

RRN 596

# Strategies for Improving Persistence and Graduation/Transfer Rate of Basic Skills Students in Community Colleges

**Purpose:** To identify research results and best practices related to increasing persistence, academic success, degree completion, and transfer to four-year universities among community college students placed in developmental courses.

*Method:* The RP Group Center for Student Success's *Basic Skills as a Foundation for Student Success in California Community Colleges*, the draft recommendations of the Student Success Task Force, EAB research briefs<sup>1</sup>, and independent research publications and reports were reviewed and examined to identify factors that increase the likelihood that basic skills students will continue their college education, graduate, and/or transfer to a four-year institution.

# Summary of Research Findings:

Developmental Education

- Left to themselves, students often choose not to take any developmental courses
- Many students do not progress through the developmental courses in sequence
- Many students complete part, but not all, of their developmental requirements
- Students often complete one developmental course but do not enroll in the next course
- Students who fully or partially complete their developmental education requirements by the end of the first year are more likely to persist to the second year of college than students who postpone taking developmental courses
- Students who begin taking their developmental courses in their first year are more likely to succeed in college-level coursework
- Students who take recommended developmental courses in their first year are more likely to complete a degree or certificate
- 53% of students who transferred from community college to university and earned bachelor's degrees started below transfer level in math
- 37% of students who transferred to university and earned bachelor's degrees started below transfer level in English

<sup>&</sup>lt;sup>1</sup> Most of the studies documented in the EAB briefs were conducted at four-year universities. However, they targeted groups of students with qualities in common with community college basic skills students, such as commuter students (Robinson & Enyeart, 2009b; Wardell & Enyeart, 2009a) and students who struggle academically (e.g., Beaudoin & Kumar, 2012; Hlavac & Enyeart, 2008; Salaman & Osei-Mensah, 2012; Venit, 2008b; Wardell & Enyeart, 2009b).

## Educational Plans

- More than 80% of students who transferred from a community college to a university and earned a bachelor's degree had detailed education plans
- The performance of Extended Opportunity Programs and Services (EOPS) students indicates the value of educational plans
  - o EOPS students start college at both an educational and a financial disadvantage
  - o All EOPS students are required to complete education plans
  - Nursing and engineering students in EOPS transferred to university faster than non-EOPS students
  - Administration of justice, accounting, and teacher education students in the EOPS program transferred just as fast as non-EOPS students
  - The education plan that all EOPS students complete is likely to help students graduate on time, since students who receive financial aid, as a group, take 4 to 6 months longer to transfer, and EOPS students are part of this group

## Intervention with Struggling Students

- Using data to predict attrition and intervene with struggling students can increase persistence to the second year of college by as much as 7%
- Attendance tracking can increase persistence by 3 to 7%

## **Recommendations:**

### Developmental Education as an Institutional Priority

- Clearly articulated mission
- Clearly defined, realistic goals
- Faculty involved in decision-making
- Regular program reviews

### Matriculation and Student Services

- Matriculation policy
  - o Require assessment and placement before matriculation
  - o Students must begin addressing basic skills needs in their first year
  - Give registration priority to students who are making satisfactory progress toward a degree, certificate, or preparation to transfer
  - o Require orientation for all new students seeking degree, certificate, or transfer
- Orientation
  - Assign new students to peer mentor AND faculty/staff advisor, whom they meet at orientation
  - Invite families to orientation
  - Hold orientation in Spanish for family members
  - o If orientation is online, require students to pass a quiz
  - Hold group advising meetings to cover

- Course schedules
- Add/drop periods
- Support services and campus resources
- Advising policy
  - Consider changing the policy of requiring students to meet individually with advisor before matriculation
    - Students often have short, perfunctory meetings with advisors
    - Instead, require meeting with advisor in the student's first year
  - o Advisors give students "homework" between appointments to keep them involved
  - o Require students to develop an educational plan in their first year
    - Students can get help from faculty/staff advisors, peer mentors, and/or ASSIST.ORG
    - Advisors hold students responsible for adhering to plan
- Use technology to facilitate advising
  - Advisors can use technology to route students to campus services and to schedule appointments
  - Unify advising records campus-wide to make changing advisors easier
  - Offer a self-service advising intranet
    - Already in use at Stanford: <u>www.ual.stanford.edu</u>
    - May extend CCCApply to lead students to build a profile and access guidance and planning services
    - Reduces faculty/staff workload
    - Students can self-diagnose when they may need extra help
    - Students come to advising appointments better informed about available services
- Identifying and intervening with at-risk students
  - Underprepared students are most likely to need help, but least likely to be mature and selfaware enough to seek it
  - The burden is on the school to identify and help at-risk students
  - Faculty, advisors, counselors, and peer mentors can all refer students to tutoring or other needed services
  - Using data to predict attrition and intervene can increase persistence by 3 to 7%
  - Make first-year risk surveys mandatory by assigning them as homework and sending reminders to students and families
    - Based on survey results, students receive targeted email advertising campus services they might need
    - Counselors or advisors follow up on survey results
  - First-year attendance tracking requires faculty buy-in
    - Attendance tracking can increase persistence by 3 to 7%
    - If a student misses class more than twice in the first few weeks of the term, the instructor notifies the student's advisor, or emails the student
  - Ways to identify students at risk of dropping or stopping out:
    - Mandatory first-year risk surveys

