



## **Annotated Bibliography: PSE Retention Programs/Interventions**

The following research reports detail the results of programs or inventions designed to increase the retention of post-secondary students. This bibliography is intended as a sample of the recent literature on this topic, rather than an exhaustive list. For inclusion, articles or reports generally described experimental research studies of PSE retention programs. Preference was given to larger scale projects focused on colleges in jurisdictions outside of Ontario (in several cases, progress reports from ongoing, large-scale initiatives were also included). Where possible, links to the original research are provided.

### **Programs Directed Towards First-Year Students**

**(1.) Bremer, C., Johnson, D., Center, B.A., Castellano, M., and Hirschy, A. (2009) Relative Impact of Interventions to Improve Achievement and Retention. National Research Center for Career and Technical Education.**

This research group is tracking the progress of all Fall 2009 entering students at four US community colleges, over the next three years. The goal of the project is to determine which interventions (or combinations of interventions) have the strongest impact on student retention. The interventions consist of first-year experience programs, learning communities, mentoring, tutoring, and 'intrusive' advising. Complete administrative data are collected each semester, and the authors supplement these data with student surveys. This is the first of a planned series of reports; here, the authors include the background material and an outline of the overall research design.

(<http://136.165.122.102/mambo/content/view/61/>)

**(2.) Cavote, S. and Kopera-Frye, K. (2007). Non-traditional Student Persistence and First Year Experience Courses. Journal of College Student Retention: Research, Theory and Practice, 8, 477-489.**

This study was designed to determine if the effects of first-year experience courses would differ between traditional and non-traditional students. To define the traditional/non-traditional variable, the authors developed a composite score for each

student based on the self-reported presence or absence of certain characteristics (e.g. direct entry from high school, PSE attainment of parents, demographic and employment data, etc.). All other data were supplied through administrative records. Although the authors did not find a significant effect of the first-year experience course on persistence, they noted that the lowest persistence rates were found for the students with the highest non-traditional scores. A discussion is provided regarding the potential benefits of tailoring first-year experience courses to specific student populations.

**(3.) Collier, P.J., and Fellows, C. (2008). Expertise-Development Mentoring: An Intervention to Improve First-Generation College Freshmen's Academic Performance and Retention. American Sociological Association.**

This report describes the Student First Mentoring Project, a university pilot project funded by the US Dept. of Education. Participants were low income students whose parent(s) did not complete a university degree. Experimental conditions consisted of online plus face-to-face mentoring or online mentoring alone. These mentoring programs continued for the entire first year, and involved information sessions and discussions designed to familiarize first generation students with the institution, help them learn how to access college resources, and provide guidance on how to interact with faculty and other students. Results were strongly positive for retention of the students who participated in these programs, and significantly better than expected academic performance was also found. This report includes an extensive discussion of the background literature used to develop this project.

([http://www.allacademic.com//meta/p\\_mla\\_apa\\_research\\_citation/2/4/0/3/2/pages240329/p240329-1.php](http://www.allacademic.com//meta/p_mla_apa_research_citation/2/4/0/3/2/pages240329/p240329-1.php))

**(4.) Karp, M.M., and Hughes, K.L. (2008). Information Networks and Integration: Institutional Influences on Experiences and Persistence of Beginning Students. New Directions for Community Colleges, 144, 73-82.**

This qualitative report examines the self-reported factors that influenced retention of students at two large, urban community colleges in the northeast US. Students who enrolled in the second semester of their programs were randomly selected to participate in this study. Students were interviewed, administrative data were collected, and then students were re-interviewed six months later. The authors report that students who felt they were connected to "information networks" were most likely to persist. Information networks are defined as 'social ties that facilitated the transfer of institutional knowledge and procedures', and students are thought to benefit through connections on campus, social contact and increased information and support. It is the authors' conclusion that institutions can best facilitate the formation of information networks, by requiring that first-year students participate in a formal orientation or student experience program.

**(5). Keup, J.R. (2006). The Impact of Curricular Interventions on Intended Second Year Re-Enrolment. Journal of College Student Retention, 7, 61-89.**

This report draws on datasets housed by the University of California, Los Angeles, which contain freshman surveys and one-year follow-up surveys administered at approximately 700 US colleges and universities. The author examined the relationship between participation in one of three types of first-year programs (first-year seminar; service-learning program; learning community) on first-to-second year retention, as measured by the students' self-report of intent to re-enrol. This study found that service-learning programs (generally designed to increase students' interaction with their external communities) had a positive relationship with intent to re-enrol, much more so than the other programs. Based on survey results, the author postulates that this effect may be indirectly mediated by an increase in positive student-faculty interaction achieved through these service-learning opportunities.

