



## **REL Pacific Ask A REL Response**

Literacy  
December 2016

### **Question:**

**What are evidence-based practices that support students' success in coursework at college?**

### **Response:**

The following document is a response to an Ask A REL inquiry from leaders at the Palau Community College, including the Director of the Institutional Research and Evaluation, the Associate Dean of Academic Affairs, and the Dean of Student Services. The college is seeking to understand supports that could help prevent high failure rates in credit-bearing courses. Developmental courses were eliminated at the college, which led to a need for supports in the credit-bearing courses to ensure student success. In response to this inquiry, REL Pacific has gathered literature and online resources:

REL Pacific conducted a web-based search. Search terms and selection criteria for the resources are included in Methods. The resulting sources have been organized into these categories:

- Challenges in Persistence, Retention, and Student Success
- Student Support and Services
- Instructional Strategies
- First Year Experience Courses: Freshman Seminars
- Learning Communities

Descriptions of the resources are quoted from the publication abstract (Abstract) or the publication itself (Introduction or Excerpt). An abstract is used when available. However, if additional text in the resource provides important information not contained in the author's abstract, the additional information is provided.

## Research References

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *Review of Educational Research, 80*, 437-469. Retrieved from <https://journals.sagepub.com/doi/10.3102/0034654310370163>

*From the abstract:* Many of the democratizing opportunities provided by community colleges are diminished in the eyes of policy makers by inadequate rates of success. In particular, large proportions of students who enter community colleges do not persist for longer than a semester, complete a program, or attain a credential. This review critically examines academic and policy research in search of explanations, emphasizing what is known about challenges stemming from three levels of influence: the macro-level opportunity structure; institutional practices; and the social, economic, and academic attributes students bring to college. It provides examples of how factors operating at each level affect rates of success at key times, including the initial transition to college, the experience of remedial education, and persistence through credit-bearing coursework. The article also discusses potential and ongoing reforms that could increase rates of community college success by addressing one or more areas of influence (the macro, the institutional, or the individual). It is concluded that increasing success in the open-access, public 2-year sector requires reforms directed at multiple levels and cannot be achieved with either student- or institution-focused incentives alone.

*From the excerpt p. 448:* Some of the strongest evidence that institutional practices regarding academic coursework affect student success comes from two studies indicating that certain courses act as “gatekeepers” to college completion (Calcagno et al., 2006; Roksa, Jenkins, Jaggars, Zeidenberg, & Cho, 2009). Passing gatekeeper math and writing courses enables access to higher level coursework, significantly contributing to student progress. That relationship appears to hold even after accounting for differences in students taking and not taking gatekeeper courses. For example, a study in Florida found that among comparable students in remedial writing courses, those who passed the first-year composition course were more than twice as likely to graduate when compared with those who did not pass that course (Calcagno et al., 2006). A study of Virginia community college students showed that gatekeeper courses appear to offer similar benefits in that state (Roksa et al., 2009). And yet many students fail to take any gatekeeper courses at all.

*From the excerpt p. 450:* By virtue of their extensive course catalogues and numerous services, coupled with the diverse array of students they serve, community colleges provide ample opportunities but—according to some—insufficient information with which to guide students through choosing among opportunities. As a result of substantial informational requirements accompanied by too little advising, some students may take courses they do not

need, spend a longer period of time in coursework that financial aid will not fund, and eventually drop out (Grubb, 2006; Rosenbaum et al., 2006). For example, many community college students have little knowledge about course requirements and in some cases are not even aware that the classes they are taking are remedial and do not count toward a degree (Person, Rosenbaum, & Deil-Amen, 2006). This makes academic advising important to students' chances of success; one study finds that this is especially true for students with academic deficiencies (Bahr, 2008). When community colleges do not explicitly provide the information and social skills their students need, students face obstacles in finishing college and moving into the labor force (Deil-Amen, 2006).

Makuakane-Drechsel, T., & Hagedorn, L. S. (2000). Correlates of retention among Asian Pacific Americans in community colleges: The case for Hawaiian students. *Community College Journal of Research and Practice*, 24(8), 639-655. Retrieved from <http://eric.ed.gov/?id=EJ613501>

*From the abstract:* This study examined Hawaiian students' persistence at the four community colleges on the island of Oahu, Hawaii. The research covered a five-year period (10 semesters), fall 1991 —spring 1996, and focused on factors promoting persistence for students pursuing either liberal arts or vocational-technical degrees. Logistic regression was the statistical method used, and the analyses were performed separately for the two groups of students. The results indicated that four factors—cumulative grade point average, financial aid, average credit hours, and enrollment at Campus 4—were significant for both liberal arts and vocational-technical majors, whereas another two variables—reverse transfer and attending an urban high school — were significant for liberal arts students only. Recommendations for policies, programs, and strategies to promote persistence for Hawaiian students were based on those results.