- First-year attendance tracking
- Using existing data
- Faculty report to the counseling center if students miss more than three classes, show signs of personal issues, fail to submit important assignments, or receive low or erratic grades on important assignments
- Provide comprehensive and integrated student services
  - o Offer students on-campus employment
  - Guide students to resources for financial aid, counseling, child care, and transportation

## Alternative Learning Strategies

- Provide tutoring services
  - Instructors, advisors, and peer mentors refer struggling students to tutoring services early in the term
  - Develop students' problem-solving and analytical skills so they become more independent thinkers
  - Advertise tutoring center all over campus and in emails to students from faculty, peer mentors, counseling center
- Provide supplemental instruction
  - Offer SI with basic skills and "gateway" courses
  - Focus on content issues AND learning habits
  - Video-based SI can show students how to apply study strategies immediately with difficult coursework
- Require basic skills students to take study skills courses
  - Improved retention across all ethnic groups
  - Study skills courses can be linked to learning communities, major, or common co-curricular interests
  - Include info about campus services
  - Use learning methods shown to work for adult basic skills learners, including
    - Learning communities
    - Modularized instruction
    - Intensive instruction
    - Contextualized learning, especially within Career Technical Education programs
    - Team teaching

## Professional Development

- Provide long-term professional development for faculty who teach basic skills courses
- One-day workshops have little effect
- Train peer mentors and make sure line is clear between peer mentor duties and faculty advisor duties

## **Research Findings**

## Developmental Coursework

More than one in three California community college students enroll in a basic skills class (Center for Student Success, 2007). Currently, most colleges and universities in California and across the United States require assessment, but many do not require students to start at the recommended level, and even fewer require students to begin taking their developmental courses in their first term. At most U.S. colleges, students must take an assessment test, and based on that assessment they are placed into a certain level of collegiate or pre-collegiate math or English. However, at many colleges and universities, including California's community colleges, the process stops at this point. Regardless of their placement, students can choose to register for any level of developmental courses, or for freshman-level math and English, as well as other courses requiring reading, writing, and/or math, such as history, biology, and accounting (Bahr, 2008; Bailey, Jeong, & Cho, 2009; Clery & Topper, 2008).

Three of the large studies to date that compare students required to take developmental courses with students with similar test scores who were not required to take those courses are Bettinger and Long (2005), Calcagno and Long (2009), and Martorell and McFarlin (2011). The evidence from the three large studies is mixed, with one study (Bettinger & Long, 2005) showing clearly positive results of remediation, including likelihood of transfer and completion of a degree, but two others (Martorell & McFarlin, 2011 and Calcagno & Long, 2009) showing little or no positive effect of remediation on students' long-term educational accomplishments. The samples and results of these three studies are summarized below.

Bettinger and Long (2005) studied over 28,000 students, all of whom had listed a bachelor's degree as their educational goal, in Ohio public four-year and two-year colleges. In Ohio, assessment, placement, and remedial coursework, if deemed necessary, are mandatory, but colleges are allowed to set their own cutoff scores. This discrepancy allowed the researchers to compare students with similar scores who, because they attended different colleges, were given different placements. Bettinger and Long found that students enrolled in remediation are more likely to persist in college compared to those with similar test scores who did not take remedial classes. The community college students who took remedial courses were more likely to transfer to a university and to complete a bachelor's degree than community college students who were not placed into remedial courses.

The other two large studies comparing students enrolled in remediation to students who did not take remedial courses both made use of regression-discontinuity analysis. The method was applied as follows: students who scored just above the cutoff point for developmental math or English are compared with students who scored just below it. The reasoning is that, although assignment to college-level vs. pre-collegiate groups is not random, the student who scored one point above the cutoff score is not essentially different from the student who scored one point below the cutoff. Therefore, with some statistical controls, students who just passed the assessment and were placed in college-level English or math can be compared to students who just barely failed the assessment and were placed in developmental math. The two groups can be followed over time, and their future grades, graduation rates, etc. can be compared.