**(6.) Miller, J.W., Janz, J.C., and Chen, C. (2007). The Retention Impact of a First-Year Seminar on Students with Varying Pre-college Academic Performance. Journal of The First-Year Experience & Students in Transition, 19, 47-62.**

Two studies are summarized in this report; a complete study using a full-year cohort of students at a large US university, and a replication of the study with the following year's cohort. The primary research question addressed the potential effectiveness of voluntary participation in a first-year seminar course on second-year retention. Seminar content included academic and social information regarding the college, information and tasks designed to improve study skills, communication exercises, and several other elements. Results showed that participants in the seminars returned for their second year at a significantly higher rate than non-participants. When categorized by prior academic performance, those with stronger academic ability returned at the highest rate. There was no interaction effect however, suggesting that this seminar was of benefit generally to all students regardless of previous academic performance.

**(7.) Pan W., Guo S., Alikonis, C., and Bai, H. (March, 2008). Do Intervention Programs Assist Students to Succeed in College? A Multilevel Longitudinal Study. College Student Journal.**

A large university in the mid-western US used new state-funding to develop a series of retention-targeted interventions. Although numerous individual programs were developed, they could be generally categorized as focused on one of the following: student advising, academic assistance, first-year experience programs, socialization, general orientation, or financial aid. The authors used three years of administrative data to track the retention and performance of students who participated in these programs. Results showed a significant increase in retention rates for students who participated in the academic assistance programs, as well as smaller positive effects on retention for

students in specific college areas, who participated in the advising and social integration programs.

([http://findarticles.com/p/articles/mi\\_m0FCR/is\\_1\\_42/ai\\_n25124432/](http://findarticles.com/p/articles/mi_m0FCR/is_1_42/ai_n25124432/))

**(8.) Robbins, S.B., Oh, I.S., Le, H., and Button, C. (2009). Intervention Effects on College Performance and Retention as Mediated by Motivational, Emotional, and Social Control Factors: Integrated Meta-analytic Path Analyses. Journal of Applied Psychology, 94, 1163-84.**

This report describes a meta-analysis of 107 previous studies in which a program-based performance or retention intervention was tested. Interventions were categorized by content into several types, including those directed towards improving academic skills, socialization among new college students, or first-year experience courses. Based on effect sizes in these studies, the authors conclude that interventions directed towards improving self-management skills (e.g. stress management; anxiety reduction) had the largest effect on retention, followed by programs designed to increase socialization; academic skills courses tended to improve course performance, but direct effects on retention were not found.

**(9.) Salinitri, G. (2005) The Effects of Formal Mentoring on the Retention Rates for First-Year, Low Achieving Students. Canadian Journal of Higher Education, 28, 853-873.**

First-year university students with relatively low entering grade averages volunteered for a program in which they received formal mentoring from more advanced students. A control group consisted of grade-matched students who did not participate in the mentoring program. Results showed that participants in the program showed significantly better grade performance and higher retention rates than those in the control group. The report details the experimental process, as well as further qualitative findings from interviews with participating students.

**(10.) Zeidenberg, M., Jenkins, D., and Calcagno, J.C. (2007). Do Student Success Courses Actually Help Community College Students Succeed? Community College Research Center Brief.**

Building on the positive results of similar, smaller-scale studies in Florida, these authors accessed the administrative records for the entire cohort of students who first enrolled in Florida community colleges in 1999, and tracked them for the following 5-6 years. The dependent variable was the attainment of a college credential (i.e. certificate or associate's degree) during that time (also accounting for those students who transferred to a 4-year institution). The authors tested whether enrolment in a Student Life Skills course had an impact on student persistence. The analyses in this study were

complicated by institutional differences (e.g. some colleges required this course to be taken by certain at-risk students; some colleges associated these courses with developmental or remedial courses) but in general, students who enrolled in this first-year course were more likely to persist in college. Some effects differed at individual institutions, and these differences, as well as recommendations for further research are discussed by the authors.

