking the lessons learned in his personal journey, Jones realizes the value of higher education, as demonstrated in his own success story. [FINANCIAL ISSUES, MINNESOTA SPECIFIC]

Gerald, D., Haycock, K. (2006). "Engines of Inequality: Diminishing Equity in the Nation's Premier Public Universities." The Education Trust. Washinginton, DC: The Lumina Foundation for Education.

Looking at the flagship universities from each of the 50 states (i.e. the University of Minnesota, Twin Cities), The Education Trust researched and graded them according to the accessibility for low income and minority students, successfully graduating minority students, and progress toward increasing access and improving success for underrepresented students. Unfortunately, the outlook is grim in the way that these universities are serving low income and minority students, especially through financial aid. For example, in 2003 flagship universities spent $257 million on financial aid for families that earn more than $100,000 per year compared to only $171 million dollars on families that earn less than $20,000 per year! In assigning grades to the states in the financial aid area, 26 states received "F" and only 7 states received an "A." The publication includes facts and figures regarding theses issues of access and success for underrepresented students, as well as provides recommendations on how the universities can begin closing these gaps of inequality. [FINANCIAL ISSUES, COLLEGE ACCESS SPECIFIC]

Haycock, K. (August 2006). *Promise Abandoned: How Policy Choices and Institutional Practices Restrict College Opportunities.* **The Education Trust. Washington, DC: The Education Trust.**

Published as a follow-up to two other documents from the Education Trust ("Choosing to Improve" and "One Step from the Finish Line" both 2005) this article looks at the gaps between low-income and high-income students in college access and degree attainment as well as the gaps with White and minority students (primarily African American and Hispanic). They approach the gaps within a historical context, comparing the changes in access, tuition costs and degree attainment to data collected 30 years ago. Included is a detailed list of recommendations that would increase opportunities for low-income, minority and first-generation college students in higher education. The recommendations are categorized according to who can best put the suggestions into practice, including: the federal government, state government, higher education

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associates, college boards and presidents, and higher education institution ranking guides.
[COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS]

Henig, S. (September 15, 2006). "Colleges Reach Out to American Indians." *The Chronicle of Higher Education.* Washington, DC: The Chronicle of Higher Education.
http://chronicle.com/students

Various new efforts are being implemented across campuses that have a reservation or connection to American Indian populations. For example, Syracuse University, which has a history of a hostile relationship with the surrounding Haudenosaunee tribe, has created a new scholarship called the Haudenosaunee Promise which in the first year already has 30 recipients—an increase of American Indian students from 19 in 2005 and just 5 in 2004. The Haudenosaunee Promise scholarship covers tuition, room and board, and mandatory fees for all American Indian students that enroll in Syracuse University. Other colleges and universities have joined suit and focused attention on admitting and retaining American Indian students, who are typically the lowest percentage in participation and success rates for minority groups. These institutions include: Cornell, Dartmouth, Harvard, North Dakota, and the University of Arizona. Each program combines tutoring and counseling requirements to ensure that not only are they able to access the college, but they are able to succeed there as well. Many American Indian students proceed to higher education as a means to help the community in which they were raised. Most students return to their people in order to act as advocates and activist for the betterment of their community. [CULTURE SPECIFIC-AMERICAN INDIAN]

Jaschik, S. (October 13, 2006). New Approach to Aid. *Inside Higher Ed.*
www.insidehighered.com accessed on October 16, 2006.

The article highlights the University of Washington's new plan that addresses access to higher education for low-incomes students. Like many other similar programs that have been implemented on higher education campuses in recent years, the main message of the program is to address the false impressions about tuition costs. Called the 'Husky Promise,' the University of Washington awards aid for only tuition and fees (room and board not included) to families that earn $46,500 or less for a family of four (235 percent the federal poverty level) which is a much higher percentage of people reached than other institutions. It is predicted that this raise in aid will reach about 30 percent of the student population that enrolls in the University of Washington. Along with that, Washington is also trying to increase the awareness of the cost of tuition for students, so that they will continue to study hard and aspire to college. Current research shows that low-income students perceive the cost of college as nearly twice the actual cost and may not perceive themselves as college-bound because of this. Other universities that have similar programs are the University of North Carolina at Chapel Hill (Carolina Covenant), the University of Virginia, and Michigan State University. While these programs don't reach as many students and different income levels, they are more comprehensive, covering room and board as well. Regardless of the approach, colleges and universities taking a stand on making tuition more affordable for low-income students can only mean positive outcomes.
http://insidehighered.com/news/2006/10/13/aid. [FINANCIAL ISSUES, COLLEGE ACCESS SPECIFIC]

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Kinzie, J. and G. D. Kuh. (2004). *Going DEEP: Learning from Campuses That Share Responsibility for Student Success.* About Campus. San Francisco, CA: Jossey-Bass of Wiley Periodicals, Inc.

The project DEEP (Documenting Effective Educational Practice) conducted research over a period of two years, across 20 different institutions (urban, rural, historically black, majority white, small, large, commuter, residential, selective and non-selective) that all have above-average graduation rates in order to determine what factors really contribute to higher student success rates. Emphasized on many college campuses (including Longwood University in Virginia and Alverno College in Wisconsin) is the idea of extending the classroom to different learning experiences through service learning projects. Ultimately, the team found that a common denominator was that the campuses collaborated and shared responsibility for every student's success. Collaboration between faculty, student affairs, students, and even the coffee cart lady (Wofford College) create an atmosphere of respect and care that support the students in their educational pursuit. [COLLEGE STUDENT RETETION AND SUCCESS]

Kirsch, I., Braun, H., Yamamoto, K., Sum, A. (January 2007). "America's Perfect Storm: Three Forces Changing Our Nation's Future." Educational Testing Services. Princeton, NJ: Policy Information Center Educational Testing Services.

Due to evidence that the United States is falling behind our competing peers—those listed as part of the Organisation for Economic Co-operation and Development (OECD), researchers identified what factors are contributing to this decline. The three main factors identified are: (1) increasing numbers of adults do not have the basic literacy and numeracy (defined: knowledge and skills required to effectively manage and respond to the mathematical demands of diverse situations) skills to compete in the work environment; (2) the changing labor market, with a decrease in need and demand for unskilled labor spurred by technological innovations and globalization; and (3) a surge in immigration and changing demographics that implies an older and more diverse workforce. As these elements of the 'perfect storm' continue to brew, and the United States does not work to address these issues and educate our workers, we will definitely loose our foothold as an economic leader in the world. [GENERAL ACCESS AND SUCCESS; FINANCIAL ISSUES].

Kuh, G.D., Kinzie, J., Schuh, J.H., Whitt, E. (July/August 2005). "Never Let It Rest." *Change.* Vol. 37, Issue 4, p44-51.

This article summarizes and highlights Project DEEP (Documenting Effective Educational Practices), which studied in-depth 20 colleges and universities that added value to their students experiences through engaging students and higher than expected graduation rates. (Included in the list of 20 schools is Macalester College, in St. Paul, MN.) The schools differ greatly from one another, but share similar characteristics in that they are all seeking ways that they can improve the college experience for their students. Positive student success indicates that through new teaching methods and approaches, integrated and collaborative learning, listening to student and faculty voices and ideas, as well as sharing the responsibility for student success across faculty and administrative offices are characteristics of effective practices. With idealistic leaders and visionaries, these schools have worked hard to create a campus environment that is conducive for students to thrive on campus, but what sets them apart is that they are not content to stop there—

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they are always looking for ways to improve. [COLLEGE STUDENT RETENTION AND SUCCESS]

McDonough, P.M. (December 2004). *The School-to-College Transition: Challenges and Prospects.* **American Council on Education. Washington, DC: American Council on Education.**

This report identifies the overwhelming amount of research suggesting that the two clearest, most direct ways to shrink the college access gap is through K-12 academic preparedness and financial aid, and everything else is a sub-category of these two main. McDonough maintains that higher education institutions need to take the boldest step in policy reformation so that there is greater access to and success in their institutions for low-income, minority and first generation college students. Four of the six identified areas in need of reform are listed at the K-12 level, including: academic preparedness, increased access and dissemination of information, counseling, and family needs. However, in order to reach into these different areas, higher education institutions have the resources and ability to effect the largest change. The publication also includes a list of questions for institutional research, asking faculty and staff to look introspectively at their own school culture and standards for success. (Service Learning reference on page 22 for anyone interested in working in education). [COLLEGE ACCESS SPECIFIC]

Minnesota College Access Network. (September 2006). *College Access Matters.* **http://www.mmep.net/Minnesota College Access Network MCAN.html**

The sense of urgency that exists around college access and success for all students is because it affects everyone in the United States. Demographic shifts mean that white people are aging and the population that will be replacing them will be all different colors and cultures. Also, the baby-boom generation is retiring leaving many highly-skilled jobs available that need to be filled by our emerging workforce. In order for the United States to be a contender in the global economic market, our workforce has to be highly-skilled. Inevitably, all students need to be attracted to higher education, and thrive once they get there. However, college affordability and educational disparity for Hispanic, African-American and American Indian students (especially) all contribute to the 'perfect storm' that threatens the economic well-being of Minnesota (and the United States).

This report produces a detailed summary of college access programs including number of students served, cultural demographic of students, length of time served in the program, where, when, incentives and participation parameters. However, the Minnesota College Access Network (MCAN) recognizes that there are holes in the system. For example, there are currently no programs that are working with dropouts who are trying to get back onto the college track outside of the K-12 system. Also, there are many counties in Minnesota that are not matching the need for access programs and the demographic of students that need the service, listed in the College Access Opportunity Index. This index cross-examines counties that could benefit from more college access programs in relation to B.A degree attainment, age (fewer people in working age), K-12 enrollment, percentage of minority students enrolled, English language learners (ELL) or limited English proficient (LEP), and low-income. [COLLEGE ACCESS SPECIFIC, MINNESOTA SPECIFIC]

Minnesota College Access Network. (June 2006) *College Access Program Inventory.*
http://www.mmep.net/Minnesota_College_Access_Network_MCAN.html

A report intended to show where there are college access programs—what they do, what type of services they provide, where there is need for more college access programs and the value of making local investments into programs especially since the federal budget does not provide enough funds to support these programs. They observe that the Twin Cities has the highest density of population and therefore the most access programs, so the greatest need is in greater Minnesota. Interestingly, parental involvement tends to be key to many access and success related things; however, it appears that few programs offer programming for parents and adult mentors along with the students' participation. The complete report can be ordered at http://www.mmep.net/National_Urban_Aliiance_Presents_Teaching_for_Intelligence_Believe_t o_Achieve_Confrence.html [COLLEGE ACCESS SPECIFIC, MINNESOTA SPECIFIC]

Misukanis, M. & Bohy, J. (February 2007). "Minnesota Measures: 2007 Report on Higher Education Performance." Minnesota Office of Higher Education. Saint Paul, MN: Minnesota Office of Higher Education.

The report written and distributed through the Minnesota Office of Higher Education examines the state of higher education in Minnesota at the behest of Governor Tim Pawlenty and the Minnesota Legislature in 2005. Five different goals were outlined, including: 1). Improving success for traditionally underrepresented students in higher education, 2). Production of graduates for the economic demands, 3). Improving student learning and skills to compete effectively in the global marketplace, 4). Contribute to the development of a state economy, and 5). Provide choice for all students through access and affordability of higher education. A key area of concern is that Minnesota lags behind our national average in the number of degrees awarded in STEM areas (in general: science, technology, engineering and math). These fields, considered to be essential for competing in the new global economy, have remained flat in Minnesota since 2000. The complete report can be accessed at www.ohe.state.mn.us. [MINNESOTA SPECIFIC]

National Center for Public Policy and Higher Education. (2006) *Measuring Up 2006: The National Report Card on Higher Education.* www.highereducation.org

This biennial report grades each state on 6 different categories: preparation, participation, affordability, completion, benefits, and learning. This year the United States was compared to international competitors in various categories. For example, degree holding older adults (35-64) place the U.S. second to Canada, but in degree holding younger adults (25-34) the U.S. falls to 7th place. While many of the states improved their standings in many of these categories, the affordability of college (most states graded 'F') denotes the largest need for improvement. In fact, only 1 state improved on more than half of the indicators and 17 declined on most or all of the indicators. [ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS]

National Center for Public Policy and Higher Education. (2006). *Measuring Up 2006 The State Report Card on Higher Education: Minnesota.* www.highereducation.org

This report specifically focuses on Minnesota's higher education preparation, participation, affordability, completion, benefits and learning. The report claims that Minnesota is among the

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leaders in college participation but that all colleges and universities have become less affordable for students and their families—Minnesota public colleges cost nearly one third of a low to middle income student's total family yearly income. And educational attainment disparities still exist in Minnesota. In fact, if all ethnic groups had equal education and earnings as whites, the total personal income for Minnesota would increase by $1.6 billion. The report also ranks Minnesota internationally in categories focused on degree attainment. For example, Minnesota ranks first in comparison to the percentage of older adults (ages 35-64) that hold an Associates Degree or higher; and second to Canada in the percentage of younger adults (ages 25-34) holding an Associates Degree or higher. However, Minnesota falls to tenth for the total number of degrees/certificates awarded per 100 students enrolled—Japan leads this category. [MINNESOTA SPECIFIC]

Olson, L. (January 4, 2007). "Moving Beyond Grade 12." *Education Week: Quality Counts 2007 From Cradle to Career.*
http://www.edweek.org//ew/articles/2007/01/04/17postsec.h26.thml?print=1
Retrieved 1/4/2007.

While colleges have to spend more and more money on remediation classes for recent high school graduates, the United States is falling further behind international competitors in college enrollment and completion rates. Part of the problem is that high schoolers are graduating ill-prepared for college level courses. In fact, the U.S. spent more than $1.4 billion last year on community college remediation for high school students (Alliance for Excellent Education). The other part of the equation is the rising cost of college tuition. For an average American family, college tuition has increased to about one fifth the annual income and nearly two-thirds of college graduates leave with debt. The rising cost of tuition also indicates the increasing gap between high income and low income students and the rate at which they attend and complete college—45% difference, according to the Pell Institute's 2005 report ("Indicators for Opportunity in Higher Education"). A solution posited by some analysts is to connect state policies for graduation with college admissions tests and financial incentives for lower remediation rates for colleges. [COLLEGE ACCESS SPECIFIC, FINANCIAL ISSUES]

Pathways to College Network. (2004). *A Shared Agenda: A Leadership Challenge to Improve College Access and Success.* **Boston, MA: The Education Resources Institute.**

The report coming out of the Pathways to College Network includes ideas about how to create change for college access and success: academic preparedness, outreach program support and community leaders and family support. They also offer 6 general principals for improving college access and success for low-income, students of color and, first generation college students. Those include: high expectations for all students to enroll and succeed in higher education; a wide range of high quality college preparatory tools; understanding and adapting to different social, cultural and learning styles; involving many leaders at all different levels to facilitate the transition from high school to college; provide and maintain sufficient financial resources, as well as human resources for the students; and assess the effectiveness of different policies, programs and practices often. Based on these principals, the report reviews a list of recommendations for anyone working with students, in order to improve access to and success in higher education. [COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS]

Raising the Expectations for College Access in Minnesota: A set of policy and program recommendations from the P-16 Access Working Group (June 2006). St. Paul, MN.

A P-16 College Access Working Group was formed to analyze policy in education and offer recommendations for improving college access and success in Minnesota('grade 16' denotes a bachelor's degree attainment). Included is the 'Straight A's for College Success' framework with the goals and strategies for reaching these goals (awareness, aspiration, achievement, access, attainment, affordability). Recommendations include increasing high school performance measures, adding more high school counselors, changing compulsory age from 16 to 18, and dealing with the issue of undocumented students. [COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS, MINNESOTA SPECIFIC]

Ruppert, S.S. (October 2003). **"Closing the College Participation Gap: A National Summary." Education Commission of the States. Denver, CO: Center for Community College Policy.**

The report uses the 2000 Census data to project the number of students that would be left out of college participation if we continued on the same trends as we are now as a nation. Defined, participation gap is, "the total number of new students that the U.S. as a whole would need to enroll between 2000 and 2015 if it were to match the participation rate of the best-performing states." Already the United States is tied for 13th in the percentage of the population that entered bachelor-seeking post-secondary institution when compared to 32 industrialized nations. The paper is aimed at state policy makers and outlines three different warning signs: 1) the U.S. lagging behind other nations in college access and attainment; 2) the current gap in college participation as a result of race, ethnicity, income is only increasing; and 3) demographic and economic changes mean that states have to limit what they can do to address the concerns. Issues such as the increase in non-traditional students, high school graduation rates, poverty levels, and immigration, and the 'graying of America' are all addressed as well. Using the population predictions for the year 2015 AND by closing the participation gap, the U.S. will have 59% more students age 18 and above enrolled in college. [COLLEGE ACCESS SPECIFIC]

Schmidt, P. (March 10, 2006). **"Powerful Forces Draw Academe Into the Fray."** *The Chronicle of Higher Education.* Accessed 9/12/2006.
http://chronicle.com/free/v52/i27/27b00401.html

The article concludes that it is time for higher education institutions to pay close attention to what is going on in K-12 or they will find themselves without students populating their hallways. Not only that, but colleges and universities cannot continue to afford to put nearly half of their students in remedial courses. For example, of a survey of college professors, 44 percent felt students were not prepared to enter higher education, whereas only 10 percent of high school teachers felt the same way. Colleges must make clear expectations of students and then translate that all the way down the education pipeline. [COLLEGE ACCESS SPECIFIC]

Shulock, N., Moore, C. (February 2007). **"Rules of the Game: How State Policy Creates Barriers to Degree Completion and Impedes Student Success in the California**

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Community Colleges." Institute for Higher Education Leadership & Policy. Sacramento, CA: California State University Sacramento.

Focused solely on California Community Colleges (CCC) and what policy changes could do to open up the way for students to be more successful in the Community College system. California has 109 community colleges that serve almost 75% of the California students enrolling in post-secondary options. While a large number (40%) of these students are not seeking degrees, less than a quarter of the ones that ARE degree seeking are not completing. The authors agree that it is detrimental to California's workforce if this trend doesn't change. Although this document is specific to California, many recommendations and suggestions for improving the success of all students, regardless of state, can be learned. [COLLEGE STUDENT RETENTION AND SUCCESS]

Spence, D. S. (January 4, 2007). "A Road Map to College and Career Readiness." *Education Week: Quality Counts 2007 From Cradle to Career.* http:www.edweek.org//ew/articles/2007/01/04/17spence.h26.html?print=1 Retrieved 1/4/2007.

As a supplemental material accompanying Education Week's *Quality Counts 2007* report a variety of articles addressing education issues from different aspects of the pipeline were published. This article addresses what steps should be taken at the K-12 level in order to prepare students for post-secondary success. Spence identifies five key actions that states can take in order to better prepare students beyond high school graduation. First, readiness reform should be focused on the K-12 classroom teachers with support for all teachers to address college readiness. Second, developing systematic readiness standards in reading, writing and math skills throughout the state. Third, not only should the readiness standards be systematic across school districts, but they should also be embedded with the high school curriculum. Fourth, in order for teachers to be successful in teaching these readiness standards, they need to include performance measures that indicate *how well* a student must perform these skills. Lastly, the assessment of student's skills should be done before the senior year of high school so that the students have time to adjust their performance before graduation. [COLLEGE ACCESS SPECIFIC]

Swail, W.S. (2006). "Institutional Strategies Series." Student Success. Education Policy Institute (www.studentretention.org).

A three part series published in the Student Success newsletter looks at the programs and strategies that help or hinder a student's success in postsecondary education.

Part I: Barriers to Student Retention and Success on College Campuses
The series starts by recognizing the literature and research that has paved the way for understanding what factors help students succeed in postsecondary education. The five of the variables that emerge are social and academic integration, academic preparedness, campus climate, commitment to educational goals and the institution, and financial aid. However, the fundamental key to successful students is having a supportive social and academic network and campus climate.

Part II: Strategies to Increase Student Success

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There is no one thing that campuses can do to ensure that all of their students are successful. However, by providing a variety of different support services, campuses can create a climate conducive to student's thriving and persisting to graduation. Listening to student voices and asking what they need is crucial, as well as positive interactions with staff, faculty, and peers. Building upon the importance of a social and academic network that was highlighted in Part I, increasing opportunities to have positive interactions with students only enhances the learning and connection students feel toward the school. These suggestions include more advising, faculty mentoring, tutoring opportunities, and a variety of different teaching methods. Working together, in collaboration, students will begin to see themselves as successful and persist to graduation.

Part III: The Buy-In Challenge
In order for colleges and universities to create a positive campus environment, they must institutionalize programs and policies that are effective. Collaboration from all sectors and levels-- staff, faculty, deans and presidents--must be present with a clear vision and defined leadership. Swail compares retention program management to a 14 point system developed by W. Edwards Deming in the 1950's that was instrumental in helping Japan become the industrial leader they are today. The process, total quality management, can guide the change process in order to meet the desired goals. [COLLEGE STUDENT RETENTION AND SUCCESS]

Taylor, D., Schelske, B., Hatfield, J., Lundell, D.B (April 2002). **"African American Men from Hennepin County at the University of Minnesota, 1994-98: Who Applies, "Who is Accepted, Who Attends?" Center for Research on Developmental Education and Urban Literacy. Minneapolis, MN: University of Minnesota.**

This report compares African American males with white males from Hennepin County (HCAAM) specifically, in order to understand the population better at the University of Minnesota (and documents the importance of the General College (GC), since the majority of the HCAAM students entered the University system through the GC). There is a persistent gap between African American males and their White counterparts in nearly every regard: admissions, financial aid, enrollment, persistence and graduation. Included are three narratives from current African American students at the U of M about the barriers they faced and the motivations they have to complete the degree they are pursing. All three of the students noted that the lack of preparation in high school, financial aid, and the limited number of African American faculty acted as barriers against successful completion. However, supportive family and the ambition to create better futures for their lives and their children were motivating factors that helped keep them on track to graduation. [MINNESOTA SPECIFIC, CULTURE SPECIFIC-AFRICAN AMERICAN]

The National Community College Conversation: What Does It Mean To Be Educated in the 21st Century? (June 2005). **Report on the May 19-20, 2005, event at Mesa Community College, to the National Science Foundation.**

This report summarizes the results of dialogue around questions about the societal and global context for higher education, expectations of community college students in the 21st century and the future of science, engineering and technology in community colleges. Recommendations were given at the end of the conference for the National Science Foundation as well as action plans for the participating community colleges and stakeholders, including increased collaboration for colleges and K-12 community institutions, an increase in

relationship between research and teaching communities, and investments into already proven practices to increase student participation and success at the community college level. Ultimately, the participants concluded that a systematic change in higher education, as well as organizational change within each institution to work together more effectively, are needed in order to address the disparities in educational attainment in the United States. Hosted by Mesa Community College, Mesa, Arizona. [COLLEGE STUDENT RETENTION AND SUCCESS]

The Pell Institute. (Fall 2004). *Indicators of Opportunity in Higher Education.* **Washington, DC: Council for Opportunity in Education.**

The purpose of this report was to respond to the increased public policy attention on higher education and provide a different viewpoint to measure the students that attend college, not necessarily the individual institutions or systems that are already being recorded in *Measuring Up* and *Quality Counts*. The researches want to know how well students, especially low-income students, are able to participate in higher education institutions. The four main questions that directed their research are: who goes to college?, where do they go?, what do students pay for college?, and who graduates from college? While many other reports have answered these questions directly or indirectly, the other piece that this report includes is WHY this is important to understand. The immediate data suggests that: low-income students have less opportunity attend a post secondary education option, are the largest percentage of attendance in for-profit schools and two-year institutions, and take longer to complete the degree program. This is the first of the "Indicators of Opportunity" report, and the plan is to publish an updated report yearly as new information becomes relevant. [COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS, LOW INCOME SPECIFIC]

The Project on Student Debt: National Survey of College Presidents 2005. (June). A project of TICAS. Research conducted by Reed Haldy MacIntosh Associates.

The Project on Student Debt surveyed 200 college presidents addressing the rising cost of college and how that affects students as well as what sort of policy changes would yield positive effects for college affordability and student debt. A variety of questions were asked, including whether or not they were concerned about college costs, what ways college can be more affordable, and how to improve the efficiency of the student loan system. In general, most presidents felt that the rising cost of tuition was of moderate concern and that increasing the amount of Pell grants would help to rectify the situation. [FINANCIAL ISSUES]

The Washington Monthly. **(September 2005). "The Washington Monthly College Guide." Washington, DC: Volume 37, No. 9.**

In response to the plethora of college ranking guides, and specifically the *U.S News College Guide*, the editors at The Washington Monthly decided to measure not what colleges are doing for students, but rather, what colleges are doing for the country. Colleges were studied and ranked according to three criteria: social mobility, research and national service. Interestingly, out of the U.S. News College Guide top 10, only three schools reached the top 10 according to *The Washington Monthly's* different measurements. For example, Princeton and Harvard shared the number one ranking in previous college guides, but according to this new system, Harvard falls to

slot #16 and Princeton all the way down to #44. According to those three categories, the schools that are among the leaders in: social mobility (calculations based on the number of Pell grant recipients that graduate from the school) are UCLA and Polytechnic University (NY); in the service category (percentage of students enrolled in Army/Navy, PeaceCorps volunteers, and federal work-study devoted to community service) are University of Portland and MIT; and lastly, lead research institutes are UW-Madison and University of Michigan-Ann Arbor. Minnesota reaches the top 10 only in the research category with the University of Minnesota-Twin Cities at #9 and an overall ranking of #52. The schools are compared to similar schools, separating the national universities from the liberal arts colleges. Macalester College is Minnesota's highest ranking liberal arts school at #16. Although The Washington Monthly recognizes that this new system of ranking colleges doesn't negate the more popular rankings, it does serve as a reminder to colleges and universities that the greater goal of higher education institutions is to strive to produce students that contribute to the betterment of our country. [COLLEGE ACCESS SPECIFIC, COLLEGE STUDENT RETENTION AND SUCCESS]

Tinto, V. (July 2004). *Student Retention and Graduation: Facing the Truth, Living with the Consequences.* **The Pell Institute. Washington DC.**

This paper, the first in a series of occasional papers, shares Dr. Tinto's expertise in understanding of who it is that is going to college, what it takes to graduate from college, and how to create a college going culture for low-income students. Using both the student and institutional perspective, Tinto suggests ways the federal government can be instrumental in addressing retention issues. The intent of this document is to help inform discussions around the Higher Education Act. For example, statistics from a longitudinal study sample of students entering college for the first time in 1995-96 and found that nearly 42% were first generation college students and 29% students of color. At the end of six years, 29% had earned a bachelor's degree and 35% had left with no degree and no longer enrolled in school. Income also is an indicator on what type of degree a student will receive because often low-income students are coming into the post-secondary institution under-prepared and must work outside of taking classes to help pay the tuition. Solutions proposed include: effective advising, providing support networks, frequent feedback, and taking the learning outside of the classroom (through service learning projects) are some of his suggestions. But colleges and universities cannot create the change needed without the support of the government and other organizations and corporations. Indeed, collaboration must occur for a significant impact. [COLLEGE STUDENT RETENTION AND SUCCESS]

Tosto, P. (January 29, 2006). *Futures on the line.* **St. Paul, MN: Pioneer Press.**

Ernest Davenport, alum of the U of M, started a free ACT and SAT test prep session for low-income, minority students in the metro area. The students are taught by volunteers, Davenport and his wife. They meet on Saturdays starting in March and meet for 11 weeks. Students are asked to do 5-7 hours of homework each week and there are only 120 spaces available in the class. They receive $50 worth of test prep material (paid for by the U of M). The focus is on math preparation because studies have shown that minority students tend to be less prepared for college algebra based on math scores (in comparison to whites). The series also talks about other college preparation programs such as Upward Bound, Admission Possible, and Fast Forward Youth at the

College of St. Ben's/St. John's University. [COLLEGE ACCESS SPECIFIC, MINNESOTA SPECIFIC]

Tosto, P. (August 6, 2006). *Acing high school, but not ready for college.* **St. Paul, MN: Pioneer Press.**

The article addresses the increasing and troubling need for remedial courses by Minnesota high school graduates. At public 2-year institutions nearly half the enrolled students, and 1 in 4 students at 4-year institutions need remedial work—especially in math and English. There is a clear disconnect between the standards for high school and for college level work, and students aren't ready for the transition. Indeed, nearly 40% of students that tested into remedial classes had gotten A's and B's in high school. [COLLEGE STUDENT RETENTION AND SUCCESS, MINNESOTA SPECIFIC]

Trends in Higher Education. **(December 2006). Society for College and University Planning. Ann Arbor: MI.** www.scup.org

Intended as a publication for the Board of Directors, the Society for College and University Planning (SCUP) published this report in order to highlight the trends in higher education and include their thoughts and implications for the future. The facts are arranged according to seven different categories: demographics, economy, environment, global education, learning, politics, and technology. Topics covered span the gamut of issues in higher education—from student loan debt to increasing popularity in online degrees to higher education's role in global warming. [NOT FOR ANNOTATED BIBLIOGRAPHY—FOR REFERENCE]

U.S. General Accounting Office. (May 2003). *College Completion: Additional Efforts Could Help Education with Its Completion Goals.* **Washington, DC: General Accounting Office.**

This report includes information and recommendations provided to the U.S. Department of Education, which seeks to hold educational institutions accountable for their performance in graduating their students. The Department of Education recognizes that factors such as race, high school preparedness, income and family college attendance history are all tied to student success in college. It laments the lack of systemic data on student retention and persistence, promising practices with a clear evaluation method, and a systematic dissemination of the results. However, the report lists promising practices that fall into three categories: increasing access to post-secondary institutions, helping colleges retain students, and helping individual students stay in college. The Department of Education advises the use of service-learning as a retention strategy in order to connect students to the institution and enhance the learning experience (pg. 23). [COLLEGE STUDENT RETENTION AND SUCCESS]

Vara-Orta, F. (January 31, 2007). "Most Latino students spurn college loans." L.A. Times. http://latimes.com/news/local/la-me-latino31jan31,0,3043540,full.story?coll=la-home-headlines **Accessed January 31, 2007.**

The LA Times article explores the reason some Latino students are not attending and/or completing college in a timely manner, as a result of an aversion to taking loans. In fact, 80% of Latino parents and 74% of college-age Latino students do not consider loans a possible source for

financial aid. Researchers cite three distinct reasons for this: lack of knowledge about financial aid, fear of debt, and distrust of lenders. While this 'pay as you go' system may work out for some students, a majority of students are missing out of advancing to postsecondary education. Since Latinos are the fastest growing demographic in the United States, there is growing concern and urgency about bridging the gap for Latino students to higher education institutions. [CULTURE SPECIFIC-LATINO; FINANCIAL ISSUES]

Vargas, J.H. (2004). "College Knowledge: Addressing Information Barriers to College." Boston, MA: The Education Resources Institute (TERI).