One of these regression-discontinuity studies was performed by Calcagno and Long (2009). The study included nearly 100,000 Florida community college students. As in Ohio, assessment and placement are mandatory in Florida; however, unlike Ohio, Florida has a statewide cutoff score below which students are not considered to be college-ready and are required to take remedial courses before they can begin college-level work in English and/or math. Calcagno and Long examined the test scores, grades, persistence, transfer, and degree and certificate completion statistics for students just above and just below the cutoff score. Students just below the math cutoff score were slightly less likely to pass their first college-level math course, earn as associate's degree, and transfer to a four-year university than students just above the cutoff. Though the differences were all negative (i.e., showing remedial students at a slight disadvantage), none of them were statistically significant. Similarly, students whose math scores were below the cutoff were slightly less likely to earn a certificate. The results were similar for students just above and below the cutoff score on the reading assessment test. The two groups (above and below the cutoff score for reading and math) earned the same number of college-level credits. Students who scored below the cutoff in math were slightly but statistically significantly more likely to persist to the next academic year than students whose scores were above the cutoff. In summary, there seems to be little, if any, positive long-term effect of requiring remedial coursework on students with scores near the cutoff.

Martorell and McFarlin (2011) performed another large regression-discontinuity analysis, this time with data from Texas, and using about 350,000 students at two-year and four-year public colleges and universities. At the time of data collection, Texas, like Florida, had mandatory assessment and placement as well as a statewide cutoff score. Interestingly, the cutoff score was changed part-way through the study, allowing the researchers to examine effects at different points in the distribution of scores. Martorell and McFarlin found results very similar to those of Calcagno and Long (2009); they found small, statistically insignificant negative effects of remediation on students who scored just below the cutoff compared to students who scored just above the cutoff.

It is important to note that the regression-discontinuity method used by Calcagno and Long (2009) and Martorell and McFarlin (2011) is most useful in examining differences between students who were just above and just below the cutoff point. This method does not give results on the value of remedial education to students who score well below the cutoff.

Another large study was conducted by Bahr (2008), with 85,894 students in California community colleges. In California, assessment is up to the individual college, and the decision of which courses to takeis up to the individual student. Bahr used hierarchical multinomial logistic regression to compare long-term academic outcomes (i.e., receipt of a degree or certificate or transfer to a four-year institution) of students who tested into college-level math with the outcomes of students who completed remedial math successfully. Although students who passed all their remedial coursework generally did as well as students not placed into remedial math, only about 25% of students placed in remedial math (some of whom started several levels below college math) finished their remedial course sequence successfully.

Boatman and Long (2010) performed a more nuanced study of more than 11,000 Tennessee college students assigned to one of four levels of developmental math and one of three levels of developmental reading and writing. They found that students starting three or four levels below college-level math, reading, and writing did clearly benefit from the developmental coursework, but that students placed only one level below college courses did not benefit: they completed fewer college-level courses in three years and were less likely to complete a degree within six years.

Clery and Topper (2008) used Achieving the Dream project data to compare credential-seeking students at two-year colleges who (a) were not referred to developmental education; (b) completed all of their developmental education requirements in their first year of college; (c) completed some of their developmental education requirements in their first year of college; or (d) did not complete any of their developmental education requirements in their first year. Students who fully or partially completed their developmental education requirements by the end of the first year were more likely to persist to the second year of college than either students who did not complete any developmental education requirements or students who were not referred to developmental education.

As suggested by Bahr's (2008) data, students referred to developmental math and/or English courses are much more likely to stop out or drop out of college compared with students not placed in these courses. According to Attewell et al. (2006), 68% of students pass all developmental writing courses they enroll in, and 71% pass all the reading courses they take. However, only 30% pass all of their math developmental courses. Furthermore, Bailey, Jeong, and Cho (2009) found that although some students did fail or withdraw from a course in the developmental sequence, far more students either did not enroll in developmental courses to start with, or completed one course in the sequence but did not enroll in the following course.

Several other publications provide valuable data about possible benefits or disadvantages of developmental coursework in college. Several researchers found that, left to themselves, students often choose not to take remedial courses (American Association of Community Colleges, 2011; Bailey, 2009; Fike & Fike, 2012; Perin & Charron, 2003; Perin & Charron, 2006; Perry & Rosin, 2010; Young, 2002). Others found that students do not progress through the recommended developmental courses in sequence (Bailey, Jeong, & Cho, 2010; Bailey, 2009). Many students complete part, but not all, of their recommended (or mandated) developmental coursework, often successfully completing one course in the sequence, but then not enrolling in the next (Bailey, Jeong, & Cho, 2009; Clery & Topper, 2008; Florida Department of Education, 2007; Perry et al., 2010; Perry & Rosin, 2010). Indeed, the title of the Florida Department of Education's publication summarizes the issue very well: "Half of College Students Needing Remediation Drop Out; Remediation Completers Do Almost as Well as Other Students." On the other hand, several studies found that students placed into developmental courses are more likely to persist in college, to succeed in college-level coursework, and to complete their degree or certificate program, *when they begin taking these courses in their first year* (Clery and Topper, 2008; Fike & Fike, 2012; Perry and Rosin, 2010; Perry et al, 2010).