([http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?\\_nfpb=true&\\_ERICExtSearch\\_SearchValue\\_0=ED499357&ERICExtSearch\\_SearchType\\_0=no&accno=ED499357](http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED499357&ERICExtSearch_SearchType_0=no&accno=ED499357))

### **Learning Communities**

#### **(12.) Engstrom, C., and Tinto, V. (2008). Access Without Support is not Opportunity. Change: The Magazine of Higher Learning, 40, 46-50.**

This brief outlines a longitudinal study of learning communities at 13 two-year colleges and six four-year universities in a selection of US states. The institutions were selected as those known to have effective developmental learning community programs. All students involved in this project were categorized by the authors as academically-underprepared, predominately low-come students. At each institution, a large sample of students who were participating in learning communities was selected, along with non-participants taking the same course subjects. Data for this study include administrative records supplied by the institution, as well as student surveys on engagement. Results showed that average persistence rates across the two-year institutions, were approximately five percent higher for student in the learning communities, as compared to the control groups. Learning community students also reported higher levels of engagement in college activities, and higher levels of perceived support and encouragement.

#### **(13.) Scrivener, S., Bloom, D., LeBlanc, A., Paxson, C., Rouse, C.E., and Sommo, C. (2008). A Good Start. Two-Year Effects of a Freshmen Learning Community Program at Kingsborough Community College. An Opening Doors Demonstration Project: MRDC.**

This project took place at a large urban community college in which incoming students with skills challenges (i.e. a majority of these students had failed one or more incoming student skills assessments) took three of their classes together in small groups, as leaning communities. Counselling, tutoring and textbook vouchers were also available to these students. These students were tracked for two years and compared to a control group of students who had also volunteered for the program, but were not assigned to a learning community. Short-term college performance was stronger in the learning

community groups (as measured by courses passed and number of credits earned), but somewhat mixed regarding persistence. At the end of two years however, slightly more of the learning community students had persisted as compared to those in the control group. The report provides significant detail on all aspects of this project. Results were considered promising enough to expand this basic research design to multiple colleges (see Visher, et al., below)

(<http://www.mdrc.org/publications/473/overview.html>)

**(14.) Visher, M., Schneider, E., Wathington, H. and Collado, H. (2010). Scaling Up Learning Communities: The Experience of Six Community Colleges. National Center for Post-secondary Research.**

This study on learning communities is in the early stages, but has received significant funding from the US Dept. Of Education, the Bill & Melinda Gates Foundation, Lumina Foundation, and other partners. It is the first large scale study of academic learning communities using a random assignment approach. At each of the six participating community colleges, approximately 1000 students volunteered to join a learning community. The definition of the learning community varies somewhat from college-to-college, but is generally a linking of two or more courses (often including developmental-level courses) such that students progress together through these courses, with the aim of increasing curricular integration and student engagement to promote student success. At each institution, volunteers were randomly assigned either to the learning community program, or a control group (no exposure to the learning community program), and the progress and performance of both groups will be compared over time. This is the first of a planned series of reports; the experiences and lessons learned by college administrators and staff in designing and implementing these communities are shared in this first report.

(<http://www.postsecondaryresearch.org/index.html?Id=Publications&Info=NCPR+Publications>)

**Institutional Policies and Practices**

**(15.) Calcagno, J.C., Bailey, T., Jenkins, D., Kienzl, G., and Leinbach, T. (2007). Community College Student Success: What Institutional Characteristics Make a Difference? Economics of Education Review, 27, 632-645.**

The authors combine student-level data from a large US longitudinal survey with institutional-level data from a national database, in order to examine the factors related to community college student success (defined as credential attainment or transfer to a university degree program). Given the data sources, both institutional and student-

based characteristics were included in their statistical models of student success. Also, in what is reported as a novel approach, the authors include data for all institutions attended by the students, thus tracking students across multiple colleges. The report includes the results of several models, but generally concludes that the strongest relationships with retention were found for institutional size, relative composition of faculty, and student demographic characteristics.

**(16.) Carey, K. (2005). Choosing to Improve: Voices from Colleges and Universities with Better Graduation Rates. The Education Trust.**

The Education Trust has developed a web tool allowing comparison of graduation rates of US two-year or four-year institutions . In recognition of the impact of incoming student factors on graduation rates, institutions can only be compared to those with similar student characteristics. This report outlines best practices as described by those institutions with relatively high graduation rates; particular emphasis is placed on increased student engagement, quality of teaching and evidence-based decision-making.