*From the excerpt pp. 650–651:* In their order of predictive ability, the six significant variables predicting persistence of liberal arts students were (a) cumulative GPA, (b) receipt of financial aid, (c) average credit hours, (d) enrollment at Campus 4, (e) previous four-year institution experience, and (f) location of high school. For vocational–technical students, the relative order of predictive ability was (a) cumulative GPA, (b) receipt of financial aid, (c) average credit hours, and (d) attendance at Campus 4. For vocational–technical students, attending Campus 4 had a negative effect on persistence, whereas for liberal arts students, the effect was positive.

*REL Pacific at McREL was unable to locate a free link to the full-text version of this resource. Although REL Pacific at McREL tries to provide publicly available resources whenever possible, it was determined that this resource may be of interest. It may be found through university or public library systems.*

## Student Support and Services

Bettinger, E. P., Boatman, A., & Long, B. T. (2013). Student supports: Developmental education and other academic programs. *Future of Children*, 93-115. Retrieved from <http://eric.ed.gov/?id=EJ1015252>

*From the excerpt p. 93:* According to a growing body of research, the effects of remedial courses are considerably nuanced. The courses appear to help or hinder students differently by state, institution, background, and academic preparedness. The mixed findings from earlier research have raised questions ranging from whether remedial programs, on average, improve student academic outcomes to which types of programs are most effective. Administrators, practitioners, and policy makers are responding by redesigning developmental courses and searching for ways to implement effective remediation programs more broadly. In addition, recent research suggests that colleges may be placing too many students into remedial courses unnecessarily, suggesting the need for further examining the placement processes used to assign students to remedial courses.

The authors expand the scope of remediation research by discussing other promising areas of academic support commonly offered by colleges, including advising, tutoring, and mentoring programs, as well as supports that target the competing responsibilities of students, namely caring for dependents and balancing employment with schoolwork. They conclude that the limited resources of institutions and equally limited funds of students make it imperative for postsecondary institutions to improve student academic supports and other services.

*From the excerpt, p 104:* Several advising programs have focused specifically on students in need of remediation. The Beacon Mentoring program at South Texas College, for example, randomly assigned students in mathematics classes to receive a mentor who encouraged them to use tutoring and other campus services and to reach out for help if needed. An MDRC evaluation found that the program increased students' use of the campus tutoring center and reduced the likelihood that they would withdraw from the course. The evaluation found several notable subgroup differences.

Mentored classes helped part-time students pass their math classes at higher rates and helped students in developmental classes achieve higher scores on a final exam. Similarly, a 2008 study by Peter Bahr concluded that enhanced advising had significantly greater effects on course success and transfer rates for students at the lowest levels of remediation.

Karp, M. M. (2011). Toward a new understanding of non-academic student support: Four mechanisms encouraging positive student outcomes in the community college. CCRC Working Paper No. 28. Assessment of Evidence Series. *Community College Research Center, Columbia University*. Retrieved from <http://eric.ed.gov/?id=ED516148>

*From the abstract:* This paper examines the ways in which academically vulnerable students benefit from non-academic support. By reviewing theories of student persistence as well as program evaluation literature, the author identifies four mechanisms by which non-academic supports can improve student outcomes, including persistence and degree attainment. Programs associated with positive student outcomes seem to involve one or more of the following mechanisms: (1) creating social relationships, (2) clarifying aspirations and enhancing commitment, (3) developing college know-how, and (4) making college life feasible. Identifying these mechanisms allows for a deeper understanding of both the functioning of promising interventions and the conditions that may lead students to become integrated into college life. Notably, each of these mechanisms can occur within a variety of programs, structures, or even informal interactions. The paper concludes by discussing avenues for further research and immediate implications for colleges. A tabular review of empirical studies is appended.