## **Educational Plans**

The Center for Student Success of the Research and Planning Group for the California Community Colleges studied about 14,500 bachelor's degree holders who started in California community colleges (Cooper, Willett, & Pellegrin, 2012). The results indicated that more than 80% of this successful group had a detailed educational plan, formed by each student with help from an advisor, counselor, faculty member, or with the use of ASSIST.ORG (Blash et al., 2012a, 2012b; Cooper et al., 2012a, 2012b, 2012c). Moreover, nursing and engineering students in this study who made use of Extended Opportunity Programs and Services (EOPS) completed their community college work and transferred to a four-year institution faster than students not using the program, and just as fast as non-EOPS students in administration of justice, accounting, and teacher education (Cooper, Willett, & Pellegrin, 2012). EOPS students are required to complete an education plan (California Community College Chancellor's Office, 2012). Since EOPS students must qualify for the program by starting college at an educational and financial disadvantage, the fact that EOPS students completed their community college work as quickly as, or more quickly than, non-EOPS students may be one argument for the value of an educational plan. Of course, EOPS students also receive other help, so the success of EOPS students cannot be attributed to an educational plan by itself.

The University Leadership Council of the Education Advisory Board (2009) and the Student Success Task Force (2011) recommend mandatory education plans for all college students; however, the data in the studies supporting these recommendations are well over 10 years old.

#### Recommendations

### Developmental Education as an Institutional Priority

The RP Group's Center for Student Success (2007) and the Student Success Task Force (2011) both found that developmental education is more effective when it is a priority of the entire institution, at the district and college level. The Center for Student Success (2007) recommends a clearly articulated mission for developmental education, as well as clearly defined, realistic goals for the program. Including faculty in decision-making and holding regular meetings of all faculty and staff involved in developmental education also add to program success. Regular program reviews are also essential (Center for Student Success, 2007).

### Matriculation

In accordance with making developmental education a district-wide and college-wide priority, matriculation policy should be changed. The Center for Student Success (2007) found that mandatory assessment, orientation, and placement for new students resulted in better retention rates, and recommends that students be required to begin addressing basic skills needs in their first year, preferably in their first term. This policy leads to better grades and higher rates of successful completion of basic skills courses. Many students are not taking the basic skills courses that they need, so they end up in college courses they are not prepared for, and often end up dropping out (Student Success Task Force, 2011). To ensure that students can register on time to get the classes they need, Salaman and Osei-Mensah (2012) and Venit et al. (2009) recommend notifying students of registration holds weeks in advance so that they have time to pay before they need to register. This is a particularly important issue for community college students, who face full classes and waiting lists more often than students at fouryear schools, and who are often hoping to complete their basic skills and general education courses as quickly as they can in order to transfer to a four-year university or begin a career.

On a related note, the Student Success Task Force (2011) recommends that registration policy be changed so that students who are making satisfactory progress toward an academic goal, such as an associate's degree or transfer to a four-year institution, have priority over students who have merely amassed a large number of credit hours.

#### New Student Orientation

Besides changes to matriculation policy, several studies suggest that changes in the structure of new student orientation would improve retention and success of basic skills students. Wardell and Enyeart (2009a) recommend that in the case of commuter students like those at California community colleges, families be invited to orientation, since families provide emotional and financial support for commuter students. Venit (2008b) further suggests having orientation sessions in Spanish for families. If students are allowed to do their orientation online, Wernicke and Zellner (2012) advise having students complete quizzes to show that they have actually viewed and understood the material presented online. In the same research brief, the authors also recommend assigning every new student to a peer mentor and connecting students with mentors at orientation. Venit (2008c) found that assigning students to peer mentors raised retention rates at public universities, and Wardell and Enyeart (2009b) reported that students found peer mentors more understanding and more approachable than faculty or staff advisors, and that students felt more comfortable asking questions about college of a fellow student. Peer mentors, or other knowledgeable students, can present information about general education requirements, degree requirements, and campus services at orientation (Adjepong & Albert, 2011). Alternatively, Wernicke and Zellner (2012) recommend holding group advising meetings at which a faculty or staff advisor explains course schedules, add/drop periods, and support services.