A summary of relevant and current research regarding access to higher education for low income, underrepresented, first generation college students reveals that information, or "college knowledge" is essential for these students to successfully access higher education at a consistent rate. While there are other factors that play into why students may or may not access higher education, research suggests that information provided early and often can only increase the awareness and aspiration for college in all students. Perhaps most importantly, talking about financial aid opens the widest doors for college aspirations. For example, only 53% of low income students with high standardized test scores enrolled in college when neither they nor their parents spoke to anyone about financial aid. In comparison, 84% of this same demographic enrolled when there had been some consultation about financial aid. Vargas clearly identifies that starting the transfer of cultural capital and 'college knowledge' can make significant changes in the college going rate for students that have historically struggled in access higher education. [COLLEGE ACCESS SPECIFIC]

Walker, S. (August 2005). *Research Review: An overview of the Pell Institute report on Improving Graduation Rates of Low-Income College Students.* **Atlanta, GA: Office of Strategic Research and Analysis Board of Regents of the University System of Georgia.**

This report compares 20 four-year institutions—those with high and low graduation rates—in order to identify programs and other elements that affect their graduation performance. The intent is to learn what some of the institutional factors are that affect graduation rates for low-income students. Included in the report is a side-by-side comparison with high and low graduation rates. Characteristics typical of an institution with high graduation rates include, but are not limited to: personalizing the educational experience (through academic plans, small classes, and special programs), dedicated and accessible full-time faculty, and an inclusive environment for all students. [COLLEGE STUDENT RETENTION AND SUCCESS]

Wilkenson, R. (October 7, 2005). "What Colleges Must Do to Help Needy Students." *The Chronicle of Higher Education.* **Accessed: August 21, 2006.**
http://chronicle.com/weekly/v52/i07/07b00701.htm.

The article recognizes that there is a direct correlation between the cost of tuition and the school choice for low-income students. In fact, more low-income students attend less-expensive higher education schools, if they choose to go at all. The primary reasons identified is that more and more schools are spending their scholarship money on merit-based students, rather than need-based, therefore making college tuition costs more expensive for the lowest-income group. Other

circumstances that contribute are that low-income students often attend poorer high schools, with less rigorous academic tracks, and/or low-income students are often first-generation college students.   Therefore, the college opportunity and achievement gap is widening even further. With the changing demographics in the United States and the policy of tuition discounting for the elite, soon the doors of our higher education institutions will be leaving out the biggest bulk of our college-age students. [FINANCIAL ISSUES]
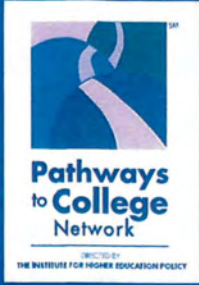
Annotated Bibliography

Removing Roadblocks to Rigor

Linking Academic and Social Supports to Ensure College Readiness and Success

Mandy Savitz-Romer, Program Director, Risk and Prevention, and Lecturer, Harvard Graduate School of Education

Joie Jager-Hyman, Doctoral Candidate, Harvard Graduate School of Education

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Table of Contents

Introduction

Evidence suggests that our nation's schools are failing to provide too many American students with the necessary preparation to succeed in higher education or compete in a globalized economy. As a result, most experts agree that increasing academic rigor is an essential component of the next wave of education reform. However, this goal can only be achieved if accompanied by effective support services to assist students in meeting the demands of more rigorous courses. Academic and social support plays a significant and complementary role in student achievement.

The purpose of this annotated bibliography is to identify and summarize research on the scope, characteristics and impact of academic and social support services for students. Several reports on academic rigor have also been included to establish a context for the importance of social and academic support. The bibliography is divided into five sections:

1) Defining academic rigor;
2) Academic and social support in middle and high school;
3) Postsecondary academic and social support services;
4) Academic and social support for key transitions in the education pipeline; and
5) Providing academic and social support out of school.

Relevant research found in peer-reviewed journals, major policy reports, public opinion surveys, and other seminal work is summarized in each section. The bibliography does not provide an exhaustive list of every program or strategy, but rather illustrates the rich diversity of academic and support strategies being used to help students undertake a rigorous course of study. It includes work published in the past 15 years with an emphasis on more contemporary sources.

Defining Academic Rigor

ACT. (2006). *Aligning Postsecondary Expectations and High School Practice: The Gap Defined Policy Implications of the ACT National Curriculum Survey Results 2005–2006.* **Iowa City, IA: ACT.**

This report examines the gap between academic preparation in high school and the requirements of college-level coursework. Based on data collected through the ACT National Curriculum Survey, which was distributed to 6,800 middle and high school students, 10,800 high school teachers, 1,200 high school guidance counselors, 12,992 postsecondary professors and 3,873 postsecondary remedial course instructors, researchers present the following findings: 1) postsecondary instructors have far more targeted and specific expectations for college coursework than what high school teachers view as important for college coursework; 2) remedial-course teachers' ratings of mathematics and reading skills tend to align more closely with those of postsecondary instructors than with those of high school teachers; 3) while most high school teachers across subject areas believe that meeting their state's standards prepares students for college-level work, most postsecondary instructors disagree; 4) high school teachers believe that today's high school graduates are less well prepared for postsecondary education and work than graduates in previous years, while postsecondary instructors perceive no difference; 5) there are specific differences between high school instruction and postsecondary expectations in every major curriculum; and 6) the ACT's Educational Planning and Assessment System (EPASTM) tests are aligned with the content and skills that postsecondary educators identify as important for college readiness. Researchers recommend that educators take the following action steps: 1) align the high school curriculum with postsecondary expectations; 2) focus state standards on the essentials for college and work readiness; 3) define course standards; 4) measure student progress with college readiness assessments; 5) establish core course requirements for high school graduation; 6) begin measuring college readiness in early grades; 7) teach higher-level reading skills across the high school curriculum; 8) guarantee that students attain the skills necessary for effective writing; 9) ensure that students learn scientific process and inquiry skills; and 10) monitor student progress.

ACT. (2007). *Rigor at Risk: Reaffirming Quality in the High School Core Curriculum.* **Iowa City, IA: ACT.**

This study is based on data collected from large samples of students (>100,000) in the nation's schools who participated in the ACT's college readiness programs and/or took the ACT exam. Researchers also analyzed the curricula at 382 high schools that have recently shown greater-than-average increases in ACT mathematics or science test scores and results from the National Curriculum Survey, which is distributed to more than 20,000 educators across grades 7–14. Researchers found that only one-quarter of ACT-tested 2006 high school graduates who took a core curriculum were prepared to take credit-bearing, entry-level college courses in all four subject areas. In addition, they found that secondary and postsecondary educators differ greatly in how well they believe their state's standards prepare students for college-level work and about the depth and breadth of essential state standards needed to prepare students for college (high school teachers rated a much larger number of topics and skills as being "important" or "very important" for college success than did college instructors). The report recommends that courses with the same name should have a common standard of quality, and courses within a discipline should be vertically aligned. At minimum, high school graduation requirements should include: 1) four years of English; 2) at least three years of mathematics,

including rigorous courses in Algebra I, geometry, and Algebra II; 3) three years of science, including rigorous courses in biology, chemistry, and physics; and 4) three years of social studies. Researchers also recommend the following five "Action Steps" for educators: 1) specify the number and kinds of courses that students need to take to graduate from high school ready for college and work; 2) align high school course outcomes with state standards that are driven by the requirements of postsecondary education and work; 3) provide teacher support; 4) expand access to high-quality, vertically aligned core courses; and 5) measure results at the course level.

Adelman, C. (2006). *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington, DC: U.S. Department of Education.

Using data from the National Education Longitudinal Study of 1988 (NELS:88/2000), Adelman examines the factors that lead to bachelor's degree attainment. Revisiting some of the findings that he documented in his previous work, Adelman reports that the highest level of math reached in high school continues to be a key marker in pre-collegiate momentum, with the tipping point of momentum toward a bachelor's degree now firmly above Algebra II. In addition, Adelman finds that students who completed the following courses—at minimum—had a 95 percent chance of completing their four-year degrees: 1) 3.75 or more Carnegie units of English; 2) 3.75 or more Carnegie units of mathematics with the highest mathematics being calculus, pre-calculus, or trigonometry; 3) 2.5 or more Carnegie units of science; 4) laboratory science (biology, chemistry, and physics); 5) more than 2.0 Carnegie Units of foreign languages; 6) more than 2.0 Carnegie Units of history and social studies; 7) 1.0 or more Carnegie Units of computer science; 8) more than one Advanced Placement course; 9) no remedial English; and 10) no courses in remedial mathematics. In addition, Adelman calculates the ratios of participation in what he calls "gateway" courses between those who ultimately earned degrees and those who did not—6:1 in American literature, 4:1 in general chemistry, and more than 3:1 in pre-calculus, micro/macroeconomics, introduction to philosophy, and world civilization. Entering a postsecondary institution directly from high school, earning 20 or more credits in the first calendar year of enrollment, and performing well enough in that first calendar year to fall in the top 40 percent of a GPA distribution were also found to be statistically significant predictors of college completion. Other predictors include summer-term credit generation, meeting the challenge of college-level mathematics, effort required to yield a rising GPA, and most of all, remaining continuously enrolled. Notably, Adelman concludes that "the academic intensity of the student's high school curriculum still counts more than anything else in pre-collegiate history in providing momentum toward completing a bachelor's degree."

Conley, D. T. (2005). *What We Must Do to Create a System That Prepares Students for College Success*. San Francisco, CA: WestEd.

In this article, Conley argues for the necessity of meaningful K-16 alignment in academic coursework to ensure that students who complete grade-level work are prepared to advance, offering numerous suggestions for policy-makers, high schools, colleges, students and parents. Suggestions for policy-makers include: 1) redesign high school graduation tests to provide diagnostic information to students on their college readiness; 2) revise or augment state assessment systems to measure more complex cognitive skills by adding requirements for classroom-based assessment of student work samples; 3) require high schools to describe how their curriculum is sequenced in a fashion that develops the habits of mind that are crucial to college success and lifelong learning; 4) encourage pilot projects to develop seminar-like courses for high school seniors; and 5) mandate that high school and postsecondary faculty meet to agree on the knowledge and skills students must master. Conley recommends that colleges and universities: 1) ensure that faculty collaborate more with high school teachers and colleges to clearly identify the content of placement tests, the cut scores being used,

and the justification for both; and 2) use placement test redesign as a tool to better define the purposes of their general education requirements. Suggestions for high schools include: 1) provide environments in which students are constantly measuring their performance and progress against clear outcomes and standards in order to gauge where they are lacking and where they have succeeded; 2) emphasize portfolios of student work, teacher-led student critiques of college readiness, challenging projects and assignments that require students to develop the habits of mind associated with postsecondary success; 3) assist students by identifying content that can be mastered independently and encourage them to do this work outside of class so that class time is focused on the types of value-added learning experiences that help students integrate, consolidate, and build on basic understandings. Suggestions for students include: 1) focus on developing the necessary knowledge and skills as identified by standards linking high school and college coursework; and 2) seek and engage in courses and educational experiences that provide the knowledge, cognitive skills, and habits of mind essential to postsecondary success.

Conley, D. T. (2007). *Toward a More Comprehensive Conception of College Readiness.* **Eugene, OR: Educational Policy Improvement Center.**

Conley makes a case for the importance of a common definition of college readiness. He asserts that a student can be considered as meeting the standards for college readiness if he or she can demonstrate the following: 1) consistent intellectual growth and development over four years of high school resulting from the study of increasingly challenging, engaging and coherent academic content; 2) deep understanding of and facility applying key foundational ideas and concepts from the core academic subjects; 3) strong grounding in the knowledge base that underlies the key concepts of the core academic disciplines; 4) facility with a range of key intellectual and cognitive skills and capabilities that can be broadly generalized as the ability to think; 5) reading and writing skills and strategies sufficient to process the full range of textual materials commonly encountered in entry-level college courses, and to respond successfully to the written assignments commonly required in such courses; 6) mastery of key concepts and ways of thinking found in one or more scientific disciplines sufficient to succeed in at least one introductory-level college course that could conceivably lead toward a major; 7) comfort with a range of numeric concepts and principles sufficient to take at least one introductory level college course that could conceivably lead toward a major that requires additional proficiency in mathematics; 8) ability to accept critical feedback including critiques of written work and oral arguments; 9) skills to assess objectively one's level of competence in a subject and to devise plans to complete course requirements in a timely fashion and with a high degree of quality; 10) ability to study independently and with a study group on a complex assignment requiring extensive out-of-class preparation that extends over a reasonably long period of time; 11) comfort with interaction with a wide range of faculty, staff, and students, including among them many who come from different backgrounds and hold different points of view; and 12) understanding of the values and norms of colleges, and within them, disciplinary subjects as the organizing structures for intellectual communities. Conley includes the following recommendations for educators who want to foster college readiness: 1) create a culture focused on intellectual development; 2) specify core knowledge and skills for college; 3) provide necessary supports to students; and 4) provide necessary supports for teachers. Each of his recommendations is elaborated upon in this report.

Pathways to College Network. (2007). *Academic Rigor at the Heart of College Access and Success.* **Boston, MA: Pathways to College Network: College Readiness Issue Brief. Retrieved on August 1, 2008 from: http://www.pathwaystocollege.net/pdf/rigor.pdf.**

This policy brief emphasizes the importance of providing students with a rigorous curriculum in preparation for more advanced coursework. According to the Pathways to College Network, a well-designed, coherent, and

rigorous curriculum allows all students to achieve mastery of core academic skills and opens the door to both college participation and skilled workforce employment. The brief identifies the following course pattern as having been defined as "rigorous" by various educational stakeholders, such as the State Scholars Initiative, High Schools That Work, College Board, and the ACT: 1) four years of English; 2) four years of mathematics (including Algebra I and II, geometry, and preferably at least one other advanced mathematics course such as trigonometry, pre-calculus, calculus, or statistics; 3) three years of laboratory science such as biology, chemistry, and physics; 4) three years of social studies; and 5) two years of a world language. Action-steps for states, superintendents and principals, and teachers/counselors are also presented.

Rainwater, T., Mize, D. A., & Brooks, N. S. (2008). *Education Beyond the Rhetoric: Making "Rigor" Something Real* **Policy brief presented at The State Scholars Initiative National Summit on Academic Rigor and Relevance.**

This conference paper calls attention to the need for educators and policy-makers to define academic rigor in schools. Though they do not present suggestions for specific courses of content, Rainwater, Mize and Brooks assert that a rigorous education is not measured simply by the number of courses taken or grades earned, but by the extent to which these courses actually prepare students for the world of work and college. This paper identifies four features of a default curriculum designed to provide students with the necessary preparation to succeed in college and work: 1) a "rigorous" course of study, not a minimum one; 2) statewide implementation plan; 3) provided to every student; and 4) with the consent of their parents and in conjunction with notification to the school, include an opt out choice. Researchers conclude with the following suggestions for educators and policy-makers: 1) define rigor; 2) develop one rigorous standard for all students; 3) create state policy (data systems and assessment policies) that specifically support rigor along with externally validated assessments; and 4) provide teachers and administrators with professional development opportunities related to curriculum, standards and assessment.

Academic and Social Support in Middle and High School

ACT. (2005). *Early College Planning Pays Big Dividends: Louisiana*: Iowa City, IA: ACT.

This case study examines the impact of the ACT's Educational Planning and Assessment System (EPAS) on student outcomes in Louisiana. EPAS provides an assessment system that measures student readiness along a continuum of college readiness benchmarks and allows teachers, counselors, and students themselves to track academic progress from 8th-12th grades on skills that are related and linked to college preparation. Since implementing the program in Louisiana, researchers have found that student participation in EPAS has increased, student performance is improving overall, college readiness has increased, and more students are planning to enter some form of postsecondary education. Despite positive findings, researchers include some causal references (for example, more students enrolling in college in the state is not necessarily the result of the introduction of EPAS) and data source and methodology for this case study are unclear.

ACT. (2006). *Breaking Barriers: A Case Study of Two High-Performing Schools*: Iowa City, IA: ACT.

Researchers at the ACT conducted two case studies of "high-performing" schools to identify the school-level factors that contribute to student success. They chose the Thornton Fractional North High School in a southeastern suburb of Chicago with about 1,600 students (64 percent of whom are African American, 19 percent Hispanic and 15 percent white) and Dumas High School in small rural town in Arkansas with about 400 students (69 percent African American, 25 percent white and 5 percent Hispanic). After identifying the numerous ways in which these schools provided academic and social support for students, the report includes the following recommendations for educators seeking to improve student achievement: 1) emphasize the importance of postsecondary education for all students; 2) ensure that the school curriculum provides the foundational skills and knowledge needed for college and work; 3) cultivate an experienced and committed faculty; 4) provide students with a variety of academic support, career exploration, and career training programs; 5) monitor student progress throughout high school; and 6) encourage parental involvement and community support.

ACT. (2007). *Setting Students' Sights on College: Chicago Public Schools*: Iowa City, IA: ACT.

This case study illustrates the impact of the Educational Planning and Assessment System (EPAS) on students in Chicago Public Schools. EPAS provides an assessment system that measures student readiness along a continuum of college readiness benchmarks and allows teachers, counselors, and students themselves to track academic progress from 8th-12th grades on skills directly related and linked to college preparation. Researchers at the ACT conclude that Chicago students increased scores on the ACT in every subject in 2006 as compared to those from 2002. In addition, the number of students requesting assistance with educational or occupational plans increased by 900 between 2002 and 2006, which the researchers assert is an indication of increased awareness and valuing of post-high school planning. The data sources for this case study are unclear as is the method of analysis.

Academic and Social Support in Middle and High School

American Youth Policy Forum. (1998). *High School Puente.* **Washington, DC: Raising Minority Academic Achievement American Youth Policy Forum.**

This mixed-methods study evaluated the influence of participation in the Puente program. Puente works with cohorts of 25-30 students who are identified by teachers and administrators for eligibility. These students enroll in special ninth and tenth grade English classes that focus on writing and literature, with an emphasis on Latino literature and cultural awareness. In eleventh and twelfth grades, Puente students receive intensive, college-prep counseling, which ensures that students are placed in college preparatory classes, that any deficiencies are quickly noted and that students receive the necessary grades for high school success and college admission. For the quantitative component of this study, the evaluators collected data from 75 Puente students across several representative sites and compared it to data collected from a control group of 75 non-Puente students. The study also used surveys, school, community and classroom observations, and formal and informal conversations with administrators, teachers, counselors, parents and students. The results of this evaluation include the following: 1) Puente students were more likely to take the PSAT in grades 9-10 and the ACT or SAT in grades 11-12; 2) more Puente than non-Puente students (44% vs. 35%) completed the University of California requirements; 3) according to statewide data, Puente students applied to the University of California at a much higher rate than their peers (24% vs. 8%); 4) Puente students were twice as likely to attend a school in the University of California system (7% vs. 4%) or the California State University system (33% vs. 15%); 5) Puente students in the matched sample attended four-year colleges at nearly double the rate of non- Puente students (43% vs. 24%); 6) the Puente program appeared to have no effect on participants' GPAs, relative to non-Puente students in a matched comparison group; and 7) Puente students reported knowing more about what was needed to go on to college and reported more influence of counselors, teachers and even parents than non-Puente students.

Ascher, C., & Maguire, C. (2007). *Beating the Odds: How Thirteen NYC Schools Bring Low-Performing Ninth-Graders to Timely Graduation and College Enrollment.* **Providence, RI: Annenberg Institute for School Reform at Brown University.**

The thirteen Beat the Odds (BTO) schools described in this report were identified in an earlier quantitative analysis using New York City Department of Education 2001-2002 data (variables considered in this selection included four-year high school graduation rates, graduates' rate of enrollment in the City University of New York and first-year academic success at the City University of New York). Researchers conducted interviews with administrators, counselors, and other relevant staff to understand how these schools were able to beat the odds and to suggest ways that the success of these schools could be maintained and scaled up. They found that BTO high schools use four key strategies: 1) rigorous academic standards, including ground rules for both academic effort and behavior and the availability of Advanced Placement courses and/or opportunities to earn credit at nearby colleges; 2) networks of timely supports provided by adults in advisories and regular reviews of student transcripts to track students' academic progress, credit accumulation, and areas of need (they also communicate with parents and offer afterschool tutoring, Saturday school, and lunchtime classes); 3) college expectations and access, including providing prominent visual and physical space devoted to college-going, available full- or part-time college counselors, annual college and career fairs and visits to colleges; and 4) effective use of school- and district-generated data used to track student progress, identify student weaknesses and strengths, provide feedback on curricula, and shape academic interventions. Based on the data, the authors offer the following suggestions for high school improvement: 1) improve school resources; 2) give schools greater control over enrollment; 3) provide schools a stronger system of support and accountability; and 4) develop a city-wide office of post-secondary education (Chicago and Philadelphia are two examples of cities that have already done this).

Bedsworth, W., Colby, S., & Doctor, J. (2006). *Reclaiming the American Dream.* **San Francisco, CA: The Bridgespan Group.**

This report reveals the factors that influence low-income, high school students' ability to gain access to and succeed in higher education. Researchers used data from the National Educational Longitudinal Study of 1988 (NELS: 88) and narrowed their sample to low-income students (defined by eligibility for free lunch) who graduated from high school academically prepared (defined as "somewhat qualified" or better on the NELS college qualification index). They find that the most important indicators of whether or not a student will succeed in college are: 1) understanding the link between education and career aspirations; 2) having a cohort of peers planning for college together; 3) expecting a college-preparatory curriculum; and 4) taking steps to make college affordable. Important indictors include: 1) general expectations of college-going among student and influential adults; and 2) parental involvement that makes college real to the student. Less important indicators include: 1) procedural assistance alone; and 2) parental involvement absent a clear college link. Researchers argue that their findings confirm the importance of a college-going culture in schools, which they define as schools functioning with the expectation that their ultimate goal is to prepare students for college. The report concludes with numerous recommendations for federal and state policy-makers, school districts, schools, and community-based organizations. Most notable, the report advocates for instituting federal policies that make college affordable for low-income students and providing the school-level infrastructure to support the transition to a college-ready curriculum.

Berger, A. R., Adelman, N., Cole, S., Hall, C., Evan, A., Hersh, L., et al. (2007). *Evaluation of the Early College High School Initiative: Select Topics on Implementation.* **Washington, DC: American Institutes for Research and SRI International.**

This report is the third annual national evaluation of the Bill & Melinda Gates Foundation's Early College High School Initiative (ECHSI), the basis for which includes the following set of Core Principles, which requires that ECHSs: 1) serve students from populations typically underrepresented in postsecondary institutions; 2) are designed so that students can earn "up to" two years of college credit; 3) compress students' time to a postsecondary degree; 4) include middle grades and/or provide outreach to middle-grade students; and 5) demonstrate the attributes of highly effective high schools. Qualitative and quantitative data was collected from interviews, focus groups and classroom observations from a sample of 24 ECHSs, 17 intermediaries (grantee organizations, which receive funding to work with school districts, community organizations, high schools, and colleges to open ECHSs) as well as publically available data and an online school-level survey. Researchers studied the implementation of the program's "3R's"—rigor, relevance, and relationships in the classroom—at both the high school and college levels. Findings for the ECHSs included the following: 1) ECHSs continued to focus on serving students underrepresented in postsecondary institutions; 2) ECHSs were moving toward integrating some college courses for some students (though the number of available college credits and the percentage of students enrolled varied considerably by school); 3) ECHSs were focused on outreach to prepare students in middle school grades, and more schools were including these grades in their programs; 4) ECHS high school classes showed evidence of the 3R's, although rigorous instruction was elusive, particularly in mathematics classes; 5) rigorous, relevant, and relationship-based instruction was less evident in students' college classes than in the high school classes; 6) ECHSs took the lead in supporting students socially and academically, even in college classes; 7) ECHSs established positive climates for students, though some sites were challenged to fully develop a college-going culture when their location made connections with the college environment difficult; and 8) ECHSs had a higher average percentage of students scoring proficient on their states' assessments than did other high schools in the districts in which they are located. The report also includes findings for partners and intermediaries, as well as suggestions for future research.

Burch, P. (2007). *Supplemental Education Services under NCLB: Emerging Evidence and Policy Issues.* **Tempe, AZ and Boulder, CO: Education Policy Research Unit and Education and the Public Interest Center.**

The Supplemental Education Services (SES) provision of the No Child Left Behind Act (NCLB) of 2001 requires school districts to pay the cost of third-party, after-school tutoring services for eligible students. Based on her analysis of program evaluation literature and the provisions of the law, Burch highlights the major limitations in the current law and implementation of SES, including low participation rates, limited services available for English Language Learners and special education students, and the inability of states and districts to monitor program quality. Furthermore, the author establishes that it is unclear how SES might affect academic achievement, because existing research offers little information about specific conditions that support positive outcomes. Burch provides the following recommendations for policy-makers: 1) redesign the law to address the core problem of local administrators lacking fiscal resources and expertise to successfully administer SES programs; 2) commission federally funded, comprehensive evaluations to determine: (a) to what degree SES may affect student achievement, and (b) to what extent at-risk student populations have access to SES services; 3) investigate the feasibility and desirability of reallocating Title I funds from SES programs to existing successful state and local reform efforts; and 4) examine and reconsider NCLB's apparent tension between the high-stakes accountability imposed on schools and the more limited measures for holding SES providers accountable for their contributions to student achievement.

Calaff, K. P. (2008). Supportive Schooling: Practices That Support Culturally and Linguistically Diverse Students' Preparation for College. *NASSP Bulletin 92*(2), 95-110.

This qualitative study was designed to understand what factors contribute to the college preparation of Latino immigrant students at one extraordinary high school. Data were collected over five months from nine Latino students at a well-respected public high school who were also participants in a college preparation program offered through a local university. Calaff conducted student interviews, parent interviews, focus group sessions, participant observation in the school, and a review of school and program records and documents. The author found that students benefited from steps taken in their high school to "level the playing field" and from teacher beliefs and expectations that their Latino students were capable of completing college preparatory work regardless of their linguistic, socio-cultural, and socioeconomic backgrounds. The high school in this study supported students by creating an academic ladder to reach the high expectations set for all students, embracing students' diverse linguistic and cultural heritage and connecting students with adults in the school who cared about them. According to Calaff, her findings suggest that one of the ways that schools can raise Latino achievement is by setting high academic standards and creating a safety net through creative scheduling and course blocking to bolster achievement.

Camblin, S. J. (2003). *The Middle Grades: Putting All Students on Track for College.* **Honolulu, HI: Pacific Resources for Education and Learning.**

The focus of this briefing paper is to help middle school principals and teachers close the opportunity gap for underserved students. The paper provides reasons why the middle grades are so critical to postsecondary preparation, background information on the opportunity gap that exists for underserved students, examples of effective practices, and recommendations for building school capacity to increase student performance for college access. These recommendations include the following: 1) focus on the needs of early adolescents; 2) hold high expectations for all students; 3) provide challenging coursework and curriculum for all students; 4) utilize small teams of teachers; 5) practice interdisciplinary teaching; 6) recommend academic counselors

and advisory programs; 7) vary instructional techniques (examples include hands-on, life-related, enrichment activities, integrated instruction, and cooperative learning); 8) emphasize all instructional strategies, especially small groups and supportive adults; 9) use linguistic and cultural materials that link the home and school; 10) expand support programs; 11) provide help for parents; 12) think systemically, creating school-wide knowledge and focus; 13) reflect on beliefs and evaluate teaching practices; 14) see learning as the interaction among teachers, students, activities, and educational materials; and 15) inclusive practices for all students and families in the classroom and in the school.