Henning, M., Manalo, E., & Tuagalu, I. (2012). A comparison between Asian and Pacific Islands students in their use of academic advising services. *Asia-Pacific Education Researcher (De La Salle University Manila)*, 21(1), 141-150. Retrieved from [http://www.p.u-tokyo.ac.jp/~learning/LearningStrategiesProject/Publications\\_files/The%20Asia-Pacific%20Education%20Researcher\\_%201\(2012\).pdf](http://www.p.u-tokyo.ac.jp/~learning/LearningStrategiesProject/Publications_files/The%20Asia-Pacific%20Education%20Researcher_%201(2012).pdf)

*From the abstract:* In New Zealand, there is growing evidence to suggest an academic achievement disparity between Pacific Islands and Asian university students. The present study investigated an aspect of this disparity and considered students' intentions to seek academic support services and their actual uptake of those services. One hundred and fifty-two tertiary students participated in the study. Students were asked if they intended to access academic support services and whether they actually accessed these services. In addition, levels of academic achievement were obtained from academic records. The findings clearly showed a difference in grade average scores, with Asian students obtaining higher scores than Pacific Islands students. There were, however, no differences between the two groups in their actual use of academic advising services despite the Pacific Islands students indicating greater intent to seek assistance. The lower grade achievement and the higher intention to access services suggest there are definite implications for educationalists.

*From the excerpt p. 147:* One likely reason for students not accessing academic advising services is that they do not see personal value in those services, as Adams, Chen, and Khan (2007) found. Thus, what could appear as "avoidant behaviour" may be related to a failure in value perception as much as to a failure in converting goal-orientation to actual behaviour (Covington, 2000). The situation may be further complicated for Pacific Islands students, for the majority of whom church, family, and their wider cultural community place major requirements and responsibilities which inevitably impact on their study performance (Mara, 2006). Many of the goals related to these outside commitments may appear more important and valuable to students (e.g., Boekaerts et al., 2006, discussion of the importance students

place on nonacademic goals such as building up friendship networks). Hence, it would be sensible to contextually situate within these wider cultural communities any efforts at addressing value perception problems among Pacific Islands students.

## Instructional Strategies

Honara, M. (2013, October). Improving students' college math readiness: A review of evidence. Education Northwest. Retrieved from [http://educationnorthwest.org/sites/default/files/resources/improving%20college%20math%20readiness\\_0.pdf](http://educationnorthwest.org/sites/default/files/resources/improving%20college%20math%20readiness_0.pdf)

*From the abstract:* A major challenge facing students as they pursue a postsecondary degree is a lack of academic preparedness for college-level math, evidenced by high rates of referral to developmental math and low rates of college math completion. This study reviews rigorous research on the interventions and reforms that postsecondary institutions currently employ to address academic underpreparedness in math and to foster college math success. The interventions and reforms fall under three strategies: (1) intervening prematriculation with early assessment programs, bridges, boot camps, and brush-ups; (2) reforming developmental math; and (3) improving math instruction. While the evidence is limited, many of these interventions appear promising. In terms of programs that intervene prematriculation, the study found that an early assessment program decreased students' likelihood of placing into remedial math, and a summer bridge program improved students' college math completion in the short term. The effects of developmental math reforms vary with some models having a more substantial impact than others. While modularization and learning communities had no long-term impact on students' outcomes, shortening the developmental math sequence improved students' college math enrollment and completion. Mainstreaming improved students' overall credit accumulation and, in one study, degree completion. Finally, in terms of innovations that are strictly pedagogical, using structured forms of student collaboration and multiple representations in the math classroom improved students' developmental math performance. While the effects of these reforms are generally positive, most do not extend beyond improving students' math course performance. Moving forward, postsecondary math interventions and reforms may need to be more connected and comprehensive to have an enduring impact on students' college success.

Maxwell, M. (1997). The dismal state of required developmental reading programs: Roots, causes and solutions. Retrieved from <http://eric.ed.gov/?id=ED415501>

*From the abstract:* The traditional college required remedial reading course has many shortcomings: students are stigmatized by forced placement and resent the course; dropout rates are higher; and high-risk students who take the course take longer to complete degrees and take longer to shed the high-risk label. The skills taught tend to be speed, vocabulary, and comprehension which are taught in traditional ways and are often unrelated to those

skills needed to understand college textbooks. Also college reading teachers may be untrained in modern theory and research, lack skills in teaching adults, and usually are not knowledgeable about what other faculty members consider academic literacy. Courses are rarely systematically evaluated so there is no incentive to change topics, or the way they are taught. There is also little evidence of these courses improving reading skills or college success. The best solution is to integrate reading, writing, and study skills directly into the courses. Teachers should design innovative curriculum and teaching strategies in reading and writing for learning which combine language activities and rely on their interaction for learning. Other alternatives are to revive college preparatory programs and summer programs that offer interdisciplinary courses