#### Educational Planning and Advising

Some researchers (Robinson & Enyeart, 2009a; Center for Student Success, 2007) recommended changing the requirement that a student meet with an advisor one-on-one before matriculation. Though an educational planning meeting with a staff or faculty advisor is clearly desirable, this policy often creates "choke points" in the matriculation process, resulting in short, perfunctory meetings (Robinson & Enyeart, 2009b). Instead, students should use ASSIST.ORG and help from a peer mentor to create an initial education plan, and then meet with an advisor during their first year in college (Robinson & Enyeart, 2009b). Developing a detailed educational plan during the first year is key to student success in college (Center for Student Success, 2007; Student Success Task Force, 2011); students can get help from peer mentors, faculty or staff advisors, and ASSIST.ORG (Adjepong & Albert, 2011; Student Success Task Force, 2011; Center for Student Success, 2007; Wernicke & Zellner, 2012; Venit, 2008c). Advisors then hold students responsible for adhering to their plan (Krase & Osei-Mensah, 2012). Furthermore, students should take assessment tests before matriculation, and they should begin addressing any basic skills needs within their first year (Center for Student Success, 2007; Student Success, 2007; Student Success Task Force, 2011).

Although one-on-one meetings with advisors before matriculation may not be feasible, assigning every student to a faculty or staff advisor, as well as a peer mentor, is essential (Student Success Task Force, 2011; Center for Student Success, 2007). Venit (2009b; 2009c; Venit et al., 2009) suggests unifying advising records electronically so that advisors have all the information they need to help students, particularly when a student changes advisors. Advisors can also use technology to route students to tutoring or other campus services and to schedule and follow up with appointments (Krase and Osei-Mensah, 2012). Wardell and Enyeart (2009b) recommend that advisors give students "homework" between advising meetings to keep students more engaged in the advising process.

Colleges and universities are also using technology to assist in advising students. Stanford University has a self-advising intranet (www.ual.stanford.edu); the Student Success Task Force (2011) recommends extending the California community colleges' CCCApply system to lead students to build a profile and access guidance and planning services. Venit (2008c) lays out criteria for a self-advising intranet: the site should be a student portal, including a checklist of all required actions students must take to be on track for graduation. This checklist should include links to more specific advising resources; in the case of community college students, for example, it would make sense to have advice for those who wish to complete an associate's degree, those who want to transfer to a four-year institution, and those who plan to earn a vocational certificate. The ads on the site should be for extracurricular activities that increase engagement and retention. The self-advising intranet, while not a substitute for advisors and counselors, will enable students to self-diagnose when they could be at risk of falling behind academically, as well as to come to advising appointments with a better knowledge of available services (Venit, 2008c).

While a self-advising intranet could reduce faculty and staff workload, saving time for more complex advising tasks (Student Success Task Force, 2011), it is not sufficient for at-risk students. Venit (2008a) stresses that struggling students often do not identify themselves as "at-risk," and they rarely seek help on their own. It is therefore up to the school to identify struggling students and intervene. Using data to predict attrition and intervene with struggling students can increase persistence up to 7 percent (Venit, 2008a). Venit's study, which included seven public and two private four-year schools, found the following successful ways to identify students at risk of dropping or failing out: mandatory first-year risk surveys, first-year attendance tracking, and using existing data to predict attrition. Mandatory first-year risk surveys, such as the Noel-Levitz College Student Inventory (CSI), which students can take online at www.noellevitz.com, can reveal which students are having trouble in school, or in balancing school, work, and family (Beaudoin & Kumar, 2012; Venit, 2008b). Colleges can get a response rate over 90 percent by emailing students, having instructors assign the surveys as homework, and emailing or sending letters to families to encourage their students to take the survey (Venit, 2008b). Immediately upon completion of the online survey, students would receive targeted email or e-advertising for the campus services they might need, based on their answers to the survey. In addition, the results of the survey are used to generate rosters of students for targeted follow-up action by academic affairs and/or student services staff. This follow-up can include referral to an advisor or counselor, to the tutoring center, or to other campus resources.

As an alternative, or in addition, to first-year surveys, attendance tracking can be very effective as a means of predicting attrition. Attendance tracking naturally requires faculty buy-in, but may be worth the trouble because class absence interventions have been found to increase persistence by 3 to 7% from first to second year (Venit, 2008a). If a student misses the same class more than twice in the first few weeks of the term, the faculty member notifies the student's advisor or the counseling center. Alternatively, the instructor could email the student personally. Beaudoin and Kumar (2012) found that some two- and four-year colleges required faculty to report to the academic success or counseling center if students missed more than three classes, showed signs of personal issues, such as sleeping in class, failed to submit important assignments, or received low or erratic grades on important assignments; these interventions resulted in increased persistence.