Chait, R., Muller, R. D., Goldware, S., & Housman, N. G. (2007). *Academic Interventions to Help Students Meet Rigorous Standards State Policy Options.* **Washington, DC: Institute for Educational Leadership.**

This report provides a review of various academic support strategies to help students meet rigorous course requirements. Based on the relevant academic and program evaluations, the researchers identified five strategies for academic intervention: 1) accelerated instruction (dual enrollment, Early College High Schools); 2) extended learning time (includes shadow classes, catch-up courses, block scheduling, and after-school and/or summer programs); 3) personalized learning environments (small learning communities in large school or new small learning communities, individual learning communities, connecting academic content to real-world problems like in career academies); 4) dropout prevention and recovery programs; and 5) incorporating literacy instruction into the curriculum (state programs typically provide professional development to participating schools, use reading coaches or experts to work with teachers to improve instruction, and incorporate a school-wide emphasis on literacy across the curriculum). The authors conclude that interventions cannot be effective in isolation of a broader agenda to transform school culture. The following recommendations are included as state policy options to help students meet rigorous standards: 1) provide accelerated learning grants to support partnerships between districts and institutions of higher education; 2) target high-need districts and schools for extended learning time programs; 3) develop ninth grade transition programs to ensure ninth graders are prepared to succeed in high school; 4) expand access to promising school models for high-need districts; 5) develop, evaluate, and expand access to contextualized curricula in high-need districts; 6) fund programs that are academically rigorous and focus on the dual goals of college and work preparation; 7) develop and assess strategic, systemic approaches for addressing both dropout prevention and dropout recovery; 8) establish funding models for supporting dropout recovery programs; 9) expand state-wide literacy programs built on research about effective reading instruction; 10) provide professional development in literacy instruction; and 11) institute literacy standards for high school students and provide ongoing assessment.

Cushman, K. (2006). *First in the Family: Advice About College from First-Generation Students: Your High School Years.* **Providence, RI: Next Generation Press.**

This book includes advice from 13 first-generation college students to their peers who are or may be considering college. The seven chapters address the following topics: 1) the importance of believing that you are college material; 2) understating why you want a higher education; 3) how to find information about and aim for college; 4) how friends, parents, teachers and others can offer support; 5) how to defy stereotypes and low expectations; 6) how to keep your social and emotional balance; and 7) how to stay organized and meet deadlines. The book also includes a list of useful resources and a planning check-list to help students follow the advice.

Fashola, O. S., & Slavin, R. E. (1998). Effective Dropout Prevention Programs for Students Placed at Risk. *Journal of Education for Students Placed at Risk, 3(2),* **159-183.**

This paper draws from a review of two dropout prevention and four college access programs that either fully or partially met authors' criteria (programs were considered to meet the criteria based on effectiveness and replicability; evaluations must also have some sort of control group to be included). Researchers find that dropout programs usually focus on one of two strategies: 1) providing students with quality elementary and middle school experiences to address precursors to dropping out; or 2) identifying key hurdles to school success and helping students overcome them (for example, getting students to complete Algebra II, which has been identified as a key step for college enrollment). Successful programs can also employ the following support strategies: 1) personalize the high school experience for at-risk students with an expectation that increasing attachment to adults at school or giving students high-status roles within school will reduce dropout rates (mentions that some programs give students hats or badges as markers that they can identify with); 2) give students a sense of purpose of completing school and make long-term consequences more apparent in daily activities; 3) place students on college campuses early to give them a realistic idea of what college will be like; 4) provide students opportunities for satisfying social interactions with a subgroup of students who plan to go to college; and 5) establish opportunities for students to earn money while enrolled in school. The authors conclude that dropout programs can be effective if implemented correctly.

Gándara, P., Larson, K., Rumberger, R., & Mehan, H. (1998). *Capturing Latino Students in the Academic Pipeline.* **Berkeley, CA: Center for Latino Research, University of California, Berkeley.**

This report examines the impact of three outreach programs that are designed to serve Latino students. The Achievement of Latinos Through Academic Success program (ALAS) targets the lowest-achieving Latino students who are at the greatest risk of dropping out of high school. The Advancement Via Individual Determination program (AVID) targets underachieving students with above-average test scores who have the potential to take more demanding college preparatory courses in high school. Puente targets students with varied levels of achievement with the aim of ensuring that they finish high school and go on to college. Based on analyses of data from these programs, the researchers findings include the following: 1) taken together, data on mobility, attendance, failed classes, and graduation credits indicate that the ALAS program had a substantial and practical impact on students who received the intervention; 2) AVID students whose parents' median annual income fell below $19,999 enroll in four-year colleges in equal or higher proportion to students whose parents' median annual income was between $20,000 and $65,000; 3) more AVID students whose parents had less than a college education enrolled in four-year colleges than students from the control group with college-educated parents; 4) Puente students were more likely to stay in school, and in the same school, than non-Puente students; and 5) Puente students took and passed more college preparatory courses than students in the control group.

George, P., & Aronson, R. (2003). *How Do Educators' Cultural Belief Systems Affect Underserved Students' Pursuit of Postsecondary Education?* **Honolulu, HI: Pacific Resources for Education and Learning.**

George and Aronson identify evidence from the research literature that suggests that educators often hold preconceived notions about students based on their own beliefs about the role that race, ethnicity, or socioeconomic status plays in student achievement. The authors assert that these beliefs can affect educators' expectations of students' ability to learn and influence the kinds of opportunities that they provide for students to achieve. Based on a review of the literature, the authors make numerous suggestions for

educators who wish to mitigate the impact of their cultural belief systems on underserved students including: 1) create opportunities for educators and students to get to know each other better on a personal basis; 2) realize that small learning communities can take many forms, from organizational/structural reconfiguration to curriculum changes to simply a friendlier school climate; 3) provide opportunities for all students to achieve by fostering self-confidence, and highlighting student strengths rather than weaknesses; 4) give students fewer options to opt out of a rigorous curriculum that includes algebra, geometry, calculus, biology, chemistry, physics, and a foreign language; 5) provide test preparation for the PSAT, SAT, and ACT and encourage all students to take these tests (if finances are a factor, districts should make the commitment to pay the testing fee for students); 6) create bridges between schoolwork and life to emphasize the relationship of education to success in later life; 7) increase the number of minority teachers at all levels of education; 8) acknowledge the negative impact that educators' low expectations, based on racism or stereotyping, can have for underserved students; 9) provide outlets for students to develop peer networks that provide support for ethnic identity while also supporting high achievement; 10) utilize mentors (mentors can play many roles, including offering tutoring and academic assistance, providing motivation to meet educational goals, model for positive behavior, and helping students focus on a career and taking the steps toward that career); 11) focus guidance and counseling on underserved students and their families who are unfamiliar with how to prepare for further education; and 12) improve the home-school-community connection to focus on promoting postsecondary education. While drawn from the academic literature, not all of these suggestions have been evaluated for effectiveness.

Jones, R. (2003). *Pre-College Academic Programs and Interventions.* Boston, MA: Pathways to College Network, TERI.

This document highlights and describes numerous pre-college programs. Jones provides the following information on each program in bullet-points: 1) date founded; 2) location; 3) description; 4) intervention (often uses words like "tutoring" or "mentoring"); 5) cohort served; 6) key components; 7) funding; and 8) evaluation reference. This report is organized according to type, including school-to-work, minority assistance, service learning, financial assistance, and comprehensive academic/support services (national, statewide, citywide). Not all programs have been evaluated, and those that have been evaluated were not necessarily evaluated according to rigorous standards.

Kennelly, L., & Monrad, M. (2007). *Approaches to Dropout Prevention: Heeding Early Warning Signs with Appropriate Interventions.* Washington, DC: National High School Center.

This paper presents guidelines for educators who wish to build early warning systems to identify students (primarily in grades 6-9) who are at risk of dropping out of middle and/or high school. Kennelly and Monrad conclude that early warning systems should use student- and school-level data that can track students over time to identify risk factors by individual student, aggregate risk factors by school and type of school, rates of decline in academic achievement and engagement (as indicated by attendance and behavior), and school-level outcomes (on track by grade, off-track recovery rates, graduation rates). Early warning systems should offer a systemic analysis of student characteristics, risk factors, outcomes, and impact of intervention. Researchers also identify several "Key Indicators" for students who are at risk of dropping out. These students receive poor grades in core subjects, possess low attendance rates, fail to be promoted to the next grade, and are disengaged in the classroom. This paper concludes with seven action steps for school leaders interested in developing an early warning system: 1) establish a data system that tracks individual student attendance, grades, promotion status, and engagement indicators, such as behavioral marks, as early as fourth grade; 2) determine criteria for who is considered off-track for graduation and establish a continuum of appropriate interventions; 3) track ninth grade students who miss 10 or more days of school in the first 30 days; 4) monitor

first quarter freshman grades, paying particular attention to failures in core academic subjects; 5) review fall semester freshmen grades, paying particular attention to failures in core academic subjects; 6) monitor end-of-year grades, as the end-of-year grades will provide further information about failure rates and reveal grade point averages, a strong predictor of dropping out; and 7) track students who have failed too many core subjects to be promoted to tenth grade.

Lee, V. E., Smith, J. B., Perry, T. E., & Smiley, M. A. (1999). *Social Support, Academic Press and Student Achievement: A View from the Middle Grades in Chicago.* **Chicago, IL: Chicago Annenberg Research Center.**

This mixed-methods study utilizes data collected from middle-school students in the Chicago Public Schools to identify the environmental factors that foster student success. Data include a large sample of sixth and eighth grade reading and math scores on the 1997 Iowa Basic Skills Assessment, 28,318 student surveys, over 5,000 teacher surveys, school observations, interviews, and document analysis at 23 Chicago schools. Controlling for student- and school-level background characteristics, researchers found a statistically significant, positive relationship between strong social support, academic press and an increase in test scores. Recommendations for educators who seek to improve middle-school achievement include setting and communicating high expectations for student learning, delineating clear responsibilities for students in raising their own achievement, providing professional development for teachers aimed at improving quality of instruction, pressing students towards more quality work and higher-order thinking, developing incentive systems to reward student achievement, and using assessment systems to provide teachers feedback. This report also emphasizes the role social supports play in fostering academic motivation, building confidence, making academic achievement attainable, and providing psychological comfort that allows students to take risks, admit errors, ask for help and experience failure along the way to educational success.

Makkonen, R. (2004). Advisory Program Research and Evaluation. *Horace, 20*(4).

Makkonen reviews large-scale studies and school-based evaluations of advisories as well as the literature on issues related to advisories, such as school culture and students' participation in school activities. The author suggests that few quantitative, systemic studies have been conducted on advisories, and there is little comprehensive data on related outcomes. In addition, advisory is rarely a school's sole strategy for supporting students and fostering personalization so it can be difficult to isolate the impact of this intervention. Despite this, Makkonen concludes that the overall research on advisories is generally optimistic. He identifies promising findings from the literature, such as the fact that students who feel that they are part of a supportive school environment are less likely to have poor attendance and drop out and that healthy relationships between teachers and students appear to facilitate academic achievement.

McDonough, P. M. (2005). *Counseling and College Counseling in America's High Schools.* **Alexandria, VA: National Association for College Admission Counseling.**

This paper reviews the research findings specific to what students need to do when preparing for college (with a focus on the application process), the history of school counseling, counselors' work and availability, research evidence on good college counseling, and professional associations for counselors. One of the main conclusions that McDonough draws from the literature is that repeated studies have found that improving counseling would have a significant impact on college access for low-income, rural, and urban students as well as students of color. Specifically, counselors who actively support middle school students and their families

in preparing for college, as opposed to simply disseminating information, increase students' chances of enrolling in a four-year college. Counselors can help high school juniors and seniors and their parents by: 1) reducing anxiety about college; 2) providing application profile enhancement in the form of test coaching, essay assistance, proofing and effective means of self-presentation; 3) helping students realize the wide range of college options and find the best personal match; 4) presenting students in the most effective ways in letters of recommendation; and 5) maintaining professional networks with college admissions officers. McDonough also addresses the wide gaps in college enrollment rates between prep schools and public schools and notes that students from wealthy families are more likely to attend schools where counselors are more committed and able to provide them with information about college. In addition, the author notes that although most Americans assume that counselors are helping students prepare for college or assisting students in enrolling in college, this charge is not written into any existing accountability system, leadership performance evaluation, or K-12 job description.

National Association of Secondary School Principals. (2004). *Breaking Ranks II: Strategies for Leading High School Reform.* **Reston, VA: National Association of Secondary School Principals.**

This report outlines three sets of recommendations and tools for high school principals who wish to increase student achievement. The first set of recommendations focuses on the development of a professional learning community, wherein leadership throughout the institution refocuses its work on supporting students. The second set focuses on how to provide every student with meaningful adult relationships. Finally, the third set speaks to the development of personalized learning, where students see their learning as meaningful and relevant, as well as rigorous and challenging. This report also includes seven cornerstone strategies for improving student success: 1) Core Knowledge (establish the essential lessons that a student is required to learn in order to graduate, and adjust the curriculum and teaching strategies to realize that goal); 2) Connections with Students (increase the quantity and improve the quality of interactions between students, teachers, and other school personnel by reducing the number of students for which any adult or group of adults is responsible; 3) Personalized Planning (implement a comprehensive advisory program that ensures each student has frequent and meaningful opportunities to plan and assess his or her academic and social progress); 4) Adapting to Differences (ensure teachers use a variety of instructional strategies and assessments to accommodate individual learning styles); 5) Flexible Use of Time (implement schedules flexible enough to accommodate teaching strategies consistent with the ways students learn most effectively); 6) Distributed Leadership (institute structural leadership changes that allow for meaningful involvement in decision-making by students, teachers, family members, and the community and support effective communication with these groups); and 7) Continuous Professional Development (align comprehensive, ongoing professional development program and individual Personal Learning Plans of staff members with the content knowledge and instructional strategies required to prepare students for graduation).

National Center for Education Statistics. *Intervention: Achievement for Latinos through Academic Success.* **What Works Clearinghouse, (December 26, 2006 ed.). Retrieved on August 13, 2008 from http://ies. ed.gov/ncee/wwc/reports/dropout/alas/.**

This summary of the research literature on the Achievement for Latinos Through Academic Success (ALAS) program was taken from the What Works Clearinghouse (WWC). ALAS caters to middle school students and their parents. Each student is assigned a counselor who monitors attendance, behavior, and academic achievement. Counselors also serve as student advocates, provide feedback and coordination among students, families, and teachers. Students in the program are trained in problem-solving skills, and parents are trained in parent-child problem solving, how to participate in school activities, and how to contact teachers

and school administrators to address issues. Only one ALAS evaluation met the WWC quality standards. This study included 94 high-risk Latino students entering seventh grade in one urban junior high school in California. The study examined the impact of ALAS on high school persistence and academic progress in the ninth and eleventh grades. The program was found to have potentially positive effects on staying in school and potentially positive effects on progressing in school at the end of the intervention (ninth grade). Information about eleventh grade outcomes was not included in the WWC summary.

National Center for Education Statistics. *Intervention: Talent Search.* What Works Clearinghouse, (December 26, 2006 ed.). Retrieved on July 16, 2008 from http://ies.ed.gov/ncee/wwc/reports/dropout/ talent_search/research.asp.

This summary provides a review of the research literature on Talent Search, a federally funded program that promotes high school graduation and college attendance among disadvantaged students through more than 400 projects sponsored by institutions of higher education, public and private agencies or organizations, and some secondary schools. Two studies of Talent Search met What Works Clearinghouse evidence standards with reservations—one was conducted in Texas and the other in Florida. Together, the studies included about 5,000 Talent Search participants, as well as a comparison sample of more than 70,000 students created through propensity score matching. The Texas and Florida studies examined the program's effects on the likelihood that students received a high school diploma or General Educational Development (GED) certificate within five years of entering ninth grade. The Texas study indicated that Talent Search participants completed school at a significantly higher rate than comparison group students (86% compared with 77%). The Florida study indicated that Talent Search participants completed school at a significantly higher rate than comparison group students (84% compared with 70%).

National High School Alliance. (2005). *A Call To Action: Transforming High School Youth for All.* Washington, DC: Institute of Educational Leadership.

This national report provides a framework of six core principles for educators and policy-makers who wish to improve the quality of high schools. The following six principles are meant to be interactive: 1) personalized learning environments; 2) academic engagement of all students; 3) empowered educators; 4) accountable leaders; 5) engaged community and youth; and 6) integrated system of high standards, curriculum, instruction, assessments, and support. Each core principle has numerous action steps for implementation. Recommendations include strategies to structure school size and schedules so that all students and all teachers are engaged in small learning environments, differentiate instruction and provide supports that meet the varied learning needs of multiple student populations and build students' capacity to critique their own work and learning process.

National Postsecondary Education Cooperative. (2007). *Deciding on Postsecondary Education: Final Report.* Washington, DC: National Postsecondary Education Cooperative.

The purpose of this study was to provide key information regarding how high school students make decisions about postsecondary education. Researchers at Westat completed a literature review, conducted 11 focus groups with 90 participants in eight states and reviewed state college search and information websites. They found that parents, guidance counselors, mainstream media, college brochures, and institutions are primary sources of information about college for potential students. Parents play the strongest role in the college choice and decision-making processes for traditional-aged students, regardless of socioeconomic status

(SES) or ethnic and racial category. Researchers also found that the direct effect of financial constraints does not inhibit enrollment as much as the indirect effect of low SES status, (e.g., students' development, social network, educational experience, aspirations, and academic preparation). They conclude that marketing information to students and parents about college is extremely important, especially for low-income, first-generation students.

Sunderman, G. L. (2007). *Supplemental Educational Services under NCLB: Charting Implementation.* **Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles, University of California Los Angeles.**

This brief examines trends in the implementation of the NCLB Supplemental Educational Services (SES) program from 2002-03 to 2006-07. It is based on data collected in Arizona, California, Georgia, Illinois, New York, and Virginia and from 11 districts within those states that enrolled large numbers of minority and low-income students, including the nation's three largest public schools districts: Los Angeles Unified School District, the Chicago Public Schools, and the New York City Public Schools. Sunderman outlines core SES requirements, implementation trends and equity implications of NCLB sanctions. She concludes that the number of students eligible for SES has increased and that this increase is related to an increase in the number of schools identified for improvement and required to offer SES. However, the percentage of eligible students actually electing to receive services leveled off or decreased after 2003-04. Sunderman recommends that, until there is better evidence of the effectiveness of these programs, SES programs should no longer be required and that funds set aside for SES programs should be used to support state school improvement efforts and the implementation of a school's improvement plan.

The Education Trust. (2005). *Gaining Traction, Gaining Ground: How Some High Schools Accelerate Learning for Struggling Students.* **Washington, DC: The Education Trust.**

This report presents the differences between high-impact schools and average-impact schools that cater to low-income students in order to understand what sets high-impact schools apart and identify the necessary—but not sufficient—conditions for increasing academic achievement for low-income students. The authors surveyed administrators, teachers and students, reviewed school documents (schedules, student transcripts, assignments etc.) and conducted multi-day site visits, extensive classroom observations, and focus groups with students and teachers in both types of schools. Based on this data, they recorded numerous differences between high- and average-impact schools in the following 5 spheres: 1) culture; 2) academic core; 3) support services; 4) teachers; and 5) time and other resources. One of the overarching conclusions of this study is that high-impact schools focus on preparing students for life, including college and career readiness, while average-impact schools focus on preparing students for graduation. The authors note that high-impact schools do a better job of maintaining a consistent delivery of services, including rigorous classroom instruction and providing students with information about college and careers.

Postsecondary Academic and Social Support Services

Barefoot, B. O., & Fidler, P. P. (1996). *The 1994 National Survey of Freshman Seminar Programs: Continuing Innovations in the Collegiate Curriculum.* **Columbia, SC: University of South Carolina National Resource Center for the Freshman Year Experience and Students in Transition.**

The purpose of this study was to understand more about the design, implementation and impact of freshmen seminars on college campuses across the country. Researchers administered the 1994 National Survey on Freshman Seminars at 1,003 accredited two- and four-year institutions. Researchers also surveyed Provosts and Vice Presidents of Academic Affairs at 2,460 institutions. Based on these results, the authors identify five different kinds of freshmen seminars (note: these types are not mutually exclusive as hybrids are common): 1) extended orientation seminars (provide students information to help them get around and use college resources); 2) academic seminars with generally uniform academic content across sections (usually focus on "higher order" academic skills such as critical thinking); 3) academic seminars that focus on particular topics; 4) professional or discipline-based seminars; and 5) basic study skills seminars. The report includes case studies of these five types of seminars offered at Longwood College, Union College, Carleton College, Wharton School, and Santa Fe Community College. Notably, researchers also found that most freshman seminars had 25 or fewer students. Of the students who completed surveys, 49 % said that they were satisfied with their seminars, 46.3 % felt seminars increased persistence to sophomore year, 44.4 % reported satisfaction with their institution, 44.4 % reported increased use of campus services, 39.2 % reported improved academic skills or grades, 38.6 % increased number of friends through seminars, 37.8 % increased content knowledge, 29.8 % increased contact with faculty, 27.9 % increased campus involvement, and 24.7 % felt that seminars increased their persistence towards graduation.

Cushman, K. (2006). *First in the Family: Advice About College from First-Generation Students: Your College Years.* **Providence, RI: Next Generation Press.**

This book includes advice from 16 first-generation college students about how to navigate the transition to higher education and succeed in the first year. The ten chapters address the following topics: 1) college is a journey of discovery; 2) college can be a culture shock; 3) how to take charge of your academic choices; 4) the importance of making relationships that help you do well in college; 5) how to manage your time and resources; 6) why your critical college skills can only get better; 7) the ways in which college is a social and emotional experience; 8) how and why you develop a new identity while at college; 9) ways in which friends and family may also change while you are at college; and 10) how and why to help other students like you to follow in your footsteps to college. The book also includes a list of useful resources.

Engle, J., Bermeo, A., & O'Brien, C. (2006). *Straight from the Source: What Works for First Generation College Students.* **Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.**

Based on focus groups with 135 first-generation college students in Texas who had participated in federal TRIO programs, this report defines the following three steps as critical for first-generation students to successfully

transition from high school to college: 1) raising aspirations for college; 2) navigating the college admission process; and 3) easing the initial transition to college. Researchers advise that educators get the message about college out to all students as early as possible, better prepare students for college academically and provide more support to students once they are in college. The report includes numerous recommendations for how educators can support first-generation students in each step, including developing stronger links between pre-college programs and state college access campaigns, drastically reducing high student-counselor ratios, and directing students toward postsecondary institutions with good support services.

Engle, J., & O'Brien, C. (2007). *Demography Is Not Destiny: Increasing the Graduation Rates of Low-Income College Students at Large Public Universities.* **Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education.**

The study examines the necessary conditions for improving graduation rates at large public institutions that cater to significant populations of low-income students. Data were collected from 14 public four-year institutions with large numbers of Pell Grant recipients. Ten of these schools demonstrated higher-than-expected graduation rates given their incoming student population and institutional characteristics, while the other four demonstrated lower-than-expected graduation rates. Researchers controlled for student characteristics using regression analysis to isolate the effects of institutional policies and practices. They found that institutions with higher-than-expected graduation rates distinguished themselves in the following ways: 1) designated faculty or staff members as "first responders" to students' needs, helping students navigate these complex institutions; 2) experienced high levels of student involvement and engagement in campus activities and programs, which personalize the college experience for students; 3) offered well-developed first-year programs (such as freshman orientation programs, freshman success courses, freshman interest groups, and first-year learning communities) and made student participation mandatory or encouraged; 4) initiated instructional improvement efforts in "gatekeeping" introductory courses, particularly in mathematics, such as reducing class sizes or keeping class sizes "small" through supplemental instruction; 5) implemented early warning and advising systems to monitor student progress and intervene when necessary; 6) provided ample academic and social support services and made proactive efforts to coordinate services with advising systems, to advertise services widely, and to train faculty and staff about available services; 7) offered special programs for at-risk student populations that incorporate many of the "best practices" in the retention literature; 8) benefited from administrators who create an institutional culture that promotes student success, providing adequate resources to fund programs, and offering rewards to faculty and staff for getting involved in retention effort; 9) identified a central person, office, or committee that coordinates undergraduate education and/or retention activities across academic and student affairs; and 10) emphasized using retention data in decision-making processes.

Engstrom, C. M., & Tinto, V. (2008). Learning Better Together: The Impact of Learning Communities on the Persistence of Low-Income Students. *Opportunity Matters, 1,* **5-21.**

This mixed-methods study examines how learning communities impact low-income student persistence in college. Researchers analyzed the results of 3,907 surveys (the surveys were modified versions of the Community College Survey of Student Engagement) collected from students in 13 institutions with academic learning communities that serve under-prepared students. Case studies were conducted at three of these institutions, where researchers performed observations and 49 interviews with students. Quantitative analyses of the data found that students in the learning communities were significantly more engaged than students in the comparison groups along all measures of engagement (classroom, classmates, and faculty), were significantly more positive in their perceptions of the encouragement they experienced on campus, and

were significantly more positive in their estimation of their intellectual gains. Students in learning communities were also significantly more likely to persist, even after being in a learning community was taken into account. The authors conclude that these findings suggest that there is something specific about being in a learning community that promotes the persistence of academically under-prepared community college students. Based on analyses of the qualitative data, researchers found that learning community faculty employed four key strategies to create a true "community of learners": 1) using active and collaborative pedagogies that engaged students with their peers; 2) collaborating with other faculty to develop an integrated, coherent curriculum; 3) integrating campus services and programs into the learning community experience; and 4) developing personal connections and relationships with students in which they encouraged students to meet high expectations while offering high levels of support.

Karp, M. M., O'Gara, L., & Hughes, K. L. (2008). *Do Support Services at Community Colleges Encourage Success or Reproduce Disadvantage? An Exploratory Study of Students in Two Community Colleges.* **New York, NY: Community College Research Center Teachers College, Columbia University.**

Using interview data from students at two colleges in the northeast, this study examines the ways that student support services in community colleges inadvertently perpetuate and legitimate disadvantage. The authors find that although support services are open to all students, only those who come to college with pre-existing social and cultural resources take advantage of them. They also found a disconnect between the belief by college staff that campus support services were well-publicized and student interviews that indicated that students with relatively low levels of social and cultural capital had trouble accessing even the most basic services. Finally, they found that because support services are presented as open-access, students who do not use these services and fail to progress toward a degree interpret their failure as personal, rather than structural. It should be noted that this study was exploratory and included a small sample at only two institutions.

Klein, S., Benjamin, R., Shavelson, R., & Bolus, R. (2007). The Collegiate Learning Assessment: Facts and Fantasies. *Evaluation Review, 31,* **415-440.**

This report provides a discussion of several issues surrounding the Collegiate Learning Assessment (CLA), an innovative new assessment tool for postsecondary institutions. This paper includes the following components: 1) what the CLA does and does not measure; 2) how dependably it measures what it claims to measure; and 3) how it can be distinguished from other direct and indirect measures of student learning. Though this paper would benefit from a methodology section, the researchers evaluate the CLA in depth, draw on literature to frame their discussion and conclusions and use data from the Integrated Postsecondary Education Data System (IPEDS) to supplement their analysis. They note that what is groundbreaking about the CLA is that it is designed to assess holistically "real-world" tasks that educators, students, and the public consider important outcomes of college education. To complete these tasks, students must demonstrate critical thinking, analytic reasoning, problem solving, and communication skills. The CLA relies entirely on open-ended measures and does not break up complex tasks to report separate ability scores. Researchers discuss potential problems with the CLA, including the limitations of a value-added model, using SAT scores to approximate ability, sample bias, and complications with computers scoring the writing section of the assessment. Despite these issues, the authors contend that the CLA is a reliable assessment for measuring learning outcomes of postsecondary institutions.

Postsecondary Academic and Social Support Services

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *What Matters to Student Success: A Review of the Literature.* **Washington, DC: National Postsecondary Education Cooperative.**

This report summarizes major theoretical findings from sociological, organizational, psychological, cultural and economic research literature regarding the factors that contribute to student success in postsecondary education. Researchers synthesize their major findings into four key areas: 1) student background and precollege experiences; 2) students' postsecondary activities emphasizing engagement in educationally purposeful activities; 3) postsecondary institutional conditions that foster student success; and 4) desired outcomes of college and postsecondary indicators of success. The authors find that: 1) the trajectory for academic success in college is established long before students matriculate; 2) family and community support are indispensable to a student's rising educational aspirations, preparing for college and persisting in college; 3) the right amount and kind of money matter to student success (too little can make it impossible for students to pay college bills; too much loan debt can discourage students from persisting); 4) most students, especially those who have been identified as "at-risk" benefit from early interventions and sustained attention at educational transition points; 5) students who find something or someone worthwhile to connect with in the postsecondary environment are more likely to engage in educationally purposeful activities during college and achieve their educational objectives; 6) institutions that focus on student success and create a student-centered culture are better positioned to help their students attain their educational objectives; and 7) because we value what we measure, assessment and accountability efforts should focus on what matters to student success.