(<http://www.edtrust.org/dc/publication/choosing-to-improve-voices-from-colleges-and-universities-with-better-graduation-rate>)

**(17.) Cutright, M. (2006) A Consortium Project to Improve Retention and the First Year of College: Results and Recommendations. Journal of College Student Retention, 7, 189-199.**

Nine community colleges in the southern US formed a consortium to evaluate and share institutional retention practices and results over a one-to-two year period. Results of this consortium were considered mixed in their success; however, the report outlines both the positive and the negative features of this collective project, as well as the relative advantages and disadvantages to individual institutions in forming retention research consortia.

**(18.) Fike, D.S. and Fike, R. (2008). Predictors of First-Year Student Retention in the Community College. Community College Review.**

The authors accessed four years of administrative data from a large US community college to determine which variables (student demographics, enrolment in particular courses, participation in institutional programs, among others) best predicted semester-to-semester retention. Successful completion of a developmental reading course showed the strongest positive impact on retention, followed by successful completion of a developmental mathematics course, enrolment in internet-based courses, and participation in student support services. Recommendations are made regarding

ensuring that college students acquire fundamental academic skills early in their programs in order to enable persistence.

(<http://www.highbeam.com/doc/1G1-186270792.html>)

**(19.) Goble, L.J., Rosenbaum, J.E., and Stephan, J.L. (2008). Do Institutional Attributes Predict Individuals' Success at Two-Year Colleges? New Directions for Community Colleges, 144, 63-72.**

This study used a large, longitudinal US database, from which the subset of students who first enrolled in a community college were drawn. Students were tracked for eight years to determine the rate of credential attainment as related to either individual characteristics (e.g. demographic variables) or institutional characteristics (a large series of variables ranging from student-body composition, institutional policies and practices, to the amount of spending on student services). The authors provide significant descriptive detail on these relationships and compare the overall institution graduation rates to those of subgroups of students.

**(20.) Jenkins, D. (2006). What Community College Management Practices are Effective in Promoting Student Success? A Study of High- and Low-Impact Institutions. Community College Research Center.**

Three cohorts of Florida community college students (approximately 150,000 students) were tracked in this study. Student transcripts were available for all new entrants in 1998-2000, who enrolled in the 28 community colleges. The colleges were ranked as to the likelihood of minority students persisting through three years (measured as completing a credential, transferring, or remaining enrolled). The top three (i.e. high impact colleges) and the bottom three (i.e. low impact colleges) were compared as to their institutional practices regarding retention as well as their institutional composition. The authors determined seven elements that they believe distinguished the two sets of colleges. The elements are discussed in depth; briefly, they include institutional focus on retention; targeted support for minority students; well-designed, aligned and proactive student support services; support for faculty development; experimentation with ways to improve instruction and support services; use of institutional research to track outcomes & program impact; and institutional management processes.

(<http://research.crc.losrios.edu/What%20CC%20Practices%20are%20Effective%20in%20Promoting%20Student%20Success.pdf>)



**(21.) Hossler, D., Ziskin, M., Moore, J.V., and Wakhungu, P.K. (2008). The Role of Institutional Practices in College Student Persistence. Association for Institutional Research.**

This paper expands on a presentation made to a conference of the Association for Institutional Research. The authors examined student-level records at three universities for a pilot project on the relationship between institutional policies and student persistence. Students surveys were also developed with questions aimed at targeting the institutional factors that could be influenced by institutional policy (e.g. student orientation; faculty interaction; availability and quality of student services). The authors then tracked student responses and retention rates by institution. Results showed that each institution had different predictors of retention, although support (primarily that of the students' families, but to a lesser degree, the support services of the institution) and student satisfaction were generalized as positive predictors of retention across the three schools.

([http://pas.indiana.edu/cb/docs/CBS\\_AIR08.pdf](http://pas.indiana.edu/cb/docs/CBS_AIR08.pdf))

**(22.) Kuh, G.D., Cruce, T., Shoup, R., Kinzie, J. and Gonyea, R.M. (2007). Unmasking the Effects of Student Engagement on College Grades and Persistence. American Educational Research Association.**

For this project, student-level records were obtained from 18 degree-granting US institutions. Each of these institutions had participated in the National Survey of Student Engagement (NSSE). The authors were interested in exploring the relationships between institutional practices and student engagement on student academic performance and persistence from first-to-second year. The authors found a significant positive relationship between student engagement in educationally-purposeful activities, and persistence through to second year. Results are also reported regarding relationships with academic performance, and secondary analyses are provided for subgroups of students across these institutions.