Another method of identifying struggling students is to use existing data to predict "campus-specific pockets of high student attrition" (Venit, 2008b). For example, University C noticed that first-generation college students whose parents were migrant workers had a disproportionately high attrition rate. The school addressed this issue by presenting orientation programming in Spanish to help these families support their students (Venit, 2008b).

#### **Academic Support**

Noting that midterm grades as a warning of poor performance are "too little, too late" for most students (Venit et al., 2009), some institutions have moved mid-term grade time up two weeks in order to give students more time to improve their scores before final exams and grades (Beaudoin & Kumar, 2012). Instructors, advisors, and peer mentors should all be responsible for referring struggling students to the tutoring center as early as possible in the term (Beaudoin & Kumar, 2012). Hlavac and Enyeart (2008) emphasize the importance of advising the tutoring center's services all over campus, as well as through instructor and advisor referrals and emails. On a related note, Salaman and Osei-Mensah (2012) maintain that it is important to frame tutoring and other academic support services as helpful rather than punitive. Tutoring should focus on not only course material but also on problem-solving and analytical skills so that students can become more independent thinkers (Hlavac and Enyeart, 2008). Offering tutoring as a drop-in service or having students make appointments both seemed to work well at several different colleges (Hlavac and Enyeart, 2008).

The Student Success Task Force (2011) strongly recommends that Supplemental Instruction (SI) be offered with basic skills courses; Krase and Osei-Mensah (2012) maintain that SI should also be offered with "gateway" courses such as first-year chemistry or biology courses. Faculty should be involved in the design of SI, which should include both content issues and learning habits (Center for Student Success, 2007). Furthermore, video-based SI can show students how to apply study strategies immediately with difficult coursework (Center for Student Success, 2007).

The Center for Student Success (2007) and Venit (2008b) advise colleges and universities to make study skills courses mandatory for basic skills students. This policy improved student success and retention in all ethnic groups (Center for Student Success, 2007). Venit (2008b) examined study skills courses at public universities and noted that some linked basic skills courses to learning communities, while others

organized sections by major or common co-curricular interests. Students in these courses can learn about library services, health services, campus safety, and other resources in addition to study skills (Venit, 2008b).

The Student Success Task Force (2011) stressed the need of community college basic skills students for learning methods already shown to be effective for adult basic skills learners. These methods include learning communities, modularized instruction, intensive instruction, supplemental instruction (SI; see above), contextualized learning, particularly within Career Technical Education programs, and team teaching.

### **Student Services**

Venit et al. (2009) found that many college students are not getting the services that would help them stay in school, not because the services are not available, but because students are not using those services. Underprepared students, who are usually placed into basic skills courses, are most likely to need help, but least likely to be mature and self-aware enough to seek it. Struggling students should be identified by the methods described above under "Academic Support," and be referred to counseling, academic advising, tutoring, or other campus services as appropriate (Beaudoin and Kumar, 2012; Venit, 2008a; Venit et al., 2009).

Wardell and Enyeart (2009b) strongly recommend offering commuter students on-campus employment in order to increase student engagement, as well as to be sure students don't need to work too many hours off campus. It is also important to make sure that students are aware of resources for financial aid, counseling, child care, and transportation (Wardell and Enyeart, 2009b).

### **Professional Development**

Both faculty/staff advisors and peer mentors must receive proper training and support. In particular, faculty who teach basic skills courses need long-term professional development, since one-day workshops have little effect (Student Success Task Force, 2011). When peer mentors receive training, the line between their responsibilities and those of the faculty or staff advisor should be made clear (Wardell and Enyeart, 2009b).

### References

- Adjepong, L., and Albert, J. (2011). Integrating Academics into Orientation Programming. EAB Custom Research Brief, March 18, 2011—best practices for new student orientation to engage students and set them up for success
- American Association of Community Colleges. (2011). Eliminate degree-completion barriers. *Dean & Provost, 12(11),* 7.

Attewell, P. A., Lavin, D. E., Domina, T., and Levey, T. (2006). New evidence on college remediation. *Journal of Higher Education, 77,* 886-924.