Lumina Foundation for Education. (2007). *Lumina Foundation Lessons: Places – And Faces – That Foster Student Success.* **Indianapolis, IN: Lumina Foundation for Education.**

This publication provides a snapshot of 15 institutions in Indiana and their efforts to create or enhance programs to improve student success in the first and second years of college. It highlights several postsecondary support strategies, including the merits of summer transition and fall orientation programs, ways to overcome the challenges of attracting busy low-income students (many of whom work 20-30 hours per week) to utilize services, the importance of reaching out to and partnering with high schools, the benefits of collaborative instruction, and professional development for faculty. An essay by John Gardner, Executive Director of the Policy Center on the First Year of College, is also included. Gardner offers ten points for practitioners to consider.

Myers, R. D. (2003). *College Success Programs.* **Boston, MA: Pathways to College Network, TERI.**

This report presents college retention programs that have demonstrated their effectiveness in retaining and graduating traditionally underrepresented college students through ongoing, longitudinal, qualitative, and quantitative evaluations. Programs included in this paper have demonstrated measurable academic achievement that was equal to, or better than, the campus-wide student population. Meyers used data from the Educational Resources Information Center (ERIC), the Library of Congress, the Department of Education Library; the databases First Search, OCLC and Article First, and resources from the Pell Institute. She also researched the web sites of the institutions whose retention programs were highlighted in articles. Based on this research, Meyers identified numerous components of comprehensive retention programs and discusses the following postsecondary support structures: 1) learning communities; 2) linked courses (courses that complement one another in different disciplines, like interdisciplinary writing); 3) freshman interest groups (three freshman courses linked around a theme, usually academic major, and include peer-advising and

seminars);
4) coordinated studies (type of learning community based on full-time interdisciplinary learning and curriculum); 5) learning clusters (a cohort of students takes the exact same schedule); 6) federated learning communities (students take three theme-based courses in addition to a three-credit seminar taught by a "Master Learner," who is a professor from a different discipline); 7) orientation programs (common characteristics of successful programs include total campus commitment, orientation activities prior to beginning classes, pre-matriculation and early registration programs, pre-fall programs, combined designs, freshman orientation activities, orientation courses, academic enhancement services and programs, learning communities, mentoring, program evaluation and improvement methods); 8) freshman seminar programs; 9) summer bridge programs; 10) mentoring programs; and 11) culturally conscious programs. This report includes many examples of college retention programs and details on the support services that they offer.

Perna, L. W., & Thomas, S. L. (2006). *A Framework for Reducing the College Success Gap and Promoting Success for All.* **Washington, DC: National Postsecondary Education Cooperative.**

In this paper, Perna and Thomas develop a conceptual model of student success to guide policy-makers, practitioners and researchers. The researchers reviewed literature in economics, education, psychology and sociology from 1995-2005 that examined 10 indicators of student success (educational aspirations, academic preparation, college access, college choice, academic performance, transfer, persistence, post-bachelor degree enrollment, income, and educational attainment) that represent four key transitions in a longitudinal student success process (college readiness, college enrollment, college achievement, and post-college attainment). This conceptual model is unique in that it recognizes the following six points: 1) student success is a longitudinal process; 2) multiple theoretical approaches inform an understanding of student success; 3) student success is shaped by multiple levels of context; 4) the relative contribution of different disciplinary and area perspectives to understanding student success varies; 5) multiple methodological approaches contribute to knowledge of student success; and 6) student success processes vary across groups.

Purcell, F. B. (2006). Urban Scholars: A Best Practice in College Readiness. *Connection: The Journal of the New England Board of Higher Education, XXI(1), 20-21.*

The purpose of this article is to make a case for the necessity of policies and programs that make transferring from two- to four-year colleges (a process Purcell calls "two-four year transfer") more accessible. The author notes that the number of New England community college students is rising and will likely continue to rise. She asserts that a regional online transfer system could alleviate the confusion and stress that students and their advisors routinely face when trying to determine how course credits would be applied to transfer institutions. She also highlights promising practices, such as Vermont's policy of allowing all grades earned at a public institution to be displayed on a single transcript.

The College Board. (2007). *The College Keys Compact: Getting Ready, Getting In and Getting Through College by Expanding Options for Low-income Students.* **New York, NY: The College Board.**

This compact outlines steps that College Board is willing to take with K-12 and postsecondary partners, including eliminating fees for low-income students and investing in Public Service Announcements (PSA) on the importance of college. The report includes numerous examples of programs and institutions that offer students academic and social support services. The College Board also offers multiple suggestions for K-12 and postsecondary partners including: 1) expand the rigor of high school courses and establish

a college-preparatory curriculum as the default program for all; 2) mount college awareness programs and pay attention to parents; 3) provide professional development for teachers, counselors, and administrators around admissions and financial aid practices; 4) enter into partnerships with higher education institutions to support recruiting fairs, campus visits, and fee waivers; 5) monitor progress and share data; 6) colleges should integrate academic support with teaching and learning by expanding tutoring, supplemental instruction, study skills introduction, and the development of learning communities; and 7) colleges should reward faculty who engage with low-income students as mentors and advisers and to expand the number of statewide agreements that permit two-year graduates of approved transfer programs to earn a bachelor's degree without unnecessary duplication of coursework. These recommendations have not been evaluated to determine their effectiveness.

Tinto, V., & Pusser, B. (2006). *Moving From Theory to Action: Building a Model of Institutional Action for Student Success.* **Washington, DC: National Postsecondary Education Cooperative.**

Drawing from a review of past academic research on student persistence and success, Tinto and Pusser conclude that institutional leaders and policy-makers should consider linked strategies when crafting policy to effectively enhance postsecondary student access, persistence and success. They offer the following recommendations for change-makers: 1) create linked P-16 systems to align primary and secondary school standards with postsecondary requirements; 2) create databases that can follow students throughout all educational levels; 3) support teacher development in primary and secondary schools; 4) provide educational development for under-prepared students; 5) create outreach programs directed at traditionally underrepresented students; 6) improve course articulation between two- and four-year institutions; 7) conduct early and continuous evaluation and assessment of student preparation for postsecondary access and success; 8) place a high priority on achieving goals that delineate which students the policies intend to serve, how the students will be better served by the proposed policies, and how the policies will affect institutions, other students and stakeholders; 9) design policies that address the myriad of contextual factors (defined here as demographics, culture, available resources and existing policies) that affect a student's probability of success; 10) design policies that are consonant with the prevalent political context and normative understandings of an inclusive set of stakeholders and can be implemented with the infrastructure and resources at hand; and 11) generate the support of broad coalitions of postsecondary stakeholders across multiple sectors of the educational system including students, families and communities.

Academic and Social Support for Key Transitions in the Education Pipeline

Roderick, M., Nagaoka, J., Vanessa, C., Moeller, E. with Roddie, K., Gilliam, J., and Patton, D. (2008). *From High School to the Future: Potholes on the Road to College.* **Chicago, IL: Consortium on Chicago School Research, University of Chicago.**

This mixed-method report identifies the barriers to enrolling in postsecondary education for high school students in the Chicago Public Schools (CPS). Data include surveys completed by CPS seniors about their college plans and activities, as well as records from CPS's postsecondary tracking system, which monitors successive cohorts of CPS graduates as they progress to college. Researchers also present several qualitative case studies, each of which highlights a student who struggled at a different point in the postsecondary planning process. These case studies draw on a longitudinal, qualitative study of 105 CPS students in three high schools. The following findings are presented based on the quantitative and qualitative data: 1) CPS students who aspire to complete a four-year degree do not effectively participate in the college application process (note: Latino students had the most difficulty managing college enrollment); 2) attending a high school with a strong college-going culture shapes students' participation in the college application process; 3) filling out a FAFSA and applying to multiple colleges shape students' likelihood of being accepted to and enrolling in a four-year college; 4) approximately one-third of CPS students who aspire to complete a four-year degree enroll in a college that matches their qualifications; and 5) among the most highly qualified students, discussions about how postsecondary planning and strong connections to teachers are particularly important in shaping the likelihood of enrolling in a match school.

Kezar, A. *Summer Bridge Programs: Supporting All Students.* **ERIC Digest. Retrieved August 3, 2008 from http://www.ericdigests.org/2001-1/summer.html.**

This report draws from program evaluations and academic literature on summer bridge programs primarily targeted towards first-generation college students. The author finds that, in general, model programs are individualized, have strong faculty support and involvement, are tied to the institutional mission, have partnerships with area K-12 schools, are supported by senior administration, use small group collaborative learning, build community, and conduct student assessment /evaluation. Kezar also identifies several academic and social support strategies that are employed by successful bridge programs, including providing tutoring in subjects like reading and math and emphasizing study skills such as time management, individual learning style, study strategies, and expectations for college work. The report includes a discussion of different types of bridge programs.

McDonough, P. M. (2004). *The School-to-College Transition: Challenges and Prospects.* **Washington, DC: American Council on Education.**

Drawing from a comprehensive review of the academic literature on the barriers that limit access to higher education for students, McDonough finds that the following priorities offer the most promise for shrinking the

college access gap: 1) lower financial barriers to college affordability; 2) ensure better academic preparation for college; 3) encourage counselors to advise students for college and focus schools on their college preparatory mission; 4) increase the quality and quantity of college entrance and financial aid information; 5) engage families as college preparation partners and 6) create more equitable admission policies. The report suggests that postsecondary leaders take the following steps to narrow the college access gap now: 1) align placement exams or other college readiness indicators with K–12 standards or exit tests; 2) contribute to teacher professional development to improve the rigor of high school classes; 3) improve school counseling for college; 4) clarify the student aid system; 5) make early commitments to middle and high school students who commit to the college track; and 6) develop intervention programs, either individually or in collaboration with other colleges, schools districts, or other statewide partners. McDonough also stresses that outreach programs are not a systemic solution and that their programmatic offerings should be integrated into the school environment.

Tafel, J., & Eberhart, N. (1999). *Statewide School-College (K-16) Partnerships to Improve Student Performance.* **Denver, CO: State Higher Education Executive Officers.**

This report presents findings from a fifty-state survey of state higher education coordinating and governing boards. The survey asked policy-makers about their existing efforts to prepare K-12 students for college, support student preparation through college admissions policies and practices, and ensure successful postsecondary education experiences for those students who are underprepared upon entry to colleges and universities. Researchers also conducted site visits in Colorado, Georgia, Maryland, Ohio, Washington, and Wisconsin to investigate two issues: 1) the alignment of K-12 reform efforts and college admissions; and 2) efforts to reduce postsecondary remediation and strengthen the preparation of students for successful collegiate experiences. The review asserts that these statewide approaches will initiate coordinated programs and structures to reduce postsecondary remediation. The authors further find that more than two-thirds of states have some type of pre-college outreach program designed to prepare students for college level work. This report also presents the following recommendations for state policy-makers who wish to implement P-16 programs: 1) establish goals and build consensus; 2) create a statewide organizational framework; 3) find incentives to sustain partnerships; 4) develop comprehensive data systems to identify gaps and inform new policy; 5) establish a communication system to disseminate information and encourage public engagement; and 6) identify substantive issues that require immediate attention.

Pathways to College Network. (2007). *Social Support: An Essential Ingredient to Success.* **Boston, MA: Pathways to College Network College Readiness Issue Brief. Retrieved August 1, 2008 from** http://www. pathwaystocollege.net/pdf/support.pdf.

This brief calls attention to the important role social support plays in the academic success of underserved students. Various strategies for providing social support in schools are discussed including how to promote a more personalized learning environment though mentorship and advisories and using disaggregated data to identify at-risk students early and make appropriate interventions. The brief also discusses the role of peers in academic achievement (presents evidence that students with a majority of friends who plan to attend college are significantly more likely to enroll). Action steps for policy-makers, middle and high school principals, and teachers and counselors are included.

Schneider, B. (2008). *College Choice and Adolescent Development Psychological and Social Implications of Early Admission.* **Alexandria, VA: National Association for College Admission Counseling.**

This paper explores the psychological and social implications of the recent push for students to begin investigating their college options and narrow their college search in their junior year of high school. Drawing from a review of the literature on youth development and psychology, the author examines how adolescent development corresponds with and impacts the college decision-making process during high school. She also investigates the societal implications of the unequal distribution of support services and resources, which may impact students' college choices and shape the applicant pools for different types of colleges. Schneider outlines the different aspects of adolescent development including: cognitive, physical, emotional, ambitions, and social relationships. She then argues that early decision programs (college admissions programs under which students apply to a single college at the beginning of their senior year and commit to matriculate, if accepted) may be incompatible with what we know about adolescent development from the academic literature. She also discusses the challenges that these programs present to counselors and the costs of these programs to students. Schneider concludes that too much emphasis on college admissions in the midst of adolescent identity-formation may inhibit creativity and discovery at a crucial stage in adolescent development and wellbeing.

Shkolnik, J. (2008). *Positive Research Study on Early College High Schools.* **Retrieved July 19, 2008 from http://thecollegepuzzle.blogspot.com/2008/07/positive-research-study-on-early.html.**

This is a brief summary of a study on Early College Schools (ECS), which use a variety of models for providing college courses to high school students, including: 1) high school teachers with adjunct status teach the courses at the high school; 2) college faculty teach high school students at the high school; 3) college faculty teach a group of high school students on a college campus; and 4) high school students, either individually or in small groups, attend traditional college courses. A survey administered to the population of ECSs and a student survey administered at a sample of 20 ECSs (both administered during the 2006-07 school year) found that the majority of ECSs (92%) offer college courses, and that most ECS students (65%) had taken a college class. In addition, students were increasingly likely to take college courses as they progressed through high school; 47% of ninth graders reported having taken a course, steadily increasing to 84% of seniors.

Providing Academic and Social Support Out of School

Durlak, J. A., & Weissberg, R. P. (2007). *The Impact of After School Programs That Promote Personal and Social Skills.* **Chicago, IL: Collaborative for Academic, Social and Emotional Learning.**

Focusing on students ages 5–18, Durlak and Weissberg examined the impact of after school programs on the personal and social skills of participants. They reviewed 73 evaluations of after school programs and only considered reports that included control groups and/or controlled for the possible influence of several methodological features. Based on the data, the researchers conclude that when it comes to enhancing personal and social skills, effective programs are SAFE, or sequenced, active, focused and explicit. Two of these criteria are related to process—the presence of a sequenced set of activities to achieve skill objectives (sequenced) and the use of active forms of learning (active). The other two criteria are related to content—the presence of at least one program component focused on developing personal and social skills (focus) and the targeting of specific personal or social skills (explicit). Durlak and Weissberg also found that participants in afterschool programs that use evidence-based skill training approaches improve significantly in three major areas: 1) feelings and attitudes; 2) indicators of behavioral adjustment; and 3) school performance.

Farbman, D., & Kaplan, C. (2006). *Time for a Change: The Promise of Extended-Time Schools for Promoting Student Achievement.* **Boston: Massachusetts 2020.**

This report details the work of a handful of "extended-time schools" in Massachusetts, which the researchers describe as schools where the conventional schedule is replaced by one that is responsive to the needs of students and teachers. Data for this study was collected from eight schools that met the following criteria: 1) more than 50 percent of the student body qualified for free or reduced lunch; 2) the school is located in a city with a population greater than 50,000; and 3) the school incorporated unique approaches to using additional time; and 4) the school showed positive learning outcomes. The research team conducted a one- or two-day site visit, class observations, interviews, and focus groups with administrators, teachers, students, and parents. According to the report, research suggests that extended time schools offer five distinct benefits: 1) with longer days and longer class periods, classroom learning is less rushed; 2) with more time, teachers can delve more deeply into subject matter because they are no longer pressed to squeeze as much content as possible into a single lesson; 3) a longer day enables schools to build in time reserved for teachers to engage in common planning and on-site professional development, which has the greatest impact on teachers' competence and, in turn, on students' proficiency; 4) in a high-stakes environment, schools often decide they must devote the bulk of their limited time to teaching English language arts and mathematics, however, more time usually means that schools can also focus on including other subjects in the school day; and 5) more time allows for greater interaction between teacher and student. The researchers also stress that it is not extended time alone that drives success. Extended time is a resource for educators to make their work more effective.

Grossman, J. B., Price, M. L., Fellerath, V., Jucovy, L. Z., Kotloff, L. J., Raley, R., et al. (2002). *Multiple Choices After School: Findings from the Extended-Service Schools Initiative.* **Philadelphia, PA: Public/ Private Ventures.**

Researchers used a mixed-methods approach to estimate the impact of 10 cities that benefited from the Wallace-Reader's Digest Fund's Extended-Service Schools (ESS) Initiative, which supported the creation of 60 afterschool programs in 20 communities around the country. Data for this study included interviews with staff, partners, students, parents and key city officials, as well as computerized attendance records, questionnaires to fourth and eighth grade students, telephone surveys and multiple site observations. Among other findings, the researchers observed that demand for the program was substantial, that students participated for 20 days in a typical semester and that higher-needs and older students were more difficult to attract to afterschool programs. The report highlights the following policy implications: 1) locating the programs in schools serving low-income families was an effective means of targeting low-income children, however, special efforts are required if programs are going to be able to attract older youth and the most high-needs students in those schools; 2) choices about program requirements and content influence which children and youth enroll in the afterschool activities and how often they attend; 3) to provide a range of developmental supports and opportunities to children and youth, afterschool programs should offer a variety of activities staffed by skilled leaders; 4) cost depends as much on program choices, opportunities and local conditions as on the number of children served; 5) as afterschool programs multiply, the challenge of raising both cash and non-cash funding is likely to increase due to competition for limited resources; and 6) policymakers need to shift their thinking to expanding the set of options available in a community.

Harvard Family Research Project. (2007). *Research Update: Highlights from the Out-of-School Time Database.* **Cambridge, MA: Harvard Graduate School of Education.**

This research brief draws from 13 different program evaluations to provide a review of the variety of services offered by after school programs. A summary shows that these programs promote summer learning, partner with schools (one evaluation found that learning suffered without this kind of partnership), provide opportunities for relationships with mentors, and encourage independent reading. The brief emphasizes "evidence-based training approaches." It also says that programs should provide services that are sensitive to the needs and anxieties of working parents in order to ensure sustained participation of youth.

Harvard Family Reseach Project. (2008). *What is Complementary Learning?* **Cambridge, MA: Harvard Graduate School of Education.**

The topic of this brief is complementary learning, a systemic approach to intentionally integrate both school and nonschool supports that can better ensure that all children have the skills they need to succeed. According to the Harvard Family Research Project, a complementary learning approach provides and aligns the following beneficial opportunities: 1) out-of-school time activities (including sports, arts, and mentoring programs); 2) community-based and cultural institutions; 3) colleges and university programming; 4) effective school practices; 5) supportive families and opportunities for family engagement; 6) early childhood programs; and 7) health and social services. This brief asserts that complementary learning also aligns resources to maximize efficiency, creates a web of opportunity, provides disadvantaged children enriching opportunities that may be the norm for middle class children, and promotes success from birth through adolescence so that all children are ready to enter school and ready to exit. The evidence for these assertions is not included in the brief.

Providing Academic and Social Support Out of School

Little, P. M. D., Wimer, C., & Weiss, H. B. (2008). *After School Programs in the 21st Century: Their Potential and What It Takes to Achieve It.* **Cambridge, MA: Harvard Family Research Project.**

Drawing on seminal research and evaluation studies of after school programs, this paper examines: 1) whether participation in after school programs makes a difference; and if so, 2) what conditions appear to be necessary to achieve positive results? The authors note that the existing research on the quality of after school programs is primarily descriptive and evidence on this issue is largely dependent on correlational studies or expert opinion. However, based on the limited research that is available, they identify three primary and interrelated factors that are critical for creating positive settings that can achieve positive youth outcomes: 1) access to and sustained participation in the program; 2) quality programming and staffing; and 3) strong partnerships among the program staff and the other places where students are learning, such as their schools, their families, and other community institutions. The authors conclude that quality after school programs foster inquiry, critical thinking, and engagement in learning. Because of this, after school programs are uniquely poised to support in-school learning and development without replicating the school day.
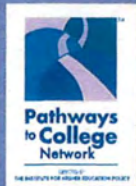
The Pathways to College Network is an alliance of over 30 national organizations that advances college opportunity for underserved students by raising public awareness, developing new research that is both innovative and actionable, and promoting evidence based policies and practices across the K-12 and higher education sectors. Pathways' work focuses on the education pipeline from middle school through college graduation in four key areas: Academic Readiness for College, College Access and Information, Financial Aid and Affordability, and College Success. Our website provides a comprehensive collection of college access and success studies and other resources to inform policy, practice and research. Pathways is directed by the Institute for Higher Education Policy, a nonprofit organization in Washington, DC. Visit our website for more information: www.pathwaystocollege.net.

The Institute for Higher Education Policy (IHEP) is an independent, nonprofit organization that is dedicated to increasing access and success in postsecondary education around the world. Established in 1993, the Washington, D.C.-based organization uses unique research and innovative programs to inform key decision makers who shape public policy and support economic and social development. IHEP's web site, www.ihep.org, features an expansive collection of higher education information available free of charge and provides access to some of the most respected professionals in the fields of public policy and research.

Pathways to College Network
Institute for Higher Education Policy
1320 19th St NW, Suite 400
Washington, DC 20036

(202) 861-8223
(202) 861-9307 fax

pathwaystocollege.net
www.ihep.org

Annotated Bibliography of Transfer Student Literature

July 2010

Purpose of Review

Lumina Foundation for Education launched the Minority-Serving Institutions (MSI) – Models of Success program to promote college completion among underserved and underrepresented populations. The MSI-Models of Success program provides support to MSIs and other organizations to dramatically increase college completion, especially among first-generation, low-income, and traditionally underrepresented minority students. There are five major objectives associated with this initiative:

1. To improve the capacity of MSIs to collect, analyze, and use data to inform decisions that will promote student success.
2. To create a collective voice for policy advocacy on behalf of MSIs.
3. To strengthen policy and practice to improve developmental education.
4. To increase MSIs' commitment to transparency and effectiveness in improving student learning outcomes.
5. To increase the postsecondary completion of traditionally underserved students, especially men of color.

The University of Texas at El Paso (UTEP) is leading a collaborative project to identify the institutional structures at minority-serving institutions that foster student success and increase the effectiveness of transfer programs across the state. As one component of this project, UTEP will model transfer-student success at a four-year institution in collaboration with El Paso Community College (EPCC). To develop an appropriate framework for this model of transfer-student success, it is important first to develop an understanding of the relevant literature in the field. While not a comprehensive review of all literature in this area, this annotated bibliography provides a summary of theoretical and empirical work related to transfer-student success.

Organization of Review

Each article summary includes the *Citation* according to the American Psychological Association (APA) 6th Edition publication manual. The primary *Research Questions* for the study are listed. One purpose of our review is to note the different types of qualitative and quantitative models that have been used to study transfer student success, therefore the *Research Design* used by the study is noted. The major *Findings* are reported along with *Implications for Policy and Practice* identified by the original researchers.

Citation (note: only information pertinent to transfer students is included)

Adelman, C. (2004). *Principal indicators of student academic histories in postsecondary education, 1972-2000.* Washington, DC: U.S. Department of Education, Institute of Education Sciences.

Research Questions

What aspects of sustained community college experience yield a bachelor's degree when the student moves to a four-year environment?

What is it about early transfer from a community college to a four-year school that diminishes a student's chances of earning a bachelor's degree?

Research Design

The report assessed data from three longitudinal studies from the National Center for Education Statistics to provide a descriptive account of student outcomes: The National Longitudinal Study of the High School Class of 1972 (NLS: 72), The High School and Beyond Longitudinal Study of 1980 Sophomores (HS&B/So: 80-92), and The National Education Longitudinal Study of 1988 (NELS: 88/2000).

Findings

Students who initially enrolled at two-year institutions and earned more than 10 credits at that institution had transfer rates around 30% for each of the three cohorts (36%, 27%, and 28% for the 1992, 1982, and 1972 cohorts respectively). Baccalaureate degree attainment for the transfer populations was 72% for the 11- and 12-year histories of the classes of 1972 and 1982 and 62% for the 8.5-year history of the class of 1992.

Implications for Policy and Practice

The author concluded that, for students who spent sufficient time at the two-year institution prior to transfer, following a path from the two-year institution to the four-year institution can effectively lead to a baccalaureate degree.

Citation

Adelman, C. (2005). *Moving into town—and moving on: The community college in the lives of traditional-age students.* Washington, DC: U.S. Department of Education.

Research Question

What are the portraits as traditional-age community college students?

Research Design

Portraits of traditional-age community college students are created using data from the National Center for Education Statistics. After creating the portraits, logistic regression was used to analyze "markers of attainment" including transfer and earning a terminal associate degree.

Findings

The portraits revealed six distinct traditional-age populations served by community colleges: (1) persistent group oriented toward transfer and baccalaureate degree attainment, (2) a persistent group oriented toward attaining intermediate occupational credentials, (3) a group with weaker academic preparation that struggle and stop-out, (4) a group that withdraws shortly after entry to the community college, (5) a group taking additional coursework at the community college but that are primarily based at a four-year institution, and (6) a group of reverse transfers.

The logistic regression model examining transfer indicated that transfer to a four-year institution is facilitated by: credits in college-level math in the first year, credits during summer terms (proxy for intense persistence), continuous enrollment, and avoidance of no-penalty course withdrawals and repeats. Demographic factors were not significant predictors of transfer.

The logistic model examining attainment of the associate degree found that continuous enrollment, college-level math, and avoidance of no penalty withdrawals and repeats were again significant factors. Holding a campus job during the first two years and earning a higher ratio of occupational credits were also significant predictors.

Implications for Policy and Practice

The author indicated that the creating portraits of traditional-age students at the community college can help researchers develop important empirical questions to explore about this growing group of students served by two-year institutions.

Citation

Alfonso, M. (2006). The impact of community college attendance on baccalaureate attainment. *Research in Higher Education, 47(8)*, 873-903. doi: 10.1007/s11162-006-9019-2

Research Question

What is the impact of community college attendance on baccalaureate attainment, as compared to four-year college attendance?

Research Design

The study used a structural equation modeling approach to estimate the effect of two-year college attendance on baccalaureate attainment. The data for this study were obtained from three major sources: the national Education Longitudinal Study (NELS), the U. S. Department of Education's Office of Institutional Research and Improvement, and the U.S. Department of Labor's Bureau of Labor Statistics.

Findings

Findings suggested that students who initially enroll in two-year colleges are less likely than their four-year counterparts to complete the baccalaureate degree. This attainment gap persisted even after controlling for non-traditional enrollment pathways, educational expectations, and self-selection.

Implications for Policy and Practice

Two-year and four-year institutions need to work together to develop institutional and articulation practices to reduce the attainment gap and improve the baccalaureate attainment rates for the increasing number of students who enter high education through the two-year institution and plan to attain a baccalaureate degree.

Citation

Alfonso, M., Bailey, T. R., & Scott, M. (2005). The educational outcomes of sub-baccalaureate students: Evidence from the 1990s. *Economics of Education Review, 24,* 197-212. doi:10.1016/j.econedurev.2004.02.003

Research Question

What are the educational outcomes of students in certificate and associate programs, such as occupational sub-baccalaureate students?

Research Design

This study used logistic regression as the empirical approach due to the dichotomous dependent variable, completion of a degree objective. Data for this study were obtained from two, Beginning Postsecondary Student Longitudinal Studies (BPS89 and BPS96).

Findings

Findings suggested that occupational students are less likely to complete their associate's degree when compared to academic students. Although this gap was partially explained by differences in student characteristics and degree expectations, the attainment gap persisted even after controlling for these factors.

Implications for Policy and Practice

The authors concluded that community colleges need to determine and implement the optimal approach for providing direct occupational preparation with an orientation toward academic education within the institutional structure.

Citation

Anderson, G. M., Sun, J. C., & Alfonso, M. (2006). Effectiveness of statewide articulation agreements on the probability of transfer: A preliminary policy analysis. *The Review of Higher Education, 29(3)*, 261-291. doi: 10.1353/rhe.2006.0001

Research Question

Does the existence of statewide articulation agreements increase the probability of vertical transfers from two-year to four-year colleges?

Research Design

A logistic regression analysis was used. The dependent variable was the dichotomous indicator signifying whether a student did or did not transfer within the period covered by the survey. Data were obtained from the Beginning Postsecondary Student Longitudinal Study of 1989-1994 (BPS89), conducted by the National Center of Education Statistics (NCES).

Findings

Results indicated that students in states with state-mandated articulation agreements did not experience an increased probability of transferring, even after controlling for demographic, educational, SES, and enrollment characteristics. Results were surprising given that policymakers argue that statewide articulation agreements should ease the transfer process.

Implications for Policy and Practice

The authors suggested that students who plan to earn a baccalaureate degree would benefit most from following the traditional path toward graduation. The authors noted that, because financial aid was an important predictor of transfer, including financial aid packages in articulation agreements may increase transfer rates. Finally, the authors noted that the data used in their study were collected when articulation agreements were still relatively new; future analyses may find that articulation rates enhance transfer, given sufficient time.

Citation

Bailey, T., Jenkins, D., & Leinbach, T. (2005). Graduation rates, student goals, and measuring community college effectiveness. *Community College Research Center Brief* (Number 28). Retrieved from http://ccrc.tc.columbia.edu/Research.asp

Research Questions

How accurate are the Student Right-to-Know graduation and transfer rate estimates?

Are there any concerns with these assessments of student success?

Research Design

The study compared the Student Right-to-Know (SRK) graduation and transfer rates for community college students to other national datasets from the U.S. Department of Education.