([http://nsse.iub.edu/uploads/AERA\\_2007\\_Kuh\\_et\\_al.pdf](http://nsse.iub.edu/uploads/AERA_2007_Kuh_et_al.pdf))

**(23.) Lee, D., Olson, E.A., Locke, B., Michelson, S.T., and Odes, E. (2009). The Effects of College Counselling Services on Academic Performance and Retention. Journal of College Student Development, 50, 305-319.**

In this study, comparisons were made between students who did or did not participate in college counselling services. Records were available for two cohorts of first-year students at a large public university, and the dependent variables included re-enrolment the following year and student grade point average. A positive relationship was found between participation in counselling services and student persistence. No such relationship was found for academic performance. The authors also present

results for secondary analyses of the group who did receive counselling, in order to explore relationships between different types of counselling (e.g. group therapy vs. individual sessions) and number of counselling sessions, and persistence and student performance.

([http://findarticles.com/p/articles/mi\\_qa3752/is\\_200905/ai\\_n31965570/pg\\_4/?tag=content;col1](http://findarticles.com/p/articles/mi_qa3752/is_200905/ai_n31965570/pg_4/?tag=content;col1))

**(24.) Sax, L.J., Bryant, A.N., and Harper, C.E. (2005). The Differential Effects of Student-Faculty Interaction on College Outcomes for Women and Men. Journal of College Student Development, 46, 642-657.**

This retrospective study used data from a large US longitudinal survey of university students. Data included information on demographic and family background characteristics, as well as survey responses to items addressing attitudes, personal values, educational achievements, and future goals, as well as PSE experiences. Results of the study focussed on exploring gender differences in an extensive list of reported types and quality of student-faculty interactions. The associations between these interactions and college outcomes are also analysed by subtypes of student groups.

**(25.) Scott, G., Shah, M., Grebennikov, L., and Singh, H. (2008). Improving Student Retention: A University of Western Sydney Case Study. Journal of Institutional Research, 14, 9-23.**

This article outlines institution-wide changes made at an Australian university with the goal of increasing student retention. It was a two-year project; based on literature reviews, as well as student and staff surveys, this institution identified six key areas that they believed could be impacted directly through changes made at the institutional level: (1) quality of student orientation; (2) accuracy and speed of computer systems; (3) contact information for students to resolve administrative issues; (4) first-year student engagement; (5) clear expectations provided to students; (6) promotion and communication of services available to students. Examples of how this institution addressed each area are provided in this report. Within two years, survey data supported a positive change in student satisfaction, and retention rates increased by four percent over this period.

(<http://www.aair.org.au/jir/Mar09/Scott.pdf>)

## **Reviews**

These final two papers provide excellent brief reviews of the US and Canadian literature on retention, with extensive reference lists.

**(26.) Bailey, T.R., and Alfonso, M. (2005). Paths to Persistence: An Analysis of Research on Program Effectiveness at Community Colleges. Lumina Foundation for Education, New Agenda Series.**

This review article describes recent initiatives in US post-secondary institutions. The relative imbalance in the amount of information available for four-year vs. two-year institutions is discussed, and the authors present information supporting further research on the impact of college policies and practices, student advising, and learning communities, on PSE persistence.

([http://www.achievingthedream.org/CAMPUSSTRATEGIES/PROMISINGPRACTICES/ABSTRACTS/paths\\_to\\_persistence.tp](http://www.achievingthedream.org/CAMPUSSTRATEGIES/PROMISINGPRACTICES/ABSTRACTS/paths_to_persistence.tp))

**(27.) Parkin, A. and Baldwin, N. (2009). Persistence in Post-Secondary Education in Canada: The Latest Research. Canada Millennium Scholarship Foundation.**

These authors review what is known regarding the impact of student variables, financial support, and institutional characteristics on PSE persistence in Canada. Persistence as it relates to underrepresented student groups is also discussed in detail. (Although retention intervention programs are not a focus of this review, it is included here as perhaps the most recent, thorough review of the Canadian literature.)

(<http://www.millenniumscholarships.ca/en/research/AllPublications.html>)