- Bahr, P. (2008). Does mathematics remediation work?: A comparative analysis of academic attainment among community college students. *Research in Higher Education, 49(5),* 420-450.
- Bailey, T. (2009). Challenge and Opportunity: Rethinking the Role and Function of Developmental Education in Community College. Part of the special issue, Policies and practices to improve student preparation and success. *New Directions for Community Colleges, 145, 11-30.*
- Bailey, T., Jeong, D. W., & Cho, S. W. (2009). Referral, enrollment, and completion in developmental education sequences in community colleges. Working paper, Community College Research Center, Teachers College, Columbia University.
- Beaudoin, B., and Kumar, P. (2012). Using Data to Identify At-Risk Students and Develop Retention Strategies. EAB Custom Research Brief, June, 2012—described how schools retain students at risk of withdrawing for academic, financial, or social reasons.
- Bettinger, E. P., and Long, B. T. (2005). Addressing the needs of under-prepared students in higher education: Does college remediation work? Working Paper No. 11325, National Bureau of Economic Research, Cambridge, MA, May 2005.
- Blash, L., Cooper, D., Karandjeff, K., Pellegrin, N., Purnell, R., Rodriguez-Kiino, D., Schiorring, E. and Willett, T. (2012a). Transfer intelligence: How community college transfer students work toward a bachelor's in criminal justice. The Research and Planning Group for California Community Colleges, Spring 2012.

http://www.rpgroup.org/sites/default/files/Criminal%20Justice%20Brief%20FINAL.pdf

- Blash, L., Cooper, D., Karandjeff, K., Pellegrin, N., Purnell, R., Schiorring, E. and Willett, T. (2012b). A long and leaky pipeline: Improving transfer pathways for engineering students. The Research and Planning Group for California Community Colleges, Spring 2012.
  http://www.rpgroup.org/sites/default/files/Engineering%20Brief%20FINAL.pdf
- Boatman, A., & Long, B. T. (2010). Does remediation work for all students? How the effects of postsecondary remedial and developmental courses vary by level of academic preparation. National Center for Postsecondary Research Working Paper, September 2010.
- Calcagno, J. C., and Long, B. T. (2008). The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach: Addressing Endogenous Sorting and Noncompliance. An NCPR Working Paper.
- California Community College Chancellor's Office website: http://extranet.cccco.edu/Divisions/StudentServices/EOPS/FrequentlyAskedQuestions.aspx

Accessed 12/4/2012 at 8:24 AM.

- California Community Colleges Student Success Task Force (2011). Draft Recommendations: Advancing Student Success in California Community Colleges—recommends best practices related to basic skills instruction at community colleges.
- Center for Student Success, The Research and Planning Group for California Community Colleges. (2007). Basic Skills as a Foundation for Student Success in California Community Colleges—details the ways community colleges in California and out-of-state have successfully improved basic skills education.
- Clery, S., and Topper, A. (2008). Developmental education: Completion status and outcomes. Data notes. Volume 3(4). Achieving the Dream, July/August 2008.
- Cooper, D., Karandjeff, K., Pellegrin, N., Purnell, R., Schiorring, E. and Willett, T. (2012a). 2 + 2 = 6? Making community college transfer pathways add up for accounting students. The Research and Planning Group for California Community Colleges, Summer 2012. <u>http://www.rpgroup.org/sites/default/files/Accounting%20Brief%20FINAL.pdf</u>
- Cooper, D., Karandjeff, K., Pellegrin, N., Purnell, R., Schiorring, E. and Willett, T. (2012b). Destination BSN: How California community college transfer students work toward a bachelor's degree in nursing. The Research and Planning Group for California Community Colleges, Summer 2012. <u>http://www.rpgroup.org/sites/default/files/Nursing%20Brief%20FINAL.pdf</u>
- Cooper, D., Karandjeff, K., Pellegrin, N., Purnell, R., Rodriguez-Kiino, D., Schiorring, E. and Willett, T. (2012c). From student to teacher: How community college transfer students work toward a baccalaureate and teaching credential. The Research and Planning Group for California Community Colleges, Spring 2012.
  http://www.rogroup.org/sites/default/files/Teacher%/20Education%/20Brief%/20EINAL.pdf

http://www.rpgroup.org/sites/default/files/Teacher%20Education%20Brief%20FINAL.pdf

- Cooper, D., Willett, T., and Pellegrin, N. (2012). Traveling the transfer path: Quantitative findings on community college transfers who complete professional degrees (2<sup>nd</sup> ed.). The Research and Planning Group for California Community Colleges, Summer 2012.
  <a href="http://www.rpgroup.org/sites/default/files/Traveling%20the%20Transfer%20Path%20(2nd%20Edition">http://www.rpgroup.org/sites/default/files/Traveling%20the%20Transfer%20Path%20(2nd%20Edition)%20FINAL.pdf</a>
- Fike, D.S., and Fike, R. (2012). The consequences of delayed enrollment in developmental mathematics. *Journal of Developmental Education, 35(3),* 2-10.
- Florida Department of Education, Office of Program Policy Analysis and Government Accountability. *Half* of College Students Needing Remediation Drop Out; Remediation Completers Do Almost as Well as Other Students, Report no. 07-31 (May 2007).