Findings

While SRK graduation rates could be replicated, the authors found that the SRK rates most likely under report student success. The authors found that the SRK transfer rate estimates were too inaccurate to provide any meaningful information. The authors also found that student background characteristics, such as family income, and student educational goals were important mediating factors to consider when estimating graduation and transfer rates.

Implications for Policy and Practice

The authors suggested that institutions should not be punished for low graduation rates, since there may be questions about the accuracy of the data and other important factors influence these rates. Still, the authors stressed that institutions should not become complacent about these types of assessments. Institutions, researchers, and policy makers need to work together to determine how to distinguish "successful" institutions and to improve the effectiveness of all institutions.

Citation

Bailey, T., Jenkins, D., & Leinbach, T. (2007). The effect of student goals on community college performance measures. *Community College Research Center Brief* (Number 33). Retrieved from http://ccrc.tc.columbia.edu/Research.asp

Research Question

To what extent do community college students' reasons for enrolling, educational goals, and expectations influence student outcomes?

Research Design

Longitudinal survey and interview techniques were used to collect data. Analyses were conducted using multivariate regression techniques. Data were obtained from the U.S. Department of Education BPS:96/01 survey.

Findings

The majority of students responded that they had enrolled in higher education to obtain a degree or certificate or to transfer to a baccalaureate institution (57%); 40% responded that they wanted job skills or personal enrichment. Six years after enrollment, 30% of the students who enrolled for "job skills" had attained a certificate or degree, or had transferred to a four-year institution. Of the students who initially sought a degree or to transfer, 40% had completed some degree or certificate and almost half of those 40% had received a BA.

Controlling for personal characteristics, students with more ambitious goals were more likely to graduate. Gaps in student attainment were noted, even after controlling for reason for enrollment. African American students and students from lower SES backgrounds were less likely than Caucasian students and students from higher SES backgrounds to complete a degree. Students from lower SES backgrounds were also found to have lower expectations.

Implications for Policy and Practice

The authors pointed out that graduation rates for community colleges do not capture information about student reasons for enrollment and student characteristics, such as SES background, that may influence aspirations and ability to pursue a degree. Still, student aspirations were found to be fluid, so institutions should work to assess student goals and raise aspirations for students who may come from disadvantaged backgrounds.

Citation

Bailey, T., Leinbach, T., & Jenkins, D. (2005). Is student success labeled institutional failure? Student goals and graduation rates in the accountability debate at community colleges. *Community College Research Center Working Paper* (Number 1). Retrieved from http://ccrc.tc.columbia.edu/Research.asp

Research Questions

What impact do students' reasons for enrollment and educational expectations have out student outcomes and on the performance of the institution?

How should outcomes be assessed and interpreted?

Do these assessments reflect the effectiveness of policies, programs, and practices that community colleges should improve upon?

Research Design

This study examined national datasets to examine the influence of students' reasons for enrollment and educational goals and expectations upon student outcomes.

Findings

Analyses found that traditional metrics, such as graduation rates, should be used cautiously as assessments of institutional success. Descriptive and multivariate analyses showed that, controlling for personal characteristics, students who had more ambitious goals were more likely to graduate, transfer, and persist. Still, even when considering only student who plan to achieve a degree or certificate or transfer, fewer than 50% of these students achieved those goals within six years.

Large attainment gaps were observed that could not be explained by differences in reasons for enrollment or educational expectations. African American and Hispanic students had graduation rates that lagged significantly behind those observed for Caucasian students. Students expectations also changed over time, influenced to some degree by their education.

Implications for Policy and Practice

The authors concluded that, while student goals are important factors in success, their intentions and expectations are dynamic. Thus, using goals when assessing institutional success factors such as graduation rates, should not excuse institutions from striving for continuous improvement and working to reduce attainment gaps between groups.

Citation

Bensimon, E. M., & Dowd, A. (2009). Dimensions of the transfer choice gap: Experiences of Latina and Latino students who navigated transfer pathways. *Harvard Educational Review, 79(4)*, 632-658. Retrieved from http://www.hepg.org/her/abstract/754

Research Questions

What are Latina and Latino students' experiences in navigating transfer pathways?

What are their lived experiences of transfer (both successful and unsuccessful) to selective institutions?

What factors contribute to a transfer choice gap among Latino students?

Research Design

Ethnographic methods – secondary analysis of interview with a sample of five students who were eligible to transfer to highly selective institutions – were used in this study.

Findings

Results were presented using narrative analysis. In-depth interviews were conducted with five students to explore pathways to transferring to a four-year institution. These interviews indicated an absence of faculty members, counselors, and others within the college to act as "institutional agents" in the students' lives. These students' stories illustrate the importance of having someone provide assistance and encouragement to the students.

Implications for Policy and Practice

The major finding gleaned from the student interviews indicated that potential transfer students would benefit from "transfer agents" on campus to encourage them and help them know what questions they need to ask.

Citation

Berger J. B., & Malaney, G. D. (2003). Assessing the transition of transfer students from community colleges to a university. *NASPA Journal 40 (4)*, 1-23.

Research Question

How do pre-transfer and post-transfer experiences and preparation influence the adjustment of community college transfer students to life on a four year university?

Research Design

The authors surveyed 372 community college transfer students attending a public four-year university.

Findings

The survey found that patterns of academic and social involvement shift as students move from a two-year college setting to a four-year college setting. The likelihood of success depended strongly on how the students prepared prior to their transfer to the four-year university.

Implications for Policy and Practice

The author suggested that universities have the responsibility to provide information to community college personnel and students about expectations and requirements leas to a successful transition to a four-year university. Community colleges must also provide adequate academic preparation and make sure that that faculty is always available to help students interested in transferring.

Citation (note: only information pertinent to transfer students is included)

Berkner, L., He, S., & Cataldi, E. (2002). *Descriptive summary of 1995-96 beginning postsecondary students: Six years later.* (NCES 2003-151). National Center for Education Statistics. Washington, DC: U.S. Department of Education. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003151

Research Question

What are the enrollment, persistence, and degree attainment trends for students who began postsecondary education for the first time in the 1995-1996 academic year?

Research Design

Descriptive data were explored based on the 1996/01 Beginning Postsecondary Students Longitudinal Study (BPS: 96/01) from the National Center for Education Statistics.

Findings

The largest proportion (46%) of the 1995-1996 beginning student cohort initially enrolled at public, two-year institutions. During the first year of enrollment at the two-year institution, 50% of these students stated that they intended to attain an associate's degrees, and another 25% stated that they planned to transfer to a four-year institution and complete a bachelor's degree. Of the students who initially enrolled at a two-year institution, 42% transferred during the six years under consideration. Of the students who initially enrolled at a two-year institution and stated that they planned to complete an associate's or a bachelor's degree, 23% completed and associate's degree and 13% completed a bachelor's degree (including 5% who attained both) during the six years under consideration. Among the student who transferred to a four-year institution, 36% attained a bachelor's degree.

Implications for Policy and Practice

Results indicated that differences in baccalaureate degree attainment for students who initially enrolled at two-year institutions and students who initially enrolled at four-year institutions reflect differences in degree goals, academic preparation, enrollment patterns, and demographic characteristics.

Citation

Bers, T. H., & Smith, K. E. (1991). Persistence of community college students: The influence of student intent and academic and social integration. *Research in Higher Education, 32(5)*, 539-558. Retrieved from
http://www.jstor.org/stable/40196066?origin=JSTOR-pdf

Research Questions

Can the persistence of community college students be predicted by social and academic integration (two variables identified as important predictors of persistence in traditional college students), and/or by students' educational objectives and their intent to persist?

Can an instrument designed to operationalize the concept of academic and social integration developed with traditional students at four-year institutions apply to students at two-year institutions?

Research Design

Set-wise discriminant analysis and classification analyses were used. Data were collected from students at a midsize suburban community college in the Midwest.

Findings

Results showed that student characteristics, objectives, and subjective experiences were important factors affecting persistence. Students who were employed more hours were less likely to persist. Students taking courses with the intention of attaining a degree or transferring to a four-year institution were more likely to persist than students taking courses for job-related purposes. Overall, students' educational objectives, intent to reenroll, precollege characteristics, and employment status explained persistence better than academic or social integration.

Implications for Policy and Practice

Because community colleges serve a wide range of students, the researchers suggested that multiple definitions of success may be necessary for community college students. "Success" may differ depending on the students' intentions. Students who plan on attaining a four-year degree are successful if they transfer and persist at a four-year institution. Students who take classes for job-related purposes may attain the training needed after one or two classes and may not need to persist longer.

Citation

Best, G. A., & Gehring, D. D. (1993). The academic performance of community college transfer students at a major state university in Kentucky. *Community College Review, 21(2)*, 32-41.

Research Questions

Are students who have completed the associate's degree (or equivalent transfer hours) better prepared to cope with the academic environment of the four-year institutions than students who transferred earlier?

Research Design

Analyses included t-tests and chi-square statistics. Two groups of transfer students based on the number of transfer credits were compared to a random sample of native students.

Findings

Students who transferred after completing the associate's degree of the equivalent number of transfer hours had GPAs and dismissal rates similar to a comparable set of native students. However, native students had significantly higher graduation rates than this group of transfer students. Students who transferred earlier (prior to completing 60 transfer hours) did not perform as well as transfer students with 60 or more transfer hours.

Implications for Policy and Practice

The authors suggested that students who initially enroll at a two-year institution should be encouraged to complete two full years (60 transfer hours) prior to transfer. Although advanced transfer students appeared to be prepared to cope with academic work at the four-year institution, these transfer students had lower graduation rates than native students, and the authors suggested that transfer students need to be prepared for the environmental conditions (institutional methods, expectations of students, advising) at the four-year institution.

Citation

Birnbaum, R. (1970). Why community college transfer students succeed in 4-year colleges: The filter hypothesis. *The Journal of Educational Research, 63(6)*, 247-249. Retrieved from http://www.jstor.org/stable/27535979?origin=JSTOR-pdf

Research Question

Does the community college transfer program act as a filter through which potentially successful baccalaureate candidates with relatively poor high school achievement can pass, rather than as a program which strengthens marginal students through counseling and remediation?

Research Design

An analysis of covariance (ANCOVA) was performed comparing two groups of students across grades and admission scores after three years.

Findings

Both groups shared a common regression line, suggesting that differences in the achievement for both groups were due to differences in high-school admission scores. Therefore the filter hypothesis was supported.

Implications on Policy and Practice

These data provided preliminary support for the filter hypothesis; however the author suggested that further research was necessary before a final judgment could be made. The author also suggested that these findings point to the need for a universal standard of grading in higher education.

Citation

Bradburn, E. M., Hurst, D. G., & Peng, S. (2001). *Community college transfer rates to 4-year institutions using alternative definitions of transfer.* (NCES 2001-197). Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov

Research Questions

What is the relationship of different definitions of "transfer student" to student background characteristics?

How does the transfer rate differ across different definitions of "transfer student"?

Research Design

Comparisons of the transfer rate by different approaches to specifying the transfer population were explored by holding the numerator constant and using increasingly restrictive definitions of the denominator. Data from the National Center for Education Statistics (NCES) 1990 Beginning Postsecondary Students Longitudinal Study (BPS: 1990/1994) were used.

Findings

Overall, 72% of community college students anticipated earning a baccalaureate degree or higher. Across increasingly restrictive definitions of transfer, the transfer rate increased for more restrictive definitions. When examining all beginning community college students, the transfer rate to four-year institutions was 25%. When examining beginning community college students pursuing academic majors and taking courses toward a bachelor's degree, the transfer rate to four-year institutions was 52%.

Implications for Policy and Practice

The definition of "transfer" used in a research project may vary depending on the specific research question. The fullest picture can be provided by using multiple indicators.

Citation

Bragg, D. D. (2001). Community college access, mission, and outcomes: Considering intriguing intersections and outcomes. *Peabody Journal of Education, 76(1)*, 93-116. Retrieved from http://www.jstor.org/stable/1493007?origin=JSTOR-pdf

Research Questions

What does the literature say about community college access, mission, and outcomes?

What are the intersections between these constructs?

Research Design

This articled reviewed the literature related to community college access, mission, and outcomes and explored the intersections between those constructs. No new analyses were conducted.

Findings

The author summarized modern-day community colleges and the diverse population served. Further, the article reviewed the literature on the changing mission of community colleges and how this relates to student access and outcomes.

Implications for Policy and Practice

The author concluded that meeting the changing needs and goals of the students should be the major priority for community colleges, even if this means changing how outcomes are conceptualized and assessed.

Citation

Research Questions

Are native students better prepared for upper-division coursework than transfer students from two-year institutions?

Do native students have higher grades in upper-division coursework than transfer students from two-year institutions?

Research Design

Regression analyses were used to examine upper-division GPAs. Stratified random-sampling techniques were used to collect data from native and transfer students over a three-year period.

Findings

Upper-division GPAs for native and transfer students did not differ significantly after controlling for related variables. For both native and transfer students, lower-division GPA and major were significant predictors of upper-division GPA. Race was a significant predictor for native, but not for transfer, students. In the transfer-student model, gender, associate degree attainment, full-time enrollment, transfer credit hours, majoring in the arts, and ACT composite score did not predict upper-division GPA; however transfer students in science and business disciplines did not perform as well as native students.

Implications for Policy and Practice

The authors concluded that two-year institutions should not be criticized for nurturing students because this approach may have helped students transfer and achieve upper-division status. The authors noted that, overall, transfer students from two-year institutions seemed to be well-prepared for upper-division coursework at the four-year institution; however, students in certain disciplines (business and science) may need additional attention.

Citation

Ceja, M., & Perez, P. P. (2010). Building a Latina/o student transfer culture: Best practices and outcomes in transfer to universities. *Journal of Hispanic Higher Education, 9(1),* 6-21. doi: 10.1177/1538192709350073

Research Question

Why do fewer Latina/o students than Caucasian or Asian students transfer to four-year institutions from their respective two-year institutions?

Research Design

Based on previous research, the authors generated a demographic of overview of Latina/o students, highlighting student attendance, persistence, and transfer rates. Then, using theoretical models, the others examined promising practices, outreach initiatives, and an exemplary transfer program model used to facilitate Latina/o student transfer.

Findings

The authors found that when students were given the opportunity to attend orientation or success courses, they had higher rates of degree completion than counterparts who did not participate in such courses. The results showed a 24% completion rate for participants compared to a 17% completion rate for non-participants.

Implications for Policy and Practice

The authors suggested that institutional structures, policies, and partnerships need to be in place in order for there to be improvement in graduation rates for the Latina/o community. Further, the authors recommended working to improve academic skills, creating outreach programs, and promoting involvement by university faculty and staff that reflect the Latina/o population.

Citation

Cheslock, J. J. (2005). Differences between public and private Institutions of higher education in the enrollment of transfer students. *Economics of Education Review, 24*, 263-274. doi:10.1016/j.econedurev.2004.06.002

Research Question

What are the differences between private and public institutions in transfer student enrollment?

Research Design

Regression analysis was used.

Findings

Relative to public institutions, at private institutions a smaller percentage of incoming students were transfer students. Transfer rates fell as a student moved from less-selective to more-selective institutions. The association between the share of transfer students and the attrition rates was stronger for private institutions than for public institutions.

Implications for Policy and Practice

The author suggested that future work should investigate how the demographic characteristic of transfer students differed across institutions of different selectivity.

Citation

Crisp, G., & Nora, A. (2009). Hispanic student success: Factors influencing the persistence and transfer decisions of Latino community college students enrolled in developmental education. *Research in Higher Education, 51(2)*, 175-194. doi: 10.1007/s11162-009-9151-x

Research Questions

For the Hispanic community college student who intends to transfer to a four-year institution, what factors lead to the probability of the student being successful in his/her second and third years of college?

Also, how do the variables responsible for a student's success vary among developmental and non-developmental students?

Research Design

A logistic regression was used to test the hypothesized framework of the existing dataset, drawn from a national sample of Hispanic students.

Findings

There were three major findings. First, a common set of factors used previous in the literature seemed to influence different measures of success in the current study. Second, environmental factors affected both developmental and non-developmental students. Finally, although a common set of factors influenced success for both developmental and non-developmental students, these factors appeared to be more influential early on for developmental students.

Implications for Policy and Practice

The study provided empirically and theoretically-based evidence about the variables that influence the success of Latina/o community college students. These results demonstrated that the variables used previously in the literature were worthwhile to explore in more depth for this student population to inform policy and intervention efforts targeted at Latina/o students.

Citation

Dowd, A. C., & Melguizo, T. (2008). Socioeconomic stratification of community college transfer access in the 1980s and 1990s: Evidence from HS&B and NELS. *The Review of Higher Education, 31(4)*, 377-400.

Research Question

What changes have occurred in the socioeconomic composition of community college transfer students between the late 1980s and early 1990s?

Research Design

Data were obtained from two national longitudinal data sets from the national Center for Education Statistics (NCES): the High School and Beyond Sophomore Sample (HS&B/So) and the National Educational Longitudinal Study (NELS).

Trends were examined using design-adjusted chi-square tests of independence and tests of differences in means.

Findings

The results provided no evidence of a "middle-class takeover" of the community college transfer function during the period of time under consideration. More affluent students, whose parents had higher incomes and higher levels of educational attainment, were actually enrolling in the community college more so than middle-class students. The authors noted that transfer access was not improving for poor students, who were still underrepresented in transfer cohorts.

Implications for Policy and Practice

The authors recommended further study to investigate transfer access trends across socioeconomic groups.

Citation

Felts, K., & Townsend, B. K. (2009, May). *Transfer student success: The role of initial college choice.* Paper presented at the Annual Forum of the Association for Institutional Research, Atlanta, GA. Retrieved from http://ir.missouri.edu/reports-presentations.html

Research Question

Do students who transferred from community college and students who transferred from another four-year institution differ in baccalaureate degree attainment at the study institution?

Research Design

A two-group path analysis was used to analyze the direct and indirect effects of transfer GPA, number of hours transferred, completion of college algebra prior to transfer, completion of freshman English prior to transfer, and first-semester GPA at the study institution upon persistence to baccalaureate degree attainment.

Findings

Transfer GPA, hours transferred, completion of college algebra, completion of freshmen English, and first-semester GPA after transfer had a positive effect on baccalaureate degree attainment for community college transfer students. Only first-semester GPA after transfer and number of hours transferred had a positive effect on baccalaureate degree attainment for transfer students from four-year institutions. Consistent with the "transfer shock" literature, there was a significant drop in average first-semester GPA in the semester following transfer.

Implications for Policy and Practice

The findings indicated that the factors that influence the success of transfer students are similar to those that affect initial college choice. The authors suggested that these factors could be targeted when assisting transfer students at the receiving institution.

Citation

Freeman, M. L. (2007, June). *Gender, geography, transfer, and baccalaureate degree attainment.* Paper presented at the Annual Forum of the Association for Institutional Research, Kansas City, MO. Retrieved from http://www.airweb.org/page.asp?page=1289

Research Question

How do individual characteristics such as urban locaction of high school and first institution attended, age, gender, and risk factor index influence transfer and baccalaureate completion?

Research Design

Data were obtained from the National Center for Education Statistics 1996/01 Postsecondary Students Longitudinal Study (BPS: 96/01). Descriptive and multivariate analysis techniques were used. Logistic regression was used to assess baccalaureate degree attainment.

Findings

Women and nontraditional-aged students were more likely than men and traditional-aged students to begin their education at two-year institutions. Only a very small percentage of students who began at the two-year institution transferred to a four-year institution (12%). Women and traditional-aged students who enrolled at the four-year institution were more likely than men and nontraditional-aged students to complete the baccalaureate degree.

Implications for Policy and Practice

The author recommended that more research focus on risk factors and student outcomes rather than institutional retention to develop a more full understanding student success.

Citation

Garcia Falconetti, A. M. (2009). 2+2 statewide articulation policy, student persistence, and
success in Florida universities. *Community College Journal of Research and Practice, 33*,
238-255. doi: 10.1080/10668920802591109

Research Questions

Is there a difference in the academic success and persistence of community college transfer students and native students who are seeking baccalaureate degrees in Florida's State University System?

Is there a difference in the academic success and persistence of community college transfer students who are seeking baccalaureate degrees at each of the selected institution?

Is there a difference in the academic success and persistence of native students who are seeking baccalaureate degrees at each of the selected institutions?

Research Design

Descriptive discriminant analysis techniques were used to answer the research questions. Cohen's d statistic and Chi-square tests of independence were also examined.

Findings

Secondary data were used to track community college and native student enrollment and degree completion between 2001 and 2006.

Community college transfer students depart at higher rates than native students. Native students graduate at higher rates than community college transfer students. Community college transfer students received relatively few cumulative semester hours in excess of 120% and took few lower division courses prior to graduation.

Implications for Policy and Practice

The authors contended that Florida's legislature, policymakers, and institutional leaders must continue to monitor and strengthen statewide articulation agreements. The authors also suggested that policy makers should explore types of incentives that could be used to encourage students to finish on time.

Citation

Research Questions

Are there significant differences between the community college transfer students' academic performance (mean GPA) before transfer and the native students' academic performance (mean GPA) at the end of the sophomore year?

Do transfer students' mean GPAs fall at the end of the first semester after transfer?

Do native students' mean GPAs fall after the first semester in their major?

Are there significant differences in the retention rates of transfer students and native students?

Are there significant differences in the graduation rates of the transfer students and the native students?

Research Design

Analysis of variance (ANOVA) and t-tests were used to compare transfer and native students across different dependent variables, including GPA, retention, and graduation.

Findings

GPAs at the beginning of the junior year did not differ significantly. Transfer students had slightly lower GPAS, compared to native students, at the end of the first semester of upper-division coursework. However, transfer students quickly recovered from this "transfer shock" and had equivalent or even better GPAs than native students at the time of graduation. Transfer students had higher retention rates than native students. It could not be determined if transfer or native students had higher graduation rates.

Implications for Policy and Practice

The authors suggested surveying students who departed during the junior year to see what factors contributed to their departure. The authors also suggested that more work be conducted to make graduation rate comparisons.

Citation

Gross, B., & Goldhaber, D. (2009). *Community college transfer and articulation policies.*
    Seattle: University of Washington Bothell.

Research Questions

Do different types of transfer and articulation policies have different effects on transfer?

Do different types of transfer and articulation policies have a differential impact on lower income and minority students?

What policies facilitate the transfer process?

Research Design

Cross-sectional data were examined to look at the states' established curriculum articulation and transfer agreements and students' use of the transfer pathway. Mathematical models were developed to explore these relationships. Data were obtained from four sources: (1) the National Educational Longitudinal Study 1988-2000 data (NELS88/2000); (2) the NELS 2000 follow-up; (3) the 1999 Survey of State Transfer and Articulation Policies conducted by Ignash and Townsend; and (4) the 1992 Integrated Postsecondary Education Data System (IPEDS).

Findings

The authors found that articulation policies did not improve transfer rates for most community college students. Student background characteristics were a much more powerful predictor of transfer. Articulation policies did appear to have a positive effect for Hispanic students, who were more likely to transfer in states with polices in place.

Implications for Policy and Practice

The authors suggested that more research was necessary to explore whether transfer and articulation policies correspond with important gains for post-secondary students, such as transfer rate and degree completion of transfer students.

Citation

Hills, J. R. (1965). Transfer shock – The academic performance of the junior college transfer. *The Journal of Experimental Education, 33(3),* 201-215.

Research Questions

Do transfer students perform better than native students as a result of their community college experience (e.g., including gradual transition, orientation toward teaching)?

Do transfer students perform poorer at the four-year institution than they performed at the two-year institution?

Research Design

The study examined the findings of 46 studies relevant to transfer shock.

Findings

Of the 46 datasets examined, 44 showed evidence of transfer shock. Recovery from transfer shock could be assessed in 38 datasets, and 34 of those 38 showed evidence of recovery. Thirty-three datasets allowed for a comparison of transfer and native student performance; native students performed better in 22 datasets, transfer students performed better in 4 datasets, and transfer and native students performed equally well in 7 datasets.

Implications for Policy and Practice

The author offered recommendations for counselors, pointing out that transfer students should expect to see a drop in grades following transfer and have a lower likelihood of graduation than native students.

Citation

Hilmer, M. J. (1997). Does community college attendance provide a strategic path to a higher quality education? *Economics of Education Review, 16(1)*, 59-68.

Research Question

Does the quality of the four-year institution of choice differ for students who attend community college first and students who attend four-year institutions directly?

Research Design

An econometric model was used to examine the quality of preferred university under each of the two educational paths. The data were obtained from the High School and Beyond (HSB) survey conducted by the National Center for Education Research.

Findings

The results indicated that students choose higher quality universities following community college attendance. The largest quality increases were observed for students who came from poorer backgrounds, who were less academically prepared, or who performed poorly in high school.

Implications for Policy and Practice

The findings demonstrated that community college attendance did not negatively affect transfer students. Further, community college attendance was a positive pathway for students from disadvantaged backgrounds and allowed them to attend higher quality four-year institutions than they may have otherwise.

Citation

Hirose, S. M. (1994). Calculating student transfer rates: The transfer assembly project. *Community College Review, 22(1),* 62-71.

Research Question

What is the transfer rate of students from community colleges to senior institutions?

Research Design

Using data from a national sample, a national average transfer rate was calculated. The Center for the Study of Community Colleges (CSCC) collected data from a national sample between 1989 and 1994. By April 1994, transfer information on over 40% of the nation's community college student enrollment was obtained.

Findings

Examining the data obtained, the CSCC determined that the national transfer rate has consistently hovered around 22% to 23% over years under consideration. The data from across the nation consistently revealed that approximately 50% of community college students completed at least 12 SCH after initial enrollment; approximately 25% of those students eventually transferred to a four-year institution.

Most states with comprehensive community college systems had transfer rates similar to the 22% national rate, with an overall range from 13% to 46%. The state with the transfer rate at the low end of the continuum was made up of community colleges that are mainly vocational and technical institutions. The state falling at the high end of the continuum was made up of two-year centers that are branch campuses of the university. Within-state differences in transfer rates tended to be larger than between-state differences.

Implications for Policy and Practice

The project developed a consistent way to estimate community colleges transfer rates so that community colleges could be proactive in collecting the data and presenting their rates, rather than responding to rates calculated by those not familiar with the community college.

Citation

Ishitani, T. T. (2008). How do transfers survive after "transfer shock"? A longitudinal study of transfer student departure at a four-year institution. *Research in Higher Education, 49,* 403-419. doi: 10.1007/s11162-008-9091-x

Research Questions

Considering the longitudinal nature of student departure, when exactly are freshman transfer students at the highest risk of departure?

Given the time-varying nature of semester GPAs at a senior institution, does the impact of the GPA consistent affect persistence behavior for transfer students over time?

Research Design

The study employed event history modeling to longitudinally study the departure behaviors of transfer students.

Findings

Results indicated that sophomore and junior transfer students were less likely to depart during the first semester at the four-year institution than freshman transfer students. Higher semester GPA was associated with higher persistence rates, after controlling for explanatory variables. Native students were retained at higher rates than freshman transfer students.

Implications for Policy and Practice

According to the author, results such as those found in the current study can be used to create awareness of the risk characteristics for transfer students. Institutional personnel can use risk profile information to improve educational practices.

Citation

Koker, M., & Hendel, D. D. (2003). Predicting graduation rates for three groups of new
    advanced-standing cohorts. *Community College Journal of Research and Practice, 27,*
    131-146. doi: 10.1080/10668920390128771

Research Question

What is the impact of demographic variables, high school and pre-transfer college academic characteristics, transfer student cohort, and post-transfer college academic characteristics on baccalaureate degree attainment?

Research Design

The study design was longitudinal and logistic regression was used to identify significant predictors of graduation status. Participants were 1,327 transfer students from two- and four-year institutions who matriculated to the study institution during 1994-1995.

Findings

Results indicated that transfer students from the four-year cohort were more likely to graduate than transfer students from the two-year institution. Ethnicity, first-term credits completed, last term GPA, and last-term credits completed were significant predictors of graduation. Transfer cohort (two-year or four-year), entry credits, last-term credits completed, and entry GPA were also significant predictors of degree efficiency.

Implications for Policy and Practice

The results indicated that background characteristics of transfer students are useful in identifying students at risk for departure.

Citation

Kodama, C. M. (2002). Marginality of transfer commuter students. *NASPA Journal, 39(3)*, 233-250.

Research Questions

Are there differences in feelings of marginality between transfer and native commuter students?

What student characteristics, demographic or situational, are related to this sense of marginality?

Research Design

Surveys were mailed to a random sample of 1,000 commuter students, including 500 native and 500 transfer students. Analysis of variance (ANOVA) and multiple regression techniques were used to examine differences in feelings of marginality and characteristics that were associated with those feelings.

Findings

There were no significant differences between transfer and native students in self-reported feelings of marginality. Overall, gender, employment status, and race/ethnicity were significant predictors of feelings of marginality such that women, employed students, and Asian American students were more likely to express feelings of marginality.

Implications for Policy and Practice

The author contended that methods for studying college-student experiences need to become more refined as student populations become more complex.

Citation

Kozeracki, C. (2001). Studying transfer students: Designs and methodological challenges. *New Directions for Community Colleges, 114,* 61-75. doi: 10.1002/cc.21

Research Questions

Who is conducting research?

What methods are being used to gather information?

What types of data are being collected on transfer students?

