

A.

Organizational and Administrative Practices

Institutional choices concerning program structure, organization, and management have been related to the overall effectiveness of developmental education programs. The following effective practices have been identified in this area:

- A.1 Developmental education is a clearly stated institutional priority.
- A.2 A clearly articulated mission based on a shared, overarching philosophy drives the developmental education program. Clearly specified goals and objectives are established for developmental courses and programs.
- A.3 The developmental education program is centralized or highly coordinated.
- A.4 Institutional policies facilitate student completion of necessary developmental coursework as early as possible in the educational sequence.
- A.5 A comprehensive system of support services exists, and is characterized by a high degree of integration among academic and student support services.
- A.6 Faculty who are both knowledgeable and enthusiastic about developmental education are recruited and hired to teach in the program.
- A.7 Institutions manage faculty and student expectations regarding developmental education.



A.1 EFFECTIVE PRACTICE Developmental education is a clearly stated institutional priority.

RESEARCH FINDINGS Various studies have cited institution-wide commitment to developmental education as a characteristic of exemplary programs. Roueche and Roueche (1999) conclude that positive student outcomes in developmental programs are more likely to occur when institutional leaders establish high standards for success, expect everyone involved to work toward achieving program goals, and create appropriate supporting frameworks for program success. Based on analysis of a large volume of literature and research studies, Boylan and Saxon (2002) further noted that commitment at the institutional level is repeatedly cited as a key factor in successful remediation. In a study of 28 exemplary programs, all but one rated developmental education as “completely” or “extensively” important when assessing institutional priorities (Boylan, 2002). A study of developmental education in Texas colleges and universities

also found that programs with the highest student retention rates were located in institutions that considered developmental education to be a priority (Boylan and Saxon, 1998).

An institutional focus and acceptance of remediation as a mainstream activity of the college are communicated via public declaration of administrative support as well as through appropriate allocation of resources. This notion was echoed in a recent Board of Governors study (2002) that characterized “best practice” institutions as those in which the success of underprepared students is a stated, institution-wide priority accompanied by adequately staffed and funded developmental education programs. Other evidence of institutional commitment includes publicizing program results, featuring developmental courses and services prominently in college publications, and including developmental educators in discussions and decisions with respect to broader campus planning and implementation of academic programs.

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The level of institutional support accorded to developmental education programs is also expressed in the sufficiency of course offerings and support services to meet student needs. Colleges that prioritize developmental education constantly monitor student placement and enrollment data and make every effort to maintain sufficient access for students entering at all levels of the program. Since basic skills learners already have the disadvantage of extended timeframes required to complete their educational goals, best-practice colleges strive to avoid further delays caused by insufficient course offerings or lack of other necessary services. To the extent that providing access involves extra efforts in recruiting and maintaining sufficient staff, purchasing additional materials, or enhancing administrative structures, these colleges accept this responsibility for achieving the desired level of functionality.

The degree to which developmental programs and services are comprehensive and institutionalized are two key factors in evaluating the extent of institutional commitment and prioritization. A strong correlation between the comprehensiveness of developmental education programs within an institution and positive impacts on student learning has been repeatedly documented. Isolated basic skills courses have been shown to be the least likely to produce long-term gains in student achievement, while those programs that incorporate an increasing sophistication of learner support and cross-disciplinary learning “systems” are the most effective (Kiemig, 1983). In order to create and maintain such systems, institutions must place a high value on basic skills programs and see them as fundamental to the institutional mission. McCabe (2000, 49) makes an explicit recommendation that community colleges give remedial education higher priority and greater support, stating,

Institutional commitment to underprepared students is of greatest importance. Successful remediation occurs in direct proportion to priority given to the program by the college. Most important is a caring staff who believe in the students and in the importance of their work.

Presidential leadership, in word and deed, is critical to success.

The increased scope and complexity of embedding systematic, comprehensive systems for developmental education requires increased institutional investment, but doing so has been associated with increased short- and long-range program outcomes (McCabe and Day, 1998). Roueche and Roueche (1999, 29) also confirm that a systemic approach has the greatest potential for success of developmental students, and that the developmental program should be “one part of an institution-wide commitment to success for all students.” Additional studies and policy recommendations from other states have also emphasized institutional commitment as a key component of successful programs (Neuberger, 1999; Ritze, 2005).



A.2 EFFECTIVE PRACTICE **A clearly articulated mission based on a shared, overarching philosophy drives the developmental education program. Clearly specified goals and objectives are established for developmental courses and programs.**

RESEARCH FINDINGS Subscribing to an overarching, articulated philosophy of developmental education that is shared among all institutional stakeholders is an acknowledged best practice according to a variety of literature sources (Board of Governors, 2002; Boylan, 2002; Roueche and Roueche, 1999; McCabe, 2000). Developing and adopting such a philosophy should be the result of a highly directed, coordinated effort involving multiple stakeholders. Reviewers have commented that the success of community college developmental education programs depends on faculty having a clear understanding of and commitment to the philosophy and objectives of developmental education that are espoused by the institution (Sheldon, 2002). “Best practice” institutions are commended for assigning faculty to developmental courses only after they have been oriented to this shared institutional philosophy