- Hlavac, M., and Enyeart, C. (2008). Structuring Tutoring and Academic Support Services. EAB Custom Research Brief, December 30, 2008—describes the structure of tutoring and academic support services at eight universities.
- Krase, H., and Osei-Mensah, E. (2012). Effective Strategies for Supporting Students on Academic Probation. EAB Custom Research Brief, 2012—examined the ways in which universities help students with low GPAs improve their grades and stay in school.
- Martorell, P., & McFarlin, I. J. (2011). Help or hindrance? The effects of college remediation on academic and labor market outcomes. *The Review of Economics and Statistics*, *93*, 436–454.
- Perin, D., and Charron, K. (2003). Trends in community college assessment and placement approaches:
  Implications for educational policy. Paper presented at the Annual Meeting of the American
  Educational Research Association, Chicago, IL, April 21-25, 2003.

Perin, D., & Charron, K. (2006). Lights just click on every day. In T. Bailey and V. S. Morest (Eds.), Defending the Community College Equity Agenda. Baltimore: Johns Hopkins University Press. Accessed on 12/3/2012 at <u>http://books.google.com/books?id=1Tpge7nJzO4C&pg=PA155&lpg=PA155&dq=Lights+Just+Click+o</u> <u>n+Every+Day%22+(Dolores+Perin+and+Kerry+Charron&source=bl&ots=x8Agbo3ov8&sig=IA9uIxRLzX</u> <u>C6YaLh0mVMizVyKXA&hl=en&sa=X&ei=DSC9UIjMI4eYiAKbnIDgDA&ved=0CD0Q6AEwAw#v=onepag</u> <u>e&q=Lights%20Just%20Click%20on%20Every%20Day%22%20(Dolores%20Perin%20and%20Kerry%2</u> <u>0Charron&f=false</u>

- Perry, M., and Rosin, M. (2010). Something's got to give: California can't improve college completions without rethinking developmental education at its community colleges. EdSource study commissioned by California Community College Chancellor's Office.
- Perry, M.; Bahr, P. R.; Rosin, M.; and Woodward, K. M. (2010). Course-taking patterns, policies, and practices in developmental education in the California community colleges. Mountain View, CA: EdSource.
- Robinson, J., and Enyeart, C. (2009a). Facilitating Richer Advising Conversations: Tools and Strategies. EAB Custom Research Brief, November 2009—how to make advising conversations (between advisor and student) more focused, intentional, and productive.
- Robinson, J., and Enyeart, C. (2009b). Engaging Transfer, Commuter, and Graduate Students. EAB Custom Research Brief, August 14, 2009—suggests ways of getting students socially connected on campus to increase engagement and retention.
- Salaman, M., and Osei-Mensah, E. (2012). Academic Policy as a Tool to Increase Student Retention. EAB Custom Research Brief, 2012—reviews ways that universities encourage students to seek academic help, ways to incentivize struggling students, how to measure academic progress.

- University Leadership Council of the Educational Advisory Board. (2009). Hardwiring student success: Building disciplines for retention and timely graduation. Washington, D.C.: The Advisory Board Company.
- Venit, E. (2008a). Improving Student Retention Through Early Intervention. EAB Custom Research Brief, August 26, 2008—examined the ways that at-risk students can be identified, and the best practices for intervention.
- Venit, E. (2008b). Student Retention Strategies at Midsize Public Universities. EAB Custom Research Brief, April 16, 2008—reviewed the strategies universities used to increase their retention rate.
- Venit, E. (2008c). The Next Five Percent: Student Retention Strategies for Selective Public Universities. EAB Custom Research Brief, May 15, 2008—using early identification of at-risk students, new measures of academic progress, and expanding learning communities, among other practices, for improving student retention.
- Venit, E. P., Mason, J. Hlavac, M., Strawn, P., Miller, C., & Tisdale, H. (2009). Hardwiring Student Success: Building Disciplines for Retention and Timely Graduation. EAB University Leadership Council Custom Research Brief, January 26, 2009--focusing on early intervention, how to get students to make use of learning resources, and simplifying, standardizing, and unifying practices for helping at-risk students.
- Wardell, D., and Enyeart, C. (2009a). Retaining Transfer and Commuter Students: A Literature Review. EAB Custom Research Brief, February 23, 2009—reviews literature on best practices for retaining transfer and commuter students.
- Wardell, D., and Enyeart, C. (2009b). Strategies for Increasing Student Participation in Academic Advising, EAB Custom Research Brief, March 26, 2009—how to identify and help students who need academic advising services
- Wernicke and Zellner (2012). Engaging Students before Matriculation: Opportunities for Networking and Academic Advising, EAB Custom Research Brief, 2012—how to connect students with advisors so that students get off to a good start (register for appropriate courses, have resources to turn to when they have questions).