Research Design

The study used a descriptive report examining the literature on transfer students from ERIC and journal articles.

Findings

Much of the work on transfer students has been conducted by institutional researchers at community colleges, statewide reports, university-based institutional researchers and faculty, graduate students, and the federal government. Many studies use quantitative analysis strategies, although there are several qualitative studies.

Implications for Policy and Practice

The author stressed the importance of making use of data by linking research and action.

Citation (note: only information pertinent to transfer students is included)

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). What matters to student success: A review of the literature. *ASHE Higher Education Report.* San Francisco: Jossey-Bass. Retrieved from https://nces.ed.gov/npec/pdf/Kuh_Team_Report.pdf

Research Questions

What are the major studies that represent the best work in the area?

What are the major conclusions from these studies?

What key questions remain unanswered?

What are the most promising interventions prior to college (such as middle school, high school, bridge programs) and during college (such as safety nets, early warning systems, intrusive advising, required courses, and effective pedagogical approaches)?

Where is more research needed and about which groups of students do we especially need to know more?

How does the work in this area inform a theory about student success?

Research Design

The literature synthesized the relevant literature to examine student success.

Findings

The literature review highlighted the diverse goals of students attending two-year institutions. When considering the likelihood of transfer, the review found that first-generation and low SES students have a lower likelihood of transfer than their counterparts, faculty encouragement on-campus employment promotes transfer, and institutional barriers may discourage students from transferring. The review found that transfer rates vary depending on how they are calculated. Students transferred to a four-year institution from a two-year institution were less likely than native students to interact with faculty and to participate in educationally enriching activities.

Implications for Policy and Practice

The authors noted that transfer rates could be higher if state systems emphasized the transfer mission of two-year institutions.

Citation

Lanaan, F. S. (2001). Transfer student adjustment. *New Directions for Community College, 114,* 5-13.

Research Question

What does the existing literature tell us about transfer student adjustment?

Research Design

The chapter reviewed existing literature to highlight key findings about transfer student adjustment.

Findings

Concerning transfer student grades following transfer to the four-year institution, the literature has shown conflicting findings ranging from a drop in GPA after transfer ("transfer shock") to an increase in GPA after transfer ("transfer ecstasy"). Comparisons of native and transfer students focusing on grades, persistence, and graduation rates often found that native students perform better than transfer students on most outcome assessments. Predictive models to examine transfer student success have been developed based on models of student persistence developed for first-time native students. Researchers have noted that transfer student performance needs to be tracked over time to determine what variables would be effective in predicting long-term academic success.

Implications for Policy and Practice

The author noted that a growing number of students in four-year institutions began at community colleges, therefore researchers must work to understand the extent to which prior experiences influence transfer student success at four-year institutions.

Citation

Lang, D. W. (2009). Articulation, transfer, and student choice in a binary post-secondary system. *Higher Education, 57,* 355-371. doi: 10.1007/s10734-008-9151-3

Research Question

What is the intersection of system articulation, transfer, and the choices that secondary students make when they apply to college and university?

Research Design

Longitudinal survey and qualitative interview techniques were used. Data were obtained from longitudinal surveys conducted in Ontario in the late 1980s and surveys and interviews conducted with students, parents, and guidance counselors in six secondary schools beginning in 2004.

Findings

Results indicated that articulation was not a concern for students. The intention to transfer did not appear to be a significant factor in initial choice of institution, but rather developed after initial enrollment. Students focused on choosing programs over choosing institutions.

Implications for Policy and Practice

The author suggested that focusing on articulation may not improve the transfer rate. Rather, students might benefit more from creating conditions that encourage institutions to collaborate in the "planning and delivery of programs that can be usefully articulated."

Citation

Lee, V. E., & Frank, K. A. (1990). Students' characteristics that facilitate the transfer from two-year to four-year colleges. *Sociology of Education, 63(3)*, 178-193. Retrieved from http://www.jstor.org/stable/2112836?origin=JSTOR-pdf

Research Question

Do social and academic background factors have an impact on the probability of transfer to a four-year college?

Research Design

A longitudinal analysis was used to track 2,500 students who enrolled at a community college after high school graduation in 1980. Path analysis was used to examine the direct and indirect effects of social and academic background factors on transferring to a four-year institution.

Findings

Academic behaviors in the community college had a strong, direct effect on transfer. Academic performance in high school was also related to the likelihood of transfer. Family background (e.g., SES) and high school factors had indirect effects upon the likelihood of transfer.

Implications for Policy and Practice

The community college is often promoted as a second chance for socially and academically disadvantaged students; however, this study suggested that these students are less likely than students from more "traditional" student backgrounds to transfer to the four-year institution after initial enrollment in the community college. The authors stressed the importance of encouraging students from disadvantaged background who initially enroll at the community college to transfer to the four-year institution.

Citation

Lee, V. E., Mackie-Lewis, C., & Marks, H. M. (1993). Persistence to baccalaureate degree for students who transfer from community college. *American Journal of Education, 102(1),* 80-114. Retrieved from http://www.jstor.org/stable/1085696

Research Question

Is there a difference in the probability of attaining a baccalaureate degree for students who enrolled in community college after high school graduation and subsequently transferred to a four-year college?

Research Design

A longitudinal analysis was used to track student cohorts from high school graduation in 1980 to outcomes in 1986. Group mean differences were tested with t-tests and logistic regression was used to study outcomes.

Findings

For both groups (transfer and native students), the proportion of students from the cohort that completed the baccalaureate degree in the time under consideration was identical – 69%. More students in the native sample expressed a desire to attend graduate school than in the transfer sample, although a high proportion of each sample did so, 76% and 70% respectively. Native students also had slightly higher GPAs and expressed greater satisfaction with the college from which they graduated.

Implications for Policy and Practice

The study found no differences in persistence to baccalaureate degree attainment for native and transfer students. The authors stressed that the results indicate that the major disadvantage of attending community college appears to take place prior to transfer, in that many students who initially express a desire to transfer never actually do so.

Citation

Research Question

Do community colleges really divert students from earning bachelor's degrees?

Research Design

A longitudinal study was performed using data from the National Longitudinal Survey of Youth (NLSY).

Findings

The years of desired schooling influenced the track chosen by community college students for postsecondary education (transfer/terminal program). Estimates of diversion were reduced after controlling for years of desired education. For students expressing a desire to attain a baccalaureate degree, attending community college increased overall educational attainment.

Implications for Policy and Practice

Based on the current findings, the authors concluded that policy makers should not be too influenced by diversion effect arguments when considering the role of community colleges in higher education.

Citation

McCormick, A. C. (2003). Swirling and double-dipping: New patterns of student attendance and
their implications for higher education. *New Directions for Higher Education, 121,* 13-24.
doi: 10.1002/he.98

Research Questions

What are the educational implications caused by a student's transfer between institutions?

How can we develop ways to enhance educational coherence?

Research Design

A longitudinal study was conducted to understand how the transfer to multiple institutions
affected a student's ability to finish their degree. Variables such as High School graduation
cohorts, new entrants into post-secondary education, and GPA comparisons were taken into
consideration.

Findings

The author noted that attendance of more than on institution is not equivalent to a transfer
(permanently leaving one institution to attend another). Students who attended other
institutions but did not transfer averaged higher first-year grades than those of students who
transferred.

Implications for Policy and Practice

The author suggested that both students and the faculty should pay more attention to how
students cope with changing institutions. The author suggested that faculty work with students
to help them focus on academic planning and use their educational goals as a framework for
this educational planning.

Citation

Melguizo, T., Hagedorn, L. S., & Cypers, S. (2008). Remedial/developmental education and the cost of community college transfer: A Los Angeles county sample. *The Review of Higher Education, 31(4)*, 401-431.

Research Questions

What were the actual monetary costs of transferring with different remediation needs?

What were the actual costs in terms of time of transferring for individuals with different remediation needs?

Research Design

The stratified sample was recruited from 5,011 students enrolled in nine community colleges in the Los Angeles district. The final sample included 411 students who participated in the initial survey and successfully transferred to the four-year institution.

Regression analysis was used to explore the association between the total cost of pre-transfer education and the levels of remediation needs.

Findings

Community colleges cost less than the four-year institution in terms of tuition and fees. However, the study found that attending a community college costs a substantial amount of time for students who take remedial/developmental and/or nontransferable courses. Students with the greatest need end up spending the greatest amount of time and money to succeed. Students averaged five years of attendance at the community college prior to transfer and spent 60% of their time taking courses that did not transfer to the four-year institution.

Implications for Policy and Practice

The authors suggested that their findings on the true cost of attendance had important implications for the community college's mission of supply access and equity. The authors encouraged colleges to reexamine the transfer procedures and instructional methods to determine why students are not successful within a more acceptable time period.

Citation

Mullen, R., & Eimers, M. T. (2001, October). *Understanding transfer success revisited: Transfer students – Who are they and how successful are they?* Paper presented at the meeting of Mid-America Association for Institutional Research, Earth City, MO.

Research Questions

What characteristics help explain a transfer student's likelihood of graduating?

Are transfer students more likely to graduate than first-time freshmen, when controlling for ability?

Research Design

Logistic regression was used to determine which student characteristics predicted a transfer student's likelihood of graduation. Student characteristics included discipline, initial institution, associate's degree completion, transfer campus, gender, age, ethnicity, transfer GPA, and transfer hours.

Findings

Findings indicated that transfer GPA and campus (residential) were positively associated with graduation and being a minority student was negatively associated with graduation. After controlling for GPA and credit hours, first-time freshman (native students) were more likely to graduate than transfer students.

Implications for Policy and Practice

According to the authors, implications of the current study included the need to focus on the assimilation of transfer student, especially transfer student from under-represented minority groups. The authors suggested the possibility of developing orientation programs that specifically target transfer students.

Citation

Nora, A., & Rendon, L. I. (1990). Determinants of predisposition to transfer among community college students: A structural model. *Research in Higher Education, 31(3),* 235-255. Retrieved from http://www.springerlink.com/content/ml5u5m1363171402/

Research Questions

How well does a model of student transfer behavior and attitudes based on Tinto's theoretical framework fit the community college student sample?

What are the direct and indirect effects of student background factors on students' initial commitments, social integration, and academic integration?

Research Design

Using structural equation modeling techniques, this study examined the structural relationships among five constructs: (1) student background factors, (2) initial commitments, (3) social integration, (4) academic integration, and (5) predisposition to transfer. Survey techniques were used to gather data.

Findings

The findings indicated that students were interested in transferring and attached high importance to the process. Students with higher commitment to the institution and to their educational goals, students with higher levels of academic and social integration, and students whose parents had higher educational levels had higher levels of predisposition to transfer. Ethnicity had no relation to predisposition to transfer.

Implications for Policy and Practice

Although ethnicity was not a factor in the current model, the author suggested that the effects of the multidimensional factors may be felt more by Hispanic students who have not been socialized to recognize or to take advantage of opportunities. The authors recommended stronger student/faculty interaction and policies to promote high expectations.

Citation

Research Questions

What are the resources for academic motivation and potential barriers that inform the transfer function and process for Latina/o community college students?

What are the essential elements required for instituting a community college transfer culture?

Research Design

A case-study design was used, including in-depth interview and focus groups with 191 Latina/o students, 17 counselors, 12 faculty members, and 6 administrators.

Findings

Findings revealed similar themes among the perceptions of students, counselors, faculty members, and administrators. All groups agreed that the most significant barrier to the transfer process for Latina/o students was balancing multiple roles and responsibilities outside of college while attending to their academic roles as students. Additionally, all groups agreed that many Latina/o students were academically underprepared. College personnel noted that students often become discouraged from pursuing transfer once they learn about the need to take additional prerequisite courses.

Implications for Policy and Practice

The authors suggested that examining multiple perspectives can provide more in depth information about the challenges Latina/o students face during the transfer process. The authors offered specific recommendations for administration, counselors, faculty, and students.

Citation

Peter, K., Cataldi, E., & Carroll, C. D. (2005). *The road less traveled? Students who enroll in multiple institutions.* (NCES 2005-157). Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov

Research Questions

To what extent do undergraduate students attend multiple institutions?

What is the association between multiple institution attendance and persistence, attainment, and time to degree?

Research Design

Survey data from the 1996/01 Beginning Postsecondary Students Longitudinal Study (BPS:96/01) and the 2000/01 Baccalaureate and Beyond Longitudinal Study (B&B:2000/01) were used. Differences in student enrollment patterns were examined using t-tests and two-way analysis of variance (ANOVA). Interrelationship factors were studied with a multivariable analysis.

Findings

The majority of degree recipients attended more than one institution during their undergraduate education. Attendance patterns differed by institution of initial enrollment. Students who initially enrolled at two-year institutions were more likely than students who initially enrolled at four-year institutions to attend more than one institution or to transfer; however, there were no differences in the likelihood of coenrollment. Multiple institution attendance was negatively related to degree completion within six year, indicating that it slowed progress toward baccalaureate degree.

Implications for Policy and Practice

The authors concluded that attending more than one postsecondary institution on the path toward attaining a baccalaureate degree has become a fairly common practice. More research is necessary to understand this pathway.

Citation

Phlegar, A. G., Andrew, L. D., & McLaughlin, G. W. (1981). Explaining the academic performance of community college students who transfer to a senior institution. *Research in Higher Education, 15(2),* 99-108.

Research Question

Can we develop a means to help students and college personnel acquire a clearer understanding of the implications of individual students selecting specific alternatives both within the community college and within the senior college environment?

Research Design

Linear regression equations and a branching algorithm were used to predict GPA at the senior institution using personal, environmental, demographic, and pre-transfer academic measures. The sample included 361 students who had transferred to a state university from one of 23 state-supported community colleges.

Findings

Community college GPA was the best single predictor of senior institution GPA. Curriculum taken at the senior institution was also important. The authors suggested that prior confusion in the literature may have resulted from the types of analyses employed. That is, student success at the four-year institution could not be explained by simplistic models, but rather required an analysis of the interaction of course selection and performance at the community college with the curriculum selected at the senior institution.

Implications for Policy and Practice

The authors found that it was important to examine the curriculum and requirements completed prior to transfer. The authors suggested that, as in modeling native student success, more work is necessary to examine the factors that explain transfer student success.

Citation

Pincus, F., & Archer, E. (1989). *Bridges to opportunity: Are community colleges meeting the transfer needs of minority students.* New York: Academy for Educational Development and College Entrance Examination Board.

Research Questions

What can be done to improve the transfer process?

What are the percentages of transfer?

Research Design

Evaluation of 24 institutions and 535 transfer students using data collected from the Academy for Educational Development and the College Board.

Findings

This book focused on ways to improve transfer efficiency and starts with nine recommendations to enhance the transfer function of community colleges. The authors reported transfer rates between 15 and 25% for all students and between 20 and 30% for students who initially expressed a desire to transfer. However, only 10 to 15% of transfer students received a bachelor's degree; this increased slightly, to 20 to 25% for students who initially expressed a desire to receive a degree.

Implications for Policy and Practice

The authors stressed the importance of social integration for student success. The book also included a chapter outlining a framework for institutions to develop transfer activities.

Citation

Porter, P. R., (May, 1999). *Assessing transfer and native student performance at four-year institutions.* Paper presented at the meeting of the Association of Institutional Research, Seattle, WA.

Research Questions

Do transfer students perform poorly in comparison with native students?

Are students who enter college by transferring from other institutions less qualified?

Research Design

A multivariate analysis was carried out in order to compare the difference between transfer and native students. The four samples included: new natives, new transfers, returning natives, and returning transfers.

Findings

The author concluded that transfer students performed worse than native students on four academic outcomes: one-year retention, one-year graduation, cumulative grade point average, and academic dismissals.

Implications for Policy and Practice

The author concluded that transfer students appear to be less motivated or less academically prepared than native students. The findings suggested that institutions need to increase their efforts with transfer students to ensure that they are academically prepared and motivated to finish their degrees.

Citation

Rendon, L. (1995). *Facilitating retention and transfer for first generation students in community college.* Paper presented at the New Mexico Institute Rural Community College Initiative. Espanola, NM.

Research Question

What factors affect retention and transfer for first generation students at community colleges?

Research Design

Report on the literature on community college student retention and transfer.

Findings

Two critical phases affected retention. First, students needed to successfully transition to college. Second, students needed to make connections in college. Retention barriers included student-related barriers (low SES, poor academic preparation, poorly defined goals), institution-related barriers (detached faculty, raising tuition costs), and cultural barrier (divided loyalties).

Implications for Policy and Practice

The author concluded that community colleges need to work to create the conditions for optimal learning for all students and focusing on ways to help remove barriers for students.

Citation

Research Question

Does a community colleges vocational focus affect a students' likelihood of earning an associated degree or transferring to a four year university and earning a bachelor's degree while controlling for characteristics of students and state environments.

Research Design

A logistic regression model was implemented in order to address the research question. Three outcomes were examined: (a) the likelihood of earning an associate degree compared to earning only certificates; (b) the likelihood of transferring to a four year institution; and (c) the likelihood of completing a bachelor's degree once you have transferred to a four-year university.

Findings

Students attending a vocationally-focused community college did not have lower education attainment. The associate degrees granted in the vocational field did not have negative effects on any of the outcomes examined.

Implications for Policy and Practice

The author suggested that states develop articulation and transfer policies to coordinate their higher education system and to facilitate the transfer of students between institutions and to ease the flow of students through higher education. The author also suggested providing incentives to community colleges to put more focus on academic training.

Citation

Roksa, J., & Calcagno, J. C. (2008). Making the transition to four-year institutions: Academic preparation and transfer. *Community College Research Center Working Paper* (Number 13). Retrieved from http://ccrc.tc.columbia.edu/Research.asp

Research Questions

To what extent do academically unprepared students transfer to four-year institutions?

Can positive experiences in community colleges diminish the role of inadequate academic preparation?

Research Design

Event history modeling techniques were used to estimate single risk discrete-time hazard models. Data from 37,623 first-time, degree-seeking community college students in the state of Florida were tracked for 15 terms to examine the likelihood of transfer to a four-year institution. Independent variables included academic preparation and intermediate outcomes.

Findings

Results indicated that many students who enter the community college academically unprepared eventually transfer successfully to a four-year institution. Further, the successful completion of intermediate outcomes, including passing college-level math and writing and earning an associate degree, enhanced the likelihood of transfer. Still, the negative effects of poor academic preparation prior to enrollment at the community college were not fully mitigated; these students continued to perform at lower levels than their more-prepared counterparts.

Implications for Policy and Practice

The authors stressed the need for a holistic view of education. Community colleges provided a vital path toward the baccalaureate degree; however, certain factors that influence the likelihood of transfer, such as academic preparation, precede entry to the community college. The authors also suggested that timing variables should be considered carefully in future studies.

Citation

Sandy, J., Gonzalez, A., & Hilmer, M.J. (2005). Alternative paths to college completion: Effect of attending a 2-year school on the probability of completing a 4-year degree. *Economics of Education Review, 25*, 463-471. doi:10.1016/j.econedurev.2005.05.003

Research Question

Compared with students who initially enter a four-year institution, are students who transfer from community colleges significantly less likely to complete a four-year college degree?

Research Design

Data were collected from the early 1970s to the mid 1990s using the National Longitudinal Survey (NLS). A logit function was implemented to examine students' probability of completing four-year degrees based on initial institution of enrollment. Marginal effects were also examined.

Findings

The data indicated that there has been a decline in degree completion at the four-year institution for transfer students. The probability of a student finishing a degree after transferring from a two-year college in 1972 was 0.754 compared to 0.373 in 1994.

Implications on Policy and Practice

The authors suggested that their findings highlight the need for research examining the "match" between students and institution, especially for transfer students.

Citation

Schmidtke, K., & Eimers, M. T. (2004, May). *Source and destination: Transfer success at a multi-campus university system.* Paper presented at the Annual Forum of the Association for Institutional Research, Boston, MA.

Research Questions

Are transfer students more likely to graduate if they enter from a two-year, four-year, or system institution, when controlling for ability and credit hours?

What characteristics help explain a transfer student's likelihood of graduating based on whether they transfer from a two-year, four-year, or system institution?

Are transfer students more likely to graduate if they transfer to an urban or residential campus, when controlling for ability and credit hours?

What characteristics help explain a transfer student's likelihood of graduating, based on whether the student transferred to an urban or residential campus?

Research Design

Logistic regression was used to predict transfer students' likelihood of success, defined as graduation within six years. The sample included 17,226 full-time, degree-seeking transfer students who entered the institution within a six-year period.

Findings

Transfer GPA, transfer hours, being female, residential campus, and system campus were positively associated with graduating within six years. Being a minority student and transferring to an urban campus were negatively associated with graduation. For students who transferred from a two-year institution, the graduation rate was higher for students who first obtained an associate's degree prior to transfer.

Implications for Policy and Practice

According to the authors, the findings supported the need for open articulation agreements between institutions. The authors recommended that future research use qualitative methods to examine the types of obstacles that transfer students perceive during the transfer process.

Citation

Surette, B. J. (2001). Transfer from two-year to four-year college: An analysis of gender differences. *Economics of Education Review, 20,* 151-163. Retrieved from http://www.elsevier.com/wps/find/journaldescription.cws_home/743/description#description

Research Question

Does gender influence the decision to transfer?

Research Design

This study used univariate probits to describe college attendance decisions and the decision of students enrolled at two-year institutions to transfer to four-year institutions. Data were obtained from the National Longitudinal Survey of Youth (NLSY).

Findings

Women were less likely than men to transfer to a four-year institution, and women who did transfer to a four-year institution were less likely than men to earn a baccalaureate degree. Marital status, the presence of children, and gender differences in occupational preferences did not explain the gap in transfer rates.

Implications for Policy and Practice

The author noted that the transfer preferences of men and women could not be explained by any of the variables under consideration. Future research is necessary to examine the apparent gender differences in college-type choice and transfer decision.

Citation

Townsend, B. (1995). Community college transfer students: A case study of survival. *Review of Higher Education, 18(2)*, 175-193.

Research Questions

What are the obstacles to transfer?

What are the obstacles for the retention of community college students that have transferred to the university?

How do community college students perceive the transfer and academic experience?

Research Design

Case study methods examining 44 fulltime students at an urban university were used. This included qualitative analyses of interview and survey information.

Findings

Students reported receiving more help from staff at the four-year institution than from the community college in the transfer process. Overall, students believed that they had to work through the transfer process on their own, but most students saw the process as relatively "easy."

Students found the academic environment at the four-year institution to be more difficult than at the community college. Students also reported not feeling prepared for the four-year institution.

Students who departed from the four-year institution due to academic difficulties reported that these difficulties were not due to differences between the two-year and the four-year institutions.

Implications for Policy and Practice

The author indicated that the study provided insight on students' experiences with the transfer process and on the factors that may affect retention. The author suggested that two-year and four-year institutions should work together to facilitate the transfer process.

Citation

Townsend, B. (2002). Transfer rates: A problematic criterion for measuring the community college. *New Directions for Community Colleges, 117,* 13-23.

Research Questions

What is problematic about concerns regarding transfer rates?

What are the implications for institutional leaders, policymakers, and researchers?

Research Design

The chapter highlighted difficulties in calculating transfer rates.

Findings

The literature has noted a trend of declining transfer rates. The author stressed that, although the decline is viewed as problematic, no level of acceptable transfer rate has been established. The author demonstrated that transfer rates vary greatly based on the definition of transfer student and what figures are included in the numerator and the denominator of the transfer rate estimate.

Implications for Policy and Practice

The author provided a number of implications for institutional leaders, policymakers, and researchers. The author suggested that institutional leaders help the general public and policy makers recognize that community colleges provide a pathway to the baccalaureate degree. Policy makers must improve tracking of community college transfers and keep definition of transfer in mind while tracking students. Institutional researchers can use these tracking systems to determine which students have transferred, when they transferred, and to what institutions they transferred.

Citation

Townsend, B., & Wilson, K. B. (2006). "A hand hold for a little bit": Factors facilitating the success of community college transfer students to a large research university. *Journal of College Student Development, 47(4)*, 439-456.

Research Question

What are current community college transfer students' perceptions about institutional factors that influenced their fit within the receiving institution, including the transfer process, orientation to the university, and social and academic experiences there as compared to those in the community college?

Research Design

The study used qualitative data analysis techniques and interviews with 19 students to collect data.

Findings

Overall, students who were interviewed expressed satisfaction with advising and formal orientation programs at the four-year institution. The majority of the students reported that they did not receive assistance from the community college in the transfer process, although only four students explicitly asked for assistance. Students felt like the transition and establishing "fit" at the four-year institution may have been easier if they had "a hand hold for a little bit."

Implications for Policy and Practice

The authors offered suggestions for future research and for practitioners. First, the authors suggested that future research examine students' efforts to integrate socially and academically both before and after transfer. Then, the authors noted that administrators and professors should work to orient students to the new institution and the large class environment.

Citation

Velez, W., & Javalgi, R. G. (1987). Two-year college to four-year college: The likelihood of transfer. *American Journal of Education, 96(1)*, 87-94. Retrieved from http://www.jstor.org/stable/1085178?origin=JSTOR-pdf

Research Question

How do institutional integration, background, academic processes, and psychosocial variables affect the probability of transfer among a subsample of two-year college students?

Research Design

Logistic regression was used to determine the likelihood of transfer from a two-year to a four-year institution. Data were obtained from the National Longitudinal Study (NLS) and included 1,407 students from the high school class of 1972.

Findings

Gender, race/ethnicity, high school track, religion, and SES were significantly associated with transfer probabilities. Holding a work-study job and living on campus increased the odds of transferring to the four-year institution.

Implications for Policy and Practice

The author recommended that all students become immersed in all aspects of the college environment. Encouraging students to become more involved with the university there seemed to have a positive effect on performance and transfer rates.

Citation

Volkwein, F., King, M., & Terenzini, P. (1986). Student-faculty relationships and intellectual growth among transfer students. *The Journal of Higher Education, 57(4)*, 413-430. Retrieved from http://www.jstor.org/stable/1980995?origin=JSTOR-pdf

Research Question

What is the relationship between transfer students' interactions with faculty and their intellectual growth?

Research Design

Longitudinal data were collected for students who entered SUNY Albany University in 1980. Student-faculty relationship was examined using the *Frequency of Transfer Student Informal Contact* with faculty outside the classroom and the *Quality of Student Informal Contact*.

Findings

Results showed that faculty-student contact was positively related to intellectual growth for transfer students. Specifically, the quality of contact was associated with intellectual growth, but the frequency of contact was not. Student background characteristics and prior college variables were not significantly associated with intellectual growth.

Implications for Policy and Practice

The authors highlighted the need to develop a better understanding of student-faculty interactions for first-year and transfer students.

Citation

Wang, X. (2008). Baccalaureate attainment and college persistence of community college transfer students at four-year institutions. *Research in Higher Education*. Advance online publication. doi: 10.1007/s11162-009-9133-z

Research Questions

How are precollege characteristics, experiences while matriculating at college and environmental factors related to the probability of attaining a bachelor's degree for community college students who successfully transferred to four-year institutions?

How well do these characteristics predict persistence?

Research Design

Binomial logistic regression models were used to predict persistence and baccalaureate degree attainment. Data were collected from the National Education Longitudinal Study of 1988 (NELS: 88) and the Postsecondary Education Transcript Study (PETS). 786 students who graduated high school in 1992 and attended community college after high school were included in the sample.

Findings

The likelihood of completing the bachelor's degree was associated with gender, SES, high school curriculum track, aspirations, remediation in math, college involvement, and community college GPA. Persistence was associated with perceived locus of control and community college GPA.

Implications for Policy and Practice

The author suggested that policy makers and school leaders should implement programs that would ease the transition of students who have transferred from community colleges (e.g., orientation programs and/or information systems) because desirable student outcomes may be achieved by improving student learning and academic performance early on. The author also stressed the need to promote positive motivational beliefs among students.

Citation

Wirth, R. M., & Padilla, R. V. (2008). College student success: A qualitative modeling approach. *Community College Journal of Research and Practice, 32,* 688-711.
doi: 10.1080/1066892070138942

Research Questions

What barriers to success do students experience in the selected community college?

What is the knowledge base and action repertoire that enables successful students to overcome the barriers?

Research Design

The qualitative approach was based on Padilla's (2004) theoretical framework for modeling student success.

Focus group methods were used to collect data from 22 participants across four student focus groups.

Findings

Institutional barriers related to learning, coursework, student support, and personal and financial issues were the most frequently cited barriers to success. Students frequently noted financial barriers and parking issues. Students recognized the value of their education and the need for a proactive attitude to be successful.

Implications for Policy and Practice

The authors highlighted the usefulness of using qualitative methods to develop a deeper understanding of the barriers facing diverse groups of students at individual institutions. The authors also noted that these types of analyses can be "powerful tools to develop a student-centered campus and to promote student success."

Citation

Yang, P. (2005, May). *A detour to success? Effect of four-year college transfer on degree completion.* Paper presented at the Annual Forum of Association for Institutional Research, San Diego, California.

Research Questions

Is there a difference in duration of undergraduate enrollment between college transfer students and non-transfer students?

Is there a difference of probability to obtain a bachelor's degree or degree of any kind for non-transfer students and upward, horizontal, and downward transfer students?

What are the determinants of the different types of college transfer?

What is the impact of the different type of transfer on length of undergraduate enrollment spell and degree completion?