Stahl, N. A., Simpson, M. L., & Hayes, C. G. (1992). Ten recommendations from research for teaching high-risk college students. *Journal of Developmental Education*, 16(1), 2. Retrieved from <http://ncde.appstate.edu/sites/ncde.appstate.edu/files/Reprinted%20from%20the%20Journal%20of%20Developmental%20Education.pdf>

*From the abstract:* Finding practical ideas about college reading that have been drawn from theory and research is difficult for most veteran instructors, but it is even more difficult for the beginner unaware of professional organizations and journals. This problem of dissemination is exacerbated by the fact that there are very few formal university programs that focus on the training of college reading specialists. Consequently, the authors of this article decided to generate a list of their own "best ideas" that they have culled from their years of teaching college reading. These 10 ideas, though not comprehensive, represent a synthesis of research and theory. More importantly, they are ones that have made a difference in the performance of the authors' students. In addition, the authors have purposely cited many scholarly sources in order to provide an extensive bibliography for colleagues new to the field.

### **First Year Experience Courses**

What works clearinghouse: First year experience courses. (2016). Retrieved October 2016, from [http://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc\\_firstyear\\_071916.pdf](http://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_firstyear_071916.pdf)

*From the background p. 3:* The first freshman seminar was offered in the late 1880s. After experiencing a lull in popularity, the seminar was reintroduced in the 1970s for three primary reasons: (a) an increased number of diverse students were coming to college unprepared for the academic and social challenges; (b) entering students had to sift through a vast number of new issues (such as curricular choices) upon matriculation because the enterprise of higher education was more complex; and (c) institutions realized that their reliance on peers to provide support was insufficient for students' success. In the early 1990s, Barefoot and Fidler identified five types of first year experience courses that still thrive on college campuses today. These are extended orientation, academic seminars with uniform content, academic

seminars with variable content, introduction to a discipline or professional seminars, and basic study skills seminars. More recently, hybrid versions of the courses, which include elements from more than one type, have also been offered.

The most common type of course is the extended orientation seminar. Its primary goal is to support student success during the freshman year. The most frequent topics associated with these seminars are study skills, campus resources, time management, career exploration, campus policies, and academic advising. Academic seminars with uniform or variable content are increasing in number. The content of these seminars can be uniform (i.e., each section has a set curriculum) or variable (i.e., different sections are built around a specific topic and/or the expertise of the faculty member). All academic seminars also focus on developing students' writing, critical thinking, and study skills. Seminars for introducing students to a discipline or profession focus on preparing students for the demands of their major and eventual profession. Basic study skills seminars are more circumscribed and revolve around helping students prepare for the academic rigors of college by focusing on building skills such as time management and note-taking.

*From the excerpt p. 6:* Clouse (2012) reported on students' persistence at the university to the third semester (i.e., whether students completed their freshman year). The author reported, and the WWC [What Works Clearinghouse] confirmed, that there was a positive and statistically significant difference in retention between students who participated in the *first year experience course* and those who did not. The WWC characterizes this finding as a statistically significant positive effect.

## Learning Communities

Price, D. V. (2005). Learning communities and student success in postsecondary education: A background paper. MDRC. Retrieved from <http://eric.ed.gov/?id=ED489439>

*From the abstract:* Learning communities bring together small groups of college students who take two or more linked courses together--typically as a cohort. During the last few decades, many colleges and universities have started or expanded learning communities as a method to deliver curricula to students and forge closer bonds between students, among students and faculty, and between students and the institution. The learning community "movement" has grown in large part because of the leadership and advocacy of the Washington Center for Undergraduate Education at Evergreen State College. What exactly is a learning community? This document describes learning communities and the potential payoff of learning communities.

*From the excerpt p. 3:* Although learning communities vary in scope and orientation, all types share several basic characteristics:

- Organizing students and faculty into smaller groups,

- Encouraging integration of the curriculum,
- Helping students establish academic and social support networks,
- Providing a setting for students to be socialized to the expectations of college,
- Bringing faculty together in more meaningful ways,
- Focusing faculty and students on learning outcomes,
- Providing a setting for community-based delivery of academic support programs, and
- Offering a critical lens for examining the first-year experience.

*From the excerpt p. 15:* Perhaps the most comprehensive research on learning communities and student outcomes was the three-year National Learning Communities Dissemination Project that involved 19 institutions, including 7 community colleges. The common lessons from all participating sites were:

Participation in learning communities resulted in the same or better grades for cohort students than for those in respective stand-alone course comparison groups;

Students who participated in learning communities — especially at community colleges — had significantly higher rates of retention than did their respective stand-alone counterparts; and

Student survey data indicated that the learning community college experience was inherently better than what they had experienced in stand-alone courses.

Goldman, C. A. (2012). A Cohort-based Learning Community Enhances Academic Success and Satisfaction with University Experience for First-Year Students. *The Canadian Journal for the Scholarship of Teaching and Learning*, 3(2), 3. Retrieved from [http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1119&context=cjsotl\\_rcacea](http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1119&context=cjsotl_rcacea) This URL did not work with IES transfer code Used alternate URL, but same source: [https://ir.lib.uwo.ca/cjsotl\\_rcacea/vol3/iss2/3/](https://ir.lib.uwo.ca/cjsotl_rcacea/vol3/iss2/3/)

*From the abstract:* Assessment of a successful cohort-based learning communities program for first-year undergraduate students shows that students in the program perform better academically and also report a higher level of satisfaction with their university experience than students who are not in the program. Students enrolled in arts and science at the University of Toronto, who take several large-enrolment courses in their first year, may optionally participate in the First-Year Learning Communities (FLC) program, designed to assist with the academic and social transition from high school to university. In this Freshman Interest Group model of learning community, the curriculum across the clustered courses is not linked. The FLC program was assessed over a five-year period, using student academic records and self-reported survey data. This paper also provides details on program design and implementation.

Graziano, J. , Schlesinger, M. R. , Kahn, G. , Singer, R. (2016). A Workbook for Designing, Building, and Sustaining Learning Communities. *Learning Communities Research and Practice*, 4(1), Article 6. Retrieved from [http://achievingthedream.org/sites/default/files/resources/a\\_workbook\\_for\\_designing\\_building\\_and\\_sustaining\\_learning\\_communities.pdf](http://achievingthedream.org/sites/default/files/resources/a_workbook_for_designing_building_and_sustaining_learning_communities.pdf)

*From the abstract:* To address the professional development needs of learning community instructors at Kingsborough Community College, faculty coordinators and program directors developed a workbook for instructional teams. This workbook walks instructors through the collaborative process of creating and sustaining successful links and focuses on what we believe is the heart of learning community work—transparency, relationship building, integration, assessment, and reflection. It both emerged from and encourages a backward design approach—starting with student learning outcomes and working backward to provide the collaboration, integration, and knowledge-construction that define learning communities and make the learning outcomes achievable. It further reflects the ongoing and cyclic nature of the collaborative process necessary for strong learning communities (Graziano & Kahn, 2013), taking collaborators from initial meetings through the development of deep and sustained integration, to assessment, reflection, and redesign. This workbook has been central in campus-wide efforts at Kingsborough to maintain philosophical and pedagogical integrity while intentionally developing and scaling learning communities; it is presented here as a resource that may be adapted to help serve the professional development needs of programs and instructors at other campuses.

## Methods

### Keywords and Search Terms Used in the Search

- "college retention" or "college persistence" AND "location" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "migration" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "emigration" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "career intention" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "opportunity" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "Pacific" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "remote" NOT "Dissertations & Theses"
- "college retention" or "college persistence" AND "rural" NOT "Dissertations & Theses"
- "college dropout" AND "location"
- "college dropout" AND "causes"
- "college dropout" AND "reasons"
- "academic support" AND "postsecondary" AND "Pacific"
- "student success" AND "college support" AND "Pacific"
- "postsecondary success" AND "first-year seminar"
- "first-year experience programs" or "freshman seminar"
- "student support services in colleges and universities"

- "learning communities" AND "Pacific" AND "college"
- "learning communities" AND "community college"
- "effectiveness of learning communities"
- "at risk for academic failure" AND "postsecondary success" NOT "high school" NOT "K 12"
- "academic skill" AND "college courses"
- "integration" or "immersion" AND "college courses"

### **Databases and Websites**

Google/Google Scholar, ERIC, EBSCO Host, ProQuest Education Journals

### **Reference Search and Selection Criteria**

The web search sought research studies that were published in peer-reviewed research journals within the last 20 years. REL Pacific searched for documents that are freely available online, but not all sources included are publicly available.<sup>1</sup> Resources included also had to be in English. Resources included in this document were last accessed in October 2016. URLs, descriptions, and content included in this document were current at that time.

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<sup>1</sup> This memorandum is one in a series of quick-turnaround responses to specific questions posed by educational stakeholders in the Pacific Region (American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, Guam, Hawai'i, the Republic of the Marshall Islands, and the Republic of Palau), which is served by the Regional Educational Laboratory (REL Pacific) at McREL International. This memorandum was prepared by REL Pacific under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-IES-17-C-0010, administered by McREL International. Its content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.