Research Design

This study included t-tests, OLS models, and probit and logit regression techniques to study transfer pathways.

Findings

Race, SES, SAT/ACT scores, college TPS, major, and selectivity of initial institution of enrollment influence the decision to transfer. Transfer was related to graduation indirectly through prolonged enrollment. GPA, SAT/ACT scores, and selectivity of graduation institution were also associated with ultimate degree attainment.

Implications for Policy and Practice

The author viewed the transfer pathway as a "detour" rather than a "dead end" in pursuing a baccalaureate degree. Students who struggle academically or do not have a good "match" with one institution may be more successful elsewhere.

Citation

Zamani, E. M. (2001). Institutional responses to barriers to the transfer process. *New Directions for Community College, 114,* 15-24.

Research Questions

What barriers are associated with the transfer process?

How can institutions respond to these barriers?

Research Design

The chapter reviewed the literature on institutional barriers to transfer. No new study was examined.

Findings

The literature reviewed in this chapter indicated that only small percentages of community college students achieve associate's degrees, transfer to four-year institutions, and/or persist to the bachelor's degree. The chapter reviewed innovative programs and policies that were effective in reviving the transfer function within community colleges.

Implications for Policy and Practice

The author stressed that two-year and four-year institutions must work together to be responsive to transfer student needs. Based on the successes of innovative programs reviewed in the chapter, the author suggested establishing cooperative admissions agreements, extending outreach activities, clarifying articulation agreements, and hosting transfer informational sessions.

Citation

Zhu, L. (2005). Transfer students' persistence and contribution to college graduation rate: A case of four-year public institution. Retrieved from http://www.eric.ed.gov/PDFS/ED491042.pdf

Research Questions

Who are the transfer students?

What are the differences between transfers from two-year colleges and four-year institutions?

What factors impact transfer students' degree attainment?

Research Design

The characteristics of transfer students were examined with descriptive methods and statistical comparisons. Data on 906 students from a fall 2002 transfer cohort were examined.

Findings

Descriptive analysis showed that students in the transfer cohort were more likely to be female and Caucasian. There was no significant difference in the average transferable credit hour and transfer GPA between students who transferred from two-year institutions and students who transferred from four-year institutions. The number of transferred hours was a significant factor in receiving a bachelor's degree. Two-year college transfer with a prior degree (e.g., AA) appeared to be more likely to stay on track to achieve the bachelor's degree as well.

Implications for Policy and Practice

The author recommended incorporating alumni survey data when studying transfer students to compare outcomes for native and transfer graduates following baccalaureate degree completion.

Over the last eighteen months the State Board of Education has been discussing high school diploma requirements. To support the Board's efforts, the Department of Education has provided the Board with background documents and recommendations to aid their discussion. The documents were prepared utilizing a wide array of research-based evidence, statistical studies and expert opinions.

What follows is a partial list of some of the sources cited. To make a full listing of the papers, publications and reports would lengthen this list considerably. Many of the sources given below were footnoted in Board docket items. Others were used to inform department documents, even if not specifically cited in Board materials.

The sources fall into several categories. The first category consists of research papers and reports that are based on experimental or quasi-experimental studies or statistical studies of either census or long-term trend data or significant populations. The second category consists of surveys of current policy and practice. The third category consists of reports from various educational organizations who also synthesize the available research to arrive at recommendations.

Research Publications: These reports are based on studies of national or state education data; longitudinal data for large cohorts; or results of experimental or quasi-experimental research conducted on smaller populations.

- National Center for Education Statistics. 1997. *Access to Postsecondary Education for 1992 High School Graduates,*
     This report uses data from the National Education Longitudinal Study of 1988 (NELS:88) to examine access to postsecondary education of 1992 high school graduates by 1994, two years after high school graduation. The report study considered family income, race-ethnicity, parental levels of education, college costs and financial aid, student educational expectations and academic preparation, among other factors. **Major Finding:** Indicates that roughly 70% of high school graduates enter college within a year. This finding has been substantiated by numerous findings since 1997. See the next citation.

- Oregon University System. 2005. *Where Have Oregon's Graduate's Gone? Survey of the Oregon High School Graduating Class of 2004.*
     This report is based on a survey of recent graduates from Oregon High Schools. It indicates postsecondary attendance patterns of the graduating class. **Major Finding:** More than 70% of Oregon high school graduates immediately enroll in post secondary education and many of those who don't enroll have postsecondary education as an aspiration.

- The American Diploma Project. 2002. *Connecting Education Standards and Employment: Course-taking Patterns of Young Workers. Data based on the NELS:88 study.*
     Examined high school course taking patterns of sophomores in 1990 (eventual class of 1992) and their place in the workforce by 2000 by job class and salary. **Major Findings:** Algebra 2 is a gateway course for students to enter well-paid skilled white collar or professional jobs. Geometry is the gateway for well-paid skilled blue-collar jobs. Taking grade-level English, as opposed to remedial English coursework had a similar correlation.

- National Center for Education Statistics. 2003. *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000.*

  This report provides national estimates remedial course enrollment in degree-granting institutions in fall 2000 and changes from fall 1995. The report compares course offerings, student participation in remedial programs, institutional structure of remedial programs, and the delivery of remedial courses through distance education.

  Major Finding: 40% of students in post secondary education require remediation.

- Adelman, C. *Principal Indicators of Students Academic Histories in Postsecondary Education, 1972-2000.* U.S. Department of Education.

  This document is a descriptive account of the major features of the postsecondary academic experience during the period 1972-2000, with an emphasis on the period 1992-2000. Report includes data on college enrollment, degree attainment, remediation rates, and other factors, with data diaggregated by both socioeconomic and by race and ethnicity.

  Major Findings: Among the many findings are high remediation rates (around 40%), as well as high rates of post secondary study (78% of graduates enroll at some time after high school.)

- Adelman, C. 1999. *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment.* U.S. Department of Education.

  Perhaps the most commonly cited study in the citations given in the third section of this bibliography. Discussed what contributes most to long-term bachelor's degree completion of students who attend 4-year colleges (even if they also attend other types of institutions). Studies high school and college transcript records, test scores, and surveys of a national cohort from the time they were in the 10th grade in 1980 until roughly age 30 in 1993.

  Major Findings: Study shows that rigor of coursework, especially the completion of Algebra 2, is the most important factor in degree completion. This correlation is even more pronounced for minority populations.

- Adelman, C. 2006. *The Toolbox Revisited: Paths to Degree Completion from High School Through College.* U.S. Department of Education.

  The Toolbox Revisited follows a nationally representative cohort of students from high school into postsecondary education, and asks what aspects of their formal schooling contribute to completing a bachelor's degree by their mid-20s. Studies students who attended a four-year college at any time, thus including students who started out in other types of institutions, particularly community colleges.

  Major Findings: The academic intensity of the student's high school curriculum is the most important factor contributing to student completion of a bachelor's degree.

- American Federation of Teachers Policy Brief. 1999. *Lessons from the World: What TIMSS Tells Us About Mathematics Achievement, Curriculum and Instructions.*

  Reviewed the Trends in Mathematics and Science Study (TIMSS) results of 1999 that show math and science achievement in the U.S. lags that of other industrial nations, especially at the high school level. U.S. 12th grade math achievement exceeded only Cyprus and South Africa, among nations studies.

  Major Findings: The U.S. needs a more focused curriculum, more rigorous content and more student accountability for reaching the standards.

- Schmidt, W., Houang R., Cogan, L. 2002. *A Coherent Curriculum: The Case of Mathematics.*

  Compares mathematics content, rigor and sequences of mathematics curriculum in high achieving TIMSS (Trends in International Math and Science Study) countries to typical state standards in the U.S.

  Major Findings: International standards for high achieving countries tend to cover fewer topics each year and in greater depth, in a sequence that shows clearer progression of skills. In comparison, U.S. content is less demanding and more repetitive. Algebra 1 is viewed as a middle school subject by most of these countries.

- American Institutes of Research. 2005. *Reassessing U.S. International Mathematics Performance: New Findings from the 2003 TIMSS and PISA.* U.S. Department of Education.

  The Trends in International Math and Science Study results are restricted to the 12 countries that have participated in 4th grade TIMSS, 8th grade TIMSS and 9th grade PISA (Program for International Student Assessment): Australia, Belgium, Hong Kong, Hungary, Italy, Japan, Latvia, Netherlands, New Zealand, Norway, the Russian Federation and the United States. This study analyzed key features of the three tests to determine more detailed comparisons among the countries.

  Major Findings: In this group the U.S. ranked 8th, 9th and 9th respectively on the three assessments. The U.S. students strongest area was data and statistics, and the weakest were measurement and geometry.

- Hallinan, M. 2002. *Ability Grouping and Student Learning.* Brookings Papers on Educational Policy.

  Examined data from approximately 2,000 high school students. The 9th grade English and Mathematics test scores that the students actually received are compared to predicted test scores based on placement in a higher or lower ability group.

  Major Findings: Regardless of the initial achievement level, assigning a student to a higher ability group increases the student's learning and assignment to a lower group depresses a student's learning regardless of the student's ability level. This study raises critical questions about whether American schools sufficiently challenge students to attain optimal performance.

- California Department of Education. 2005. *A Study of the Relationship Between Physical Fitness and Academic Achievement in California Using 2004 Test Results.*

  Studies the relationship between academic test scores and a fitness test score.

  Major Findings: There was a strong positive relationship between physical fitness and academic achievement. The relationship between fitness and achievement was stronger for females than for males and stronger for higher SES students than for lower SES students.

- The Arts Education Partnership. 1999. *Champions of Change: The Impact of the Arts on Learning, pp. 47-62.*

  In Chicago, inner-city schools with integrated arts curriculum were compared to those without and arts curriculum.

  Major Findings: The number of students performing at or above grade level in mathematics was as much as 20% higher in schools with an integrated Arts curriculum.

Analysis of Current State and Local Policies

Summaries of current state and local practices, as well as student achievement data. Recommendations are also given.

- Dounay, J.. 2006. *Ensuring Rigor in the High School Curriculum: What States are Doing.* Education Commission of the States.

  Reviews current policies aimed at increasing rigor for the high school diploma and identifies those policies that have a real effect on student achievement. Some policies intended to increase rigor do not necessarily translate into a more challenging curriculum.

  Major Findings: End-of-course exams, formative assessments, proficiency requirements, teacher professional development, and raising academic standards are the most effective policies.

**Annotated Bibliography of Research for the
State Board of Education Oregon Diploma Discussion**
January 2007

THE **OREGON
DIPLOMA**
Moving Education Forward

- Council of Chief State School Officers. 2005. *Key State Education Policies on PK-12 Education 2004.*
  Summarized current (as of 2005) state policies regarding graduation requirements, content standards, teacher licensure and student assessments.
  Major Findings: Gives comparison of other state graduation requirements to our own, and gives the latest data on trends in raising rigor for high school expectations.

- ACT, Inc. 2005. *Crisis at the Core: Preparing All Students for College and Work.*
  ACT has developed college readiness benchmarks. These benchmarks are indicators of college success, (a 75% chance of earning a C or better in credit bearing core college courses) rather than college entrance.
  Major Findings: Less than half of ACT test-takers met the College Algebra benchmark and only one-fourth of the ACT test-takers met the benchmark for College Biology.

- ACT, Inc. 2005. *College Readiness Begins in Middle School.* ACT Policy Report.
  Examined the career and educational aspirations of middle school students and the amount of preparation towards those goals that occurs in middle school.
  Major Recommendations: Post secondary educational and career planning should begin in middle school. Many middle school students do not take the courses that prepare them for advanced high school classes.

- NACAC Admissions Trends Survey, 2001.
  Profiles trends in admission policies for U.S. colleges.
  Major Finding: Grades in college prep courses are the most important factor in admissions.

- College Entrance Examination Board. 2005. *2005 College-Bound Seniors: Total Group Profile Report* and *State of Oregon Profile Report.*
  This profiles SAT test takers, including their academic history and post secondary expectations, correlated with their SAT scores.
  Major Findings: There are strong correlations between SAT Verbal and Math scores and study in other subjects, such as the Arts and Second Language.

- ACT, Inc. 2005. *2005 ACT National and State Scores Report* and *State Composite for Oregon Report.*
  This profiles ACT test takers, including their academic history and post secondary expectations, correlated with their ACT scores.
  Major Findings: Shows strong correlation between rigor of coursework and scores on the ACT.

- Zinth, C and Dounay, J. 2006. *Mathematics and Science Education in the States.* Education Commission of the States.
  This report reviews state policy and identifies the types of policy activities most likely to impact the skills of teachers and student participation in advanced math and science.

Policy and Position Papers

These are often position papers by major non-profit organizations and provide syntheses of research studies in education, together with the organization's own conclusions and recommendations. Many of these sources have extended bibliographies.

- The American Diploma Project. 2004. *Ready or Not: Creating a High School Diploma That Counts.*
  Reviews data and research on student aspirations and actual achievement. Highlights the 90% of 8th graders aspire to post secondary education, but few achieve a degree.

Major Recommendations: States need to anchor their high school diploma expectations in the knowledge and skills that colleges and employers expect. States need to specify specific courses/content required for graduation.

- ACT, Inc. 2006. *Ready for College or Ready for Work: Same or Different?*

  A study that provide empirical evidence concerning whether planning to enter college or workforce training programs after graduation,

  Major Findings: High school students need to be educated to a comparable level of readiness in reading and mathematics to either succeed in college-level courses without remediation or to enter workforce training programs ready to learn job-specific skills.

- Achieve, Inc. 2005. *Rising to the Challenge: Are High School Graduates Prepared for College and Work.*

  A study of recent high school graduates, college instructors and employers to examine perceptions of student preparedness for college and the workforce.

  Major Findings: College Instructors and employers estimate that over 40% of the recent high school graduates they see are either are not prepared for college-level work or to advance beyond entry level jobs. Looking back, two-thirds of high school graduates would have taken more rigorous coursework, and would have worked harder if expectations were higher in high school.

- Carnevale, A. and Desrochers, D. 2003. *Standards for What? The Economic Roots of K-16 Reform.* Educational Testing Service.

  Reviews the shift in the U.S. economy toward jobs that require post secondary education. Correlates training and education with earnings potential. Lists the skills and abilities that employers want.

  Major Findings: For most Americans, education and training beyond high school is a necessary condition for developing skills required by most well-paying jobs. Workers in the best-paying jobs have typically completed Algebra 2 in high school.

- Venezia A., Kirst M., Antonio A. 2003. *Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations.* The Stanford Bridge Project.

  Examined the gap between student post secondary expectations in 8th grade and actual post secondary enrollment. Oregon was one of six states studied for the report.

  Major Findings: States create unnecessary barriers between high school and college. These can be lowered through alignment of K-12 standards and postsecondary placement exams, linking senior year courses to post secondary general education courses, and expanding dual enrollment to include all students, not just college-bound students.

- Public Agenda. 2002. *Reality Check 2002.*

  Includes data from a survey of professors and employers regarding the skills of recent high school graduates.

  Major Findings: A substantial majority of respondents rated the typical high school graduate as "fair" or "poor" in writing, grammar and basic math.

- National Commission on the High School Senior Year. 2001. *The Lost Opportunity of Senior Year: Finding a Better Way.*

  Studied the nature of the disconnect between K-12 and post secondary education, resulting remediation rates, low expectations for the senior year.

  Major Recommendations: The senior year often represents a year of decreased motivation and expectations. It should be the most rigorous year of high school, preparing students for the increased rigor of post secondary education.

- Achieve, Inc. 2004. *The Expectations Gap: A 50-state Review of High School Graduation Requirements.*
    Synthesized research reports on graduation rates, remediation rates in college, skill levels of recent graduates, policies of states with rigorous diplomas.
    Major Findings: Students taking more rigorous high school coursework are better prepared to succeed in college and the workforce.

- Achieve, Inc. 2005. *Oregon Data Profile.*
    Compares state data on Oregon students' progress through the education pipeline to other states and the nation. Provides data on high school diploma rates; high school coursework; and enrollment in college and degree completion.
    Major Findings: Oregon students continuation rates in the education pipeline are below the national average and lag significantly behind those of the top states. Oregon students are near or below the national averages in number of 8th graders taking Algebra and in national achievement in math and reading.

- National Research Council. 2006. *America's Lab Report: Investigations in High School Science (2005)*
    Reviews and gives recommendations regarding the instructional practices for high school science.
    Major Recommendations: Outlines the role of laboratory experiences in the 21st Century classroom as well as guidelines for proper conduct of laboratory experiences.

- Partnership for 21st Century Skills. 2005. *Results That Matter: 21st Century Skills and High School Reform.*
    Including participation by major companies such as Intel, Ford, Microsoft, Apple, TimeWarner, and the American Federation of Teachers, this group outlines a list of skills needed to be successful in the 21st century workforce.
    Major Recommendations: To ensure that high school graduates are ready for next steps, school reform needs to go beyond increasing the rigor of course requirements to include skills necessary for success in the new century.

- National Governor's Association for Best Practices. 2002. *The Impact of Arts Education on Workforce Preparation, Issue Brief.*

- Western States Arts Federation. 2000. *The Economic Impact of Oregon's Nonprofit Arts Sector.* Prepared for the Oregon Arts Commission.

Begley, S. (2011, March 15). **The science of making decisions.** *Newsweek.* Retrieved from http://www.newsweek.com/science-making-decisions-68627

Decision science investigates the impact of excess information on the decision-making process. When confronted with a plethora of options, individuals experience anxiety and frustration, increasing the prevalence of mistakes and poor choices. The article presents research from Dr. Angelika Dimoka, who concludes that "with too much information, people's decisions make less and less sense" (p. 30). Examples from empirical studies are described, demonstrating the negative effect of too many choices on selecting retirement plans, stock portfolios, and auction bundles. Information overload can also lead to decision remorse; too many options make it difficult to determine if the "best" one was selected. In addition, the rate and chronology of information flow influences decision-making, creating a bias toward the most recently received information. The author draws upon research, and commentary from high profile individuals in crisis events, to argue that the "proliferation of choices can create paralysis when the stakes are high and the information complex" (p. 31).

Bergeron, D.A. (2013, December). *A path forward: Game-changing reforms in higher education and the implications for business and financing models.* **Retrieved from Center for American Progress website: http://www.americanprogress.org/wp-content/uploads/2013/12/PathForward-1.pdf**

This report outlines the Guided Pathways to Success (GPS) model and highlights its significance regarding student completion, institutional reform, and scaling up pathways programs to serve greater numbers of students through additional components such as stackable credentials and competency-based, student-centric approaches to teaching and learning. While there is no data supporting how the GPS model impacts the workforce, the report acknowledges how such highly structured designs for completion can increase students' competitiveness in the workforce. Included within the concept of pathway reform for students is an investigation into innovative ways that business, financing, and human organization can be reformed within institutions, offering brief examples of methods for revising institutions' financial models for tuition and fees.

Completion by Design. (n.d.). *Pathways analysis toolkit.* **Retrieved from http://completionbydesign.org/our-approach/step-3-diagnose-the-issues/pathway-analyses-toolkit**

Completion by Design developed this step-by-step toolkit as an approach to pathways analysis. The toolkit provides extensive resources for institutions interested in either analyzing their current design—from students' initial contact with the college through completion—or revising their current design for students' program of study based upon a pathways model. The provided framework also stresses the importance of establishing consistent methods for collecting and analyzing institutional data to evaluate and improve students' pathways over time. Furthermore, it includes metrics for pathway creation and evaluation as well as a framework, or Key Performance Indicators, designed to extend and improve colleges' pathway models.

Complete College America. (2012, Winter). *Guided pathways to success: Boosting college completion.* Retrieved from http://completecollege.org/docs/GPS_Summary_FINAL.pdf

This resource serves as a guide to data associated with graduation rates for students at two- and four-year colleges, and in response, offers the components of a pathway model named Guided Pathways to Success (GPS). GPS notes that if encouraging students to persist and achieve is the goal, then new systems, such as GPS, must be designed to allow students to make more informed decisions regarding their academic path. The GPS program includes consistent and intrusive advising, guidance and support with academic plans, intentional course sequencing including embedded developmental courses, mandatory attendance, and innovative scheduling options.

Completion by Design (2012, March). *Pathway principles* (Version 2). Retrieved from http://completionbydesign.org//sites/default/files/site-uploads/main-site/pdf/pathway-principles_v2_0.pdf

Drawing from research and experiences from colleges in the planning phase of implementation, this brief provides eight key "principles" for colleges designing and implementing pathways programs. While pointing out that there is no rigid way of implementing these practices, this resource stresses that colleges should integrate the following principles in their pathways design: accelerate entry into coherent programs of study; minimize time required to get college-ready; ensure students know requirements to succeed, customize and contextualize instruction; integrate student supports with instruction; continually monitor student progress and proactively provide feedback; reward behaviors that contribute to completion; and leverage technology to improve learning and program delivery.

Dadgar, M., Venezia, A., Nodine, T., & Bracco, K.R. (2013). *Providing structured pathways to guide students toward completion.* San Francisco: WestEd.

Community colleges have begun to experiment with structured pathways that allow students to explore career options while they take courses toward a credential or degree. Such pathways are particularly helpful to low-SES students who, in the absence of a "structured opportunity to explore...have traditionally pursued shorter-term credentials that tend to have lower labor-market returns than those of their more advantaged peers" (p. 3). Insights and examples from personnel at New Community College (NY) (now Guttman Community College/CUNY), Austin Peay State University (TN), Valencia College (FL), Community College Research Center (CCRC), California Community Colleges (CA), Public Agenda, and Tacoma Community College (WA) are included.

Approaches presented as examples include mandating prescribed intake processes, balancing flexibility and prescription, defining clear instructional programs, providing proactive "intrusive" advising, and increasing program alignment. While structured pathways are too new to have produced empirical evidence of effectiveness, the authors provide examples of current institutional efforts and outline major issues being discussed by participating colleges. They also provide implementation suggestions helpful to institutions desiring to develop structured pathways. CCRC recommendations for key data questions that need to be considered also are included.

Jenkins, D., & Cho, S. W. (2012). *Get with the program: Accelerating community college students' entry into and completion of programs of study* (CCRC Working Paper No. 32). Retrieved from Community College Research Center website: http://ccrc.tc.columbia.edu/media/k2/attachments/accelerating-student-entry-completion.pdf

The authors analyze data from 23 community colleges and over 22,000 students to demonstrate that "students who do not enter a program of study within a year of enrollment are far less likely to...complete and earn a credential" (p.3). They advocate using student course taking patterns

rather than declared intent to most accurately identify program entry. Colleges desiring to accelerate student entry into programs of study must implement research-based organizational redesign processes that create coherent pathways and consider potential roadblocks in developmental and gatekeeper courses. The authors also find varying rates of program entry and completion in different academic and career areas, and suggest that increasing institutional completion rates will require college-wide implementation of improvement strategies. The student experience is divided into four stages: connection, entry, progress, and completion. Aligning college practices to create a coherent student experience requires that a broad contingent of administrators, staff, and faculty work together to review policies and practices that affect the student at every stage. Questions to guide college efforts at each stage are included. Colleges should seek "best processes," rather than "best practices," as they rethink and redesign program pathways.

Jenkins, D., & Cho, S. (2014). *Get with the program . . . and finish it: Building guided pathways to accelerate student completion.* (CCRC Working Paper No. 66). Retrieved from Community College Research Center website: http://ccrc.tc.columbia.edu/publications/get-with-the-program-finish-it.html

While community colleges provide services to students that help guide them through their academic plan, this paper stresses the need for clearer pathways that not only inform students of the many opportunities that are available to them, but create a clearer picture of the specific steps students need to take to achieve their end goals. Such programs should offer embedded advising and track students' progress, but there should also be structured ways of providing students feedback and support as they progress. Community colleges highlighted in this paper have adopted institutional structures that evaluate course offerings to ensure alignment with student pathways, developed faculty committees to enhance interdisciplinary alignment between academic programs, and created default course sequences that transfer directly to baccalaureate institutions. The authors point out that clear, structured pathways decrease colleges' reliance on advisors and increase the coherence of student learning.

Jobs for the Future. (2013, October). *Cornerstones of completion: State policy support for accelerated structured pathways to college credentials and transfer.* Retrieved from http://www.jff.org/sites/default/files/publications/CBD_CornerstonesOfCompletion_111612.pdf

This report provides policy recommendations for structured pathways formed through the partnership of Completion by Design, participating colleges, and state-level policy organizations in an effort to provide insight regarding how to design, support, scale up, and strengthen pathways programs. Jobs for the Future focuses its research on ten "high-leverage policies that can accelerate institutional change toward systemic, student-focused structured pathways" (p. 4), consisting of creating structured transfer pathways by improving transfer and articulation policies; redesigning CTE programs to more structured pathways with clear labor market value, supporting structured pathways with better use of labor market information and program-level data; building direct routes to college opportunities through strategies such as dual enrollment, early college, and contextualized basic skills instruction; improving assessment and placement policies; reducing, accelerating, and contextualizing developmental education; supporting strong college advising, orientation, and student success courses; investing in professional development to prepare faculty for changes and reform; leveraging technology to support individualized student planning and tracking; and designing financial aid to encourage and reward student progress. Each policy recommendation includes a description, suggestions for implementation, and research that supports the recommendation.

Jobs for the Future. (2013, October). *Structured pathways and completion policy self-assessment tool: Aligned with the Completion by Design "Preventing Loss, Creating Momentum" framework.* Retrieved from http://www.jff.org/sites/default/files/publications/materials/PSPN_SelfAssessmentTool_101713b.pdf

This tool provides a set of policy-based questions designed for states to evaluate the progress that has taken place and the priorities that have been implemented to increase community college student success, retention, and completion. Using this survey, colleges can compare their progress with a set of policies recommended by Jobs for the Future, many of which directly integrate measures to implement and expand structured pathways models. Categories include Political Leadership and Commitment, Data System Capacity and Use, Student Engagement and Support Services, Continuous Improvement Processes, Outcomes-based Funding, and Financial Aid and Affordability, all of which align to the Completion by Design Preventing Loss, Creating Momentum Framework.

Kadlec, A., Immerwahr, J., & Gupta, J. (2013, September). *Guided pathways to student success: Perspectives from Indiana college students and advisors.* Retrieved from http://www.in.gov/che/files/FINAL-PA-ICHE_Guided_Pathways_Research_9_10_2013.pdf

This report, designed to contribute to the growing evidence base for improving advising and program development, includes an overview of pathways components, additional insight into how these components affect advisors and students, and quotes from campus advisors and students from several two- and four-year institutions. The authors also provide strategies for embedding promising practices such as early alert and intervention and academic goal setting and planning within pathways designed to increase student engagement and completion. Additionally, the report provides an extensive profile of a four-year institution in Indiana with additional qualitative data describing obstacles to implementation as well as feedback from policy and practice applications.

Karp, M.M. (2013). *Entering a program: Helping students make academic and career decisions* (CCRC Working Paper No. 59). New York, NY: Community College Research Center, Teachers College, Columbia University.

This literature review presents evidence focused on academic and career planning as it impacts student decision-making. The author emphasizes four principles that emerge from the research: (1) pathways must provide both structure and opportunities for exploration; (2) career advising and academic advising should be integrated; (3) student support services are most effective when targeted to student needs and cognizant of varying levels of need; and (4) counseling resources should be strategically allocated to provide the greatest support to students with the greatest needs. Colleges considering structured pathways must rethink how advising and counseling are delivered on their campus to maximize the benefits of increased structure. Examples from community colleges in California, Florida, North Carolina, Virginia, and New York are included. The author emphasizes that redesigned academic pathways will succeed only when accompanied by reformed counseling and advising systems. She concludes that, "doing so will require a renewed focus on advising and counseling – coupled with new technologies, new professional structures, and a commitment to working with the students who require the most support in a sustained and developmental way" (p. 26).

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2010). *Student success in college: Creating conditions that matter.* San Francisco, CA: Jossey-Bass.

A chapter in this text is dedicated to "Clear Pathways to Student Success." In this section, several profiles are offered with ways in which Documenting Effective Educational Practice (DEEP) institutions are creating structured pathways to support student success. Most DEEP institutions have first-year experience programs, many of which include summer transition

programs. Several also enhance their orientation for new faculty by including ways that they can support students academically and socially. Others have created a weekly Faculty Colloquium where faculty can share best practices and strengthen the interdisciplinary culture of the school. Some DEEP institutions have added student representation (of up to 20%) to the faculty recruitment and faculty orientation processes. Additional profiles included in this text highlight components of DEEP schools' pathways, such as structured peer mentorship for incoming students and campus events that incorporate the college mission or code of conduct in a presentation of campus traditions and social events.

Kuh, G. D., O'Donnell, K., Reed, S. D., (2013). *Ensuring quality & taking high-impact practices to scale.* **Washington, D.C.: Association of American Colleges and Universities.**

In discussions about how to improve and scale up high-impact practices, George Kuh notes that too few students take part in high-impact practices. Scholars and practitioners need to "better understand why they work, and possibly identify other practices, activities, and experiences that may have similar positive influences on undergraduate student learning and personal development" (p. 7). Kuh also points out that, "while it's true that virtually all students, no matter their background, report positive effects [from high-impact practices] . . . certain groups are systematically underrepresented" (p. 12). Ken O'Donnell continues this conversation, adding that colleges must not only scale up the quality and size of high-impact practices, but that of articulation between institutions, curriculum and pedagogy, and real-world contextualization. He stresses that "we also need to know whether the gains we see with high-impact practices will hold up in the context of student mobility" (p. 22).

McClenney, K., Dare, D., and Thomason, S. (2013, April/May). Premise and promise: Developing new pathways for community college students. *Community College Journal,* **56-63.**

The authors present a new, integrated model of academic pathways that emphasizes the student experience as central to student success. Traditionally, community college academic and support systems have functioned in silos, providing an incoherent experience that allows students to "wander into the college, wander around the curriculum, and then, all too soon, wander out the door" (p. 57). Based on evidence from researchers, the authors propose structured academic pathways composed of related programs, facilitating student entry into a proscribed course of study early in their postsecondary experience while also supporting exploration as a foundation for career choice. The embedded potential for stackable credentials allows students to pursue transfer, employment, or both. In addition, the academic pathways model creates and supports learning communities, embedded advising, and opportunities for discipline-appropriate co-curricular and experiential learning, integrated developmental coursework, and credit for prior learning. The increased structure of the academic pathways model provides a foundation on which students enter college, progress seamlessly through their coursework, and receive the support needed for completion. As the authors observe, "if we aspire to better results, we must first imagine and then implement better educational designs" (p. 63).

McClenney, K., and Dare, D. (2013, June/July). Forging new academic pathways: Reimagining the community college experience with students' needs and best interests at heart. *Community College Journal,* **21-26.**

This is the second article in the authors' three-part series advocating for the development of structured academic pathways informed by research-based design principles. Academic pathways chart a student's course from community college entry to completion, and are unlike "the typical community college experience [that] provides many opportunities for students to slip through the cracks, even when there is a clear sequence of courses" (p. 24). While no college has yet to implement the full academic pathways model, individual aspects of the model have been successfully incorporated in institutional initiatives, many of which are surveyed here. First year experiences, academic and student support services embedded in coursework, redesigned

math and English curricula, and contextualized learning are among the examples presented, drawn from community colleges and organizations around the country. In addition, the authors discuss the professional development needed to support such initiatives. As evidenced by the effectiveness of components of the pathways model already implemented at institutions referenced in the article, redesigned student experiences can improve academic outcomes. To be successful, colleges aspiring to redesign the student experience must utilize "key design principles, implement them at scale, and do it all exceedingly well" (p. 26).

McClenney, K. and D. Dare (2013, August/September). Reimagining the student experience: Stepping up to the challenges of change. *Community College Journal,* **41-46.**

In this final article of their three-part series, the authors review the changes that must occur for colleges to reimagine the student experience and design structured pathways to improve completion. Acknowledging the central role of institutional culture in campus policy and practice, 12 critical areas are discussed as the authors highlight cultural influences that facilitate or hinder the creation and implementation of academic pathways. Establishing a culture that embraces student success as an overarching priority requires colleges to "move from fragmentation to integration, and...from isolation to collaboration" (p. 44) as members of the campus community learn to do things differently. Such efforts require a willingness to redefine traditional roles and redesign familiar processes - facilitated by courageous leadership, collaboration, a clear vision, and a sustained focus on critical goals. Barriers to completion must be removed, and resources reallocated to support the elements of a successful student experience. In this guide to the cultural challenges involved in transitioning to academic pathways, the authors recognize that the work will not be easy, but also affirm that it is possible, and that structured pathways are "necessary...to reach the critical goals of increasing college completion and achieving equity in student outcomes" (p. 46).

Nodine, T., Venezia, A., and Bracco, K. (2011). *Changing course: A guide to increasing student completion in community colleges.* **Retrieved from Completion by Design website: http://knowledgecenter.completionbydesign.org/sites/default/files/changing_course_V1_fb _10032011.pdf**

This comprehensive guide offers an overview of the Completion by Design initiative as well as of the planning stages of two-year institutions' redesign process. Citing the goals of providing a platform (and funding) for institutions to become more student-centered and designing highly-structured pathways for completion, the Completion by Design initiative seeks to increase student completion (both degree and certificate), abbreviate the time students take to complete programs, and prepare students for transfer to four-year institutions. The report includes recommendations for design and programming such as integrating academics, career, and technical education; increasing connections with K-12 schools, four-year institutions and employers; designing course sequences within programs of study; embedding early alert systems throughout students' degree progress; and defining learning outcomes across academic programs. Additional components involve innovative course design in terms of acceleration and/or modular structures, and embedding pathways needs, such as technological infrastructures, within the foundational financial and academic priorities of the institution.

O'Banion, T. (2011, August/September). Guidelines for pathways to completion. *Community College Journal.* **Retrieved from http://www.ccjournal-digital.com/ccjournal/20110809?pg=6#pg1**

In this article, O'Banion stresses that creating effective pathways in community colleges involves "redesign[ing] existing policies, programs, practices, and the way they use personnel in order to form a new seamless, integrated system that begins in our high schools, or at least at the points where ABE/GED/ESL and returning adults enter the pipeline, and follows through completion" (p. 29). He stresses that implementing promising practices in isolation or "grafting" on "prosthetic technology" (p. 29) are incomplete methods of institutional reform. Rather, full-fledged reform

should include (1) leadership that reflects all stakeholders, (2) consistent data snapshots as well as longitudinal data collection and interpretation to inform evidence based decisions, (3) integrated preparation for college success in all courses across disciplines, (4) consistent and meaningful employee development, (5) implementation of technological innovations that assume the necessity for constant expansion, (6) policies and guidelines for addressing rapid expansion or scaling up of successful initiatives to address all students, (7) reapplication and the search for additional financial resources, and (8) the establishment and maintenance of communication between all stakeholders.

Ross, R., White S., Wright, J., & Knapp, L. (2013). *Using behavioral economics for postsecondary success* [White Paper]. Retrieved from Ideas42 website: http://ideas42.org/content/Using%20Behavioral%20Economics%20for%20Postsecondary% 20Success_ideas42_2013.pdf

Behavioral economics examines how and why people make particular choices. The authors invite readers to focus on the behaviors underlying student decision making, and to be creative in designing interventions that address these behaviors. Procrastination, inconvenience, and mental fatigue are proposed as causative factors in poor student choices. During their college experience, students are often overwhelmed with too many choices, and mental fatigue contributes to poor decision-making. Interventions should reduce choices, increase structure, and automate processes when possible. Examples of successful interventions in financial aid processes, student savings account programs, and summer counseling are provided. New Community College (NY) (now Guttman Community College/CUNY) is included as an institutional example. The authors observe that "the importance of structured decision making can't be underestimated if the goal is getting more students to complete" (p. 35), and suggest that behavioral interventions are the most cost-effective and easy to scale efforts for improving student success.

Scott-Clayton, J. (2011). *The shapeless river: Does a lack of structure inhibit students' progress at community colleges?* (CCRC Working Paper No. 25). Retrieved from Community College Research Center website: http://ccrc.tc.columbia.edu/media/k2/attachments/shapeless-river.pdf

This paper delves into the theories behind student choice and decision-making, positing that certain systems that are in place within an institution may create paradoxical situations in which student decisions are not supported in the long term because there is no systematic method of requiring students to follow through on their decisions and no system of integrated support to help students do so. The author asserts that unstructured programs of study can be particularly inequitable for first-generation college students or those who do not have access to college information. Practices such as more structured, sequential degree plans, access to aligned or sequential programs of study, more intensive advising so that students are able to weigh their options and make informed decisions, implementing learning community models so that students also have access to such information through their peers, and ensuring that curriculum is aligned and coherent across academic disciplines are all recommended. Lastly, Scott-Clayton stresses that there are innovative ways of creating more highly structured academic plans that do not necessarily limit student choice, such as creating collections of courses that students can choose from that are aligned to a more regimented academic course sequence.

Scott-Clayton, J. (2011). *The structure of student decision-making at community colleges* (CCRC Brief No. 49). New York, NY: Community College Research Center, Teachers College, Columbia University.

This brief proposes investigating several psychological and behavioral factors that affect student completion, such as students' feelings of being overwhelmed or pressured to make decisions that align with the given system rather than those that are best for their individual academic progress and needs. It also describes several interventions that research indicates could be powerful

measures to support and increase student experiences and completion. In addition to intrusive advising practices and learning communities, a refocus on curriculum cohesion and alignment, as well as the need for radical structural changes, are also discussed. Each recommendation is accompanied by a brief profile of a college's experiences during implementation.

Symonds, W. C., Schwartz, R. B., & Ferguson, R. (2011). *Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century.* Report issued by the Pathways to Prosperity Project, Harvard Graduate School of Education. Retrieved from Southwest Alabama Workforce Development Council website: http://www.sawdc.com/media/5959/pathways_to_prosperity_feb2011.pdf

The main focus of this report is examining the ways in which a pathways model can prepare students with the necessary skills and knowledge to become competitive and highly contributing members of the workforce. The report cites lower completion at two-year colleges as compared with four-year colleges (29% versus 56%, respectively), high school dropout rates, and gender gaps in degree attainment to illustrate some of the ways in which the current education system has not kept up with the changing needs of its students. With the emerging needs of the 21st century workforce and the necessity for young adults to obtain skills relevant to shifting global needs, this report stresses that post-secondary institutions should "focus more attention and resources on programs and pathways that do not require a bachelor's degree but do prepare young people for . . . middle-skill jobs," highlighting the "central role that community colleges [play] in vocational training programs and apprenticeships" (p. 6). While emphasis is placed on how higher education institutions can support such models, the report also investigates the benefit of reform for employers, businesses, and governments to meet the new needs and demands of an increasingly global marketplace.

The Completion Arch: Measuring Community College Student Success

Transfer and Completion—Annotated Bibliography

Adelman, C. (2005). *Moving into town and moving on: The community college in the lives of traditional-aged students*. Washington, DC: Office of Vocational and Adult Education, U.S. Department of Education. Retrieved June 25, 2010, from http://www2.ed.gov/rschstat/research/pubs/comcollege/movingintotown.pdf.

Author abstract: [This publication] offers a series of transcript-based portraits of traditional-age community college students. As of 2001, students under the age of 22 constituted 42 percent of all credit-seeking students in community colleges and those under the age of 24 constituted nearly three-fourths of first-time community college students. As the baby-boom echo continues to play out with larger high school graduating classes, and as national and state policies focus even more intensely on the intersection between secondary and postsecondary education, this group is of increasing importance to community colleges. The three portraits offered here are designed to help community college administrators and faculty, along with state higher education officers, in developing responsive indicators of institutional performance. They may also prove useful to researchers in refining and refreshing the questions they ask and the variables they employ when exploring similar terrain.

Adelman, C. (2006, October 13). The propaganda of numbers. *Chronicle of Higher Education*, p. B6. Retrieved June 24, 2011, from http://chronicle.com/article/The-Propaganda-of-Numbers/2883/.

Education statistics can be misleading when they are not complete or are taken out of context, which in turns causes undue concern and misguided policies. Official statistics from the National Center for Education Statistics are scrupulously checked but can still give varying impressions of the underlying reality depending on the

definitions and populations used. This article illustrates the problems with statistics in popular representations of U.S. graduation rates and attrition in educational attainment from high school to college.

Adelman, C. (2007, March 12). Making graduation rates matter. *Inside Higher Ed.* Retrieved June 24, 2011, from http://www.insidehighered.com/views/2007/03/12/adelman.

This article proposes a series of steps for postsecondary institutions to calculate and report graduation rates as an alternative to a national "student unit record" system. The authors suggests a standard definition of the "academic calendar year" and that rates should be calculated separately for traditional (under age 24) and non-traditional (age 24 and up) students, as well as calculating rates for formal transfer students so that 4-year institutions get credit for transfer student completion. Institutions should also make an effort to determine whether students who left their institution graduated from another institution.

Adelman, C. (2009). *The spaces between numbers: Getting international data higher education straight.* Washington, DC: Institute for Higher Education Policy. Retrieved June 24, 2011, from http://www.ihep.org/publications/publications-detail.cfm?id=131.

Author abstract: The research report, The Spaces Between Numbers: Getting International Data on Higher Education Straight, reveals that U.S. graduation rates remain comparable to those of other developed countries despite news stories about our nation losing its global competitiveness because of slipping college graduation rates. The only major difference—the data most commonly highlighted, but rarely understood—is the categorization of graduation rate data. The United States measures its attainment rates by "institution" while other developed nations measure their graduation rates by "system."

Albright, B. (2010). *Suggestions for improving the IPEDS graduation rate survey data collection and reporting* (NPEC 2010-832). Washington, DC: National Postsecondary Education Cooperative. Retrieved June 26, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010832.

Author abstract: The National Center for Education Statistics (NCES) at the U.S. Department of Education developed the Graduation Rate Survey (GRS) to help institutions comply with the "Student Right-to-Know (SRTK) Act" requirements. NCES uses GRS data to calculate graduation rates within 150 percent of normal time for all students in the GRS cohort, as well as 100 percent and 125 percent of normal times for students seeking bachelor's degrees, by race/ethnicity and by gender.

Responding to the GRS is wrought with complexities. Respondents are required to be aware of which students to include (e.g., can first-time students attending the previous summer be included), which students to exclude (e.g., can students who temporarily stop their studies because of military service be excluded), and the dates used to compute an accurate graduation rate. The purpose of this paper is to present recommendations for reducing complexity and confusion of completing the GRS survey as well as improve the standardization of data. The paper summarizes findings from two activities: deliberations of the NPEC GRS Working Group (with feedback from the full NPEC membership) and an analysis of graduation rate survey perceptions using entries in the Common Dataset listserve.

Bailey, T., Crosta, P. M., & Jenkins, D. (2006, August). *What can student right-to-know graduation rates tell us about community college performance?* CCRC Working Paper No. 6. New York: Community College Research Center, Columbia University, Teachers College, Columbia University. Retrieved June 22, 2011, from http://ccrc.tc.columbia.edu/Publication.asp?uid=498.

Author abstract: This paper examines the validity of the Student Right-to-Know (SRK) graduation rates as measures of community college performance. The SRK rates are the only performance measures available for every undergraduate institution in the U.S. Many community college educators argue that the SRK rates give an inaccurate picture of community college outcomes. Using data from national longitudinal surveys of college students, we examined criticisms commonly leveled against the SRK measures and found that the SRK rates do indeed yield a biased and potentially misleading picture of individual community college student outcomes. We then analyzed the usefulness of the SRK rate as a measure of relative institutional performance. Specifically, we considered whether using different measures of performance would result in substantially different rankings of Florida's 28 community colleges. Contrary to initial expectations, we found that the relative performance of the colleges did not change substantially as different students or outcomes were used. Even after we adjusted for student characteristics that might affect outcomes, the college rankings were still fairly stable.

Bailey, T., Jenkins, D., & Leinbach, T. (2005). *Is student success labeled institutional failure? Student goals and graduation rates in the accountability debate at community colleges.* CCRC Working Paper No. 1. New York: Community College Research Center, Teachers College, Columbia University. Retrieved June 26, 2011, from http://ccrc.tc.columbia.edu/Publication.asp?uid=342.

Author abstract: Community colleges are open-door institutions serving many students with academic, economic, and personal characteristics that can make

college completion a challenge. Their graduation rates are low, but community college students do not always have earning a degree as their goal. While individual students may feel that their experience at a community college is a success, unless it culminates in a credential or transfer to a four-year institution the enrollment is counted as a failure for the college. This report explores different views on whether graduation rates are a fair and valid measure of community college effectiveness. It indicates how these rates can be useful as a relative measure and as a guide for institutional improvement, and suggests other ways of measuring student and institutional success.

Bosworth, B. (2010, December). *Certificates count: An analysis of sub-baccalaureate certificates*. Washington, DC: Complete College America. Retrieved June 26, 2011, from http://dl.dropbox.com/u/13281059/Other%20Certificates%20Count%20Release%20Docs/Certificates%20Count%20FINAL%2012-05.pdf.

This report advocates for the expansion of sub-baccalaureate programs in the United States to increase postsecondary attainment and improve the labor market. Section I of the report uses IPEDS data to examine that current status and trends of certificate awards, including institution sector, field of study, and program duration. Section II reviews the literature that attempts to measure the economic returns to certificates at the national and state levels. Section III summarizes the major findings and provides recommendations for policy makers.

Bradburn, E. M., Berger, R., Li, X., Peter, K., & Rooney, K. (2003). *A descriptive summary of 1999–2000 bachelor's degree recipients 1 year later, with an analysis of time to degree* (NCES 2003-165). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 23, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003165.

Author abstract: This report provides a basic demographic profile of 1999–2000 bachelor's degree recipients and examines the institutional paths they took to complete the baccalaureate. It also describes the amount of time it took them to do so, assessed from both the time they completed high school and the time they entered postsecondary education. Estimates of time to degree are also compared with those for 1992–93 bachelor's degree recipients. A table compendium provides more detailed information about the demographic characteristics, undergraduate experiences, and current activities of these college graduates as of 2001.

California Partnership for Achieving Student Success (Cal-PASS). (n.d.). *Overview*. Retrieved June 28, 2011, from http://www.cal-pass.org/HowDoes/Default.aspx.

Author abstract: Cal-PASS is an initiative that collects, analyzes and shares student data in order to track performance and improve success from elementary school through university. Utilization of the Cal-PASS Core Values represents a new approach to improving education.

Cohen, A. M. (2003, April). *The community colleges and the path to the baccalaureate*. Research and Occasional Papers Series. Berkeley, CA: Center for Studies in Higher Education, University of California, Berkeley. Retrieved June 23, 2011, from http://escholarship.org/uc/item/1dx9w981.

Author abstract: This paper discusses several aspects of the community college role in providing access to further studies: ways of calculating transfer rates and estimates of the number of students making the transition, incentives for and inhibitors to student transfer as reflected in state policy and institutional practice, and a look to the future of transfer. It emphasizes California, which boasts by far the greatest community college and public university enrollment figures.

Cook, B., & Pullaro, N. (2010, September). *College graduation rates: Behind the numbers.* Washington, DC: Center for Policy Analysis, American Council on Education. Retrieved June 27, 2011, from http://www.acenet.edu/links/pdfs/cpa/2010_09_30_collegegraduationrates.html.

Author abstract: Overall, this report highlights the complexities of measuring what many policy makers view as a simple compliance metric with the existing national databases. Just because the existing databases used to calculate graduation rates were not designed with the current policy demands in mind does not render them useless. The databases referenced in this report provide valuable information on graduation rates; however, as the disadvantages of these databases reveal, users of these data should take care in using them to measure the overall effectiveness of postsecondary education institutions.

Ewell, P. T. (2010). *Data collection and use at community colleges*. National Center for Higher Education Management Systems (NCHEMS). Retrieved June 26, 2011, from http://www2.ed.gov/PDFDocs/college-completion/13-data-collection-and-use-at-community-colleges.pdf.

This article states the need for improved data systems for community colleges to assess the needs of the students they serve, and how well they are being served. The author states that flexible longitudinal data systems that incorporate non-credit student populations (e.g., ABE, GED, and vocational certificate enrollments) and intermediate performance and outcome measures, such as completion of

gatekeeper courses and college-credit completion milestones. The author concludes with a list of some remaining challenges to establishing these data systems.

Garcia, T. I., & L'Orange, H. P. (2010, July). *Strong foundations: The state of state postsecondary data systems.* Boulder, CO: State Higher Education Executive Officers. Retrieved June 28, 2011, from http://www.sheeo.org/sspds/.

Author abstract: The study describes state postsecondary data systems, a task made complex by the organizational reality that there is often no single, uniform entity or organization within a state to respond to survey questions associated with state postsecondary data systems. Rather, each state has a unique organization that implements and oversees the collection of its postsecondary data. State postsecondary data systems, then, reflect state oversight differences and are an amorphous group. There is often more than one postsecondary data system per state. They may be within a coordinating or governing board of higher education or another state agency or entity. They may contain data from only one institution of higher education, several institutions, institutions within a defined system, or all institutions in the state. Further, they may contain student data in the aggregate or at the unit record level. Ultimately, state constitutions and laws dictate coordinating and governing board missions, duties, and responsibilities, affecting the shape of each state's postsecondary data system. Understanding these differences is critical to the discussions currently taking place in the design, function, and goals of state P-20 data systems.

Horn, L. (2006). *Placing college graduation rates in context: How 4-year college graduation rates vary with selectivity and the size of low-income enrollment* (NCES 2007-161). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 24, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007161.

Author abstract: This report uses data primarily from the 2004 Graduation Rate Survey (GRS), a component of the Integrated Postsecondary Education Data System (IPEDS), to provide a systemwide overview of how graduation rates of comparable 4-year institutions vary with institution selectivity and the size of the low-income population enrolled. The report clearly shows that graduation rates dropped systematically as the proportion of low-income students increased, even within the same Carnegie classification and selectivity levels. Variations by gender and race/ethnicity also were evident. Women graduated at higher rates than men, and in general, as the proportion of low-income students increased, so did the gap between female and male graduation rates. The gap in graduation rates between White and Black students and between White and Hispanic students, on the other

hand, typically narrowed as the as the proportion of low-income students increased. In the end, the results indicate that serving large numbers of low-income students does not necessarily lead to low graduation rates.

Horn, L. (2010). *Tracking students to 200 percent of normal time: Effect on institutional graduation rates* (NCES 2011-221). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Author abstract: This Issue Brief examines institutional graduation rates reported at 200 percent of normal time, a time frame that corresponds to completing a bachelor's degree in 8 years and an associate's degree in 4 years. The report compares these rates with those reported at 150 percent and 100 percent of normal time for all nine institutional sectors. The purpose is to determine whether the longer time frame results in higher institutional graduation rates.

Horn, L., & Lew, S. (2007). *California community college transfer rates: Who is counted makes a difference.* MPR Research Brief #1. Berkeley, CA: MPR Associates, Inc. Retrieved November 1, 2010, from http://mprinc.com/products/pdf/horn_ccc.pdf.

Author abstract: This report presents six views of transfer rates based entirely on students' course taking. The study shifts the focus from students' stated intentions about transfer, which are often uncertain, to their actual behavior in pursuing an educational path that would make transfer possible. Its purpose is to provide data to inform ongoing policy analyses and discussions about transfer.

Horn, L., & Nevill, S. (2006). *Profile of undergraduates in U.S. postsecondary education institutions, 2003-04: With a special analysis of community college students* (NCES 2006-184). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 26, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006184.

Author abstract: This report is the fifth in a series of reports that provide a statistical snapshot of the undergraduate population. The reports accompany the newly released data from the National Postsecondary Student Aid Study, and each one includes a focused analysis on a particular topic. This report focuses on community college students, who represent about 4 in 10 undergraduates, or about 7.6 million students nationwide. With their open enrollment policies and relatively low cost, community colleges have long provided access to underserved populations, such as students from low-income families and those who are the first in their family to attend college. This report focuses on the relationship between a measure of degree commitment and student persistence among community college students. Student persistence is of concern to educators and policymakers because large numbers of

students who begin their college education in community colleges never complete it. The findings from this study help explain why community college students complete associate's degrees and occupational credentials at relatively low rates. It appears that a substantial proportion of students who enroll in formal degree programs do not necessarily want to complete a credential. Rather, greater proportions cited personal interest or obtaining job skills as reasons for enrolling. The results suggest that if community college graduation rates were based on students expressing a clear intention of transfer or degree completion rather than on simply being enrolled in a formal degree program, they would be considerably higher.

Manski, C. F. (1989). Schooling as experimentation: A reappraisal of the postsecondary dropout phenomenon. *Economics of Education Review, 8*(4), 305–312.

Author abstract: Dropout from postsecondary schooling is widely considered a social problem. In fact, reducing dropout would not necessarily make society better off. This conclusion derives from analysis of the process of postsecondary enrollment and completion. The key observation is that students contemplating enrollment do not know whether completion will be feasible or desirable. Hence, enrollment is a decision to initiate an experiment, one of whose possible outcomes is dropout. Experiments should be evaluated by their ex ante expected return, not by their ex post success rate. It follows that, told only the completion rate of enrolled students, one cannot judge whether the right enrollment decisions have been made.

Moltz, D. (2011, June 6). Redefining community college success. *Inside Higher Ed.* Retrieved June 6, 2011, from http://www.insidehighered.com/news/2011/06/06/u_s_panel_drafts_and_debates _measures_to_gauge_community_college_success.

This article reports on some current discussions around alternative measures of community college success being had by The Committee on Measures of Student Success, a group of fifteen policy experts tasked by the Department of Education with developing more appropriate indicators for community colleges as articulated in the Higher Education Opportunity Act of 2008. The article summarizes the discussions from a two day meeting, where the committee outlined a rough set of reporting framework recommendations and considered alternative measures of success, such as licensure exam pass rates and wage growth of graduates. The committee has until April 2012 to deliver a final report of recommendations.

Moore, C., Shulock, N., & Jensen, C. (2009). *Crafting a student-centered transfer process in California: Lessons from other states.* Sacramento, CA: California State University, Sacramento, Institute for Higher Education Leadership & Policy. Retrieved June 26, 2011, from http://www.hewlett.org/uploads/documents/Crafting_a_Student-Centered_Transfer_Process_in_California.pdf.

Author abstract: This report is the third in a series of reports analyzing the performance of California higher education in the areas of preparation, participation, completion, affordability, and benefits. It presents data related to these categories of performance by region and by race/ethnicity, and discusses key issues and policy recommendations for each category. It also describes California's performance relative to other states as presented in the National Center's Measuring Up 2008 report card.

Offenstein, J., & Shulock, N. (2009, August). *Community college student outcomes: Limitations of the Integrated Postsecondary Education Data System (IPEDS) and recommendations for improvement.* Sacramento, CA: Institute for Higher Education Leadership & Policy, California State University, Sacramento. Retrieved June 24, 2011, from http://www.csus.edu/ihelp/PDFs/R_IPEDS_08-09.pdf.

Author abstract: IHELP's report on the IPEDS analyzes the value and effectiveness of the system for understanding student outcomes in community colleges. The report discusses the system's shortcomings such as the limitation of the graduation rate data to full-time students, the difficulty in discerning student intent in order to report on the appropriate outcomes, and the limitations for using the data to make comparisons across colleges. Recommendations are made for improving the data collected and for better use of the data.

Offenstein, J., & Shulock, N. (2010, September). *Taking the next step: The promise of intermediate measures for meeting postsecondary completion goals.* Boston: Jobs for the Future. Retrieved November 1, 2010, from http://www.jff.org/sites/default/files/ATD_TakingtheNextStep_092810.pdf.

Author abstract: This report examines system, state and multi-state efforts and multi-institution initiatives to develop and use intermediate measures of student success as a tool to improve accountability and guide institutional efforts to improve student success. The report distinguishes between milestones that must be attained in order to get to completion and success indicators that increase a student's chances of completion. The report analyzes the differences in approach, definitions and uses of the data on intermediate measures and offers recommendations on the

collection, reporting and effective use of the data and the need for common practices and definitions.

Peter, K., & Cataldi, E. F. (2005). *The road less traveled? Students who enroll in multiple institutions* (NCES 2005-157). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 24, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2005157.

Author abstract: The purpose of this study is to provide an overview of the extent to which undergraduates attend multiple institutions as well as the relationship between multiple institution attendance and persistence, attainment, and time to degree. Students who attended multiple institutions are the population of interest here. Subsets of this population will also be examined—specifically, those who: (1) Attended two or more institutions at one time (co-enrolled); (2) Transferred between institutions; or (3) Began at a 4-year institution and attended a 2-year institution at some point. This report focuses on both 1995-96 beginning postsecondary students and 1999-2000 bachelor's degree recipients and is organized by survey and beginning institution type.

Provasnik, S., & Planty, M. (2008). *Community colleges: Special supplement to The Condition of Education 2008* (NCES 2008-033). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved June 26, 2011, from http://nces.ed.gov/pubs2008/2008033.pdf.

Author abstract: This Special Supplement to *The Condition of Education 2008* provides a descriptive profile of community colleges in the United States, examines the characteristics of students who entered community college directly from high school, and looks at rates of postsecondary persistence and attainment among community college students in general. It also compares the characteristics of these institutions and of the students who enroll in them with those of public and private 4-year colleges and universities.

U.S. Department of Education. (2006). *A test of leadership: Charting the future of U.S. higher education: A report of the commission appointed by Secretary of Education Margaret Spellings.* Washington, DC.

ERIC abstract: The future of this country's colleges and universities is threatened by global competitive pressures, powerful technological developments, restraints on public finance and serious structural limitations that cry out for reform. This report from The Secretary of Education's Commission on the Future of Higher Education, has recommended strategic actions designed to make higher education more accessible, more affordable, and more accountable, while maintaining world-class

quality. Colleges and universities must become more transparent, faster to respond to rapidly changing circumstances and increasingly productive in order to deal effectively with the powerful forces of change they now face. Reaching these goals will also require difficult decisions and major changes from many others beyond the higher education community. The commission calls on policymakers to address the needs of higher education in order to maintain social mobility and a high standard of living. It calls on the business community to become directly and fully engaged with government and higher education leaders in developing innovative structures for delivering 21st-century?educational services—and in providing the necessary financial and human resources for that purpose. Finally, it calls on the American public to join in this commission's commitment to improving the postsecondary institutions on which so much of our future—as individuals and as a nation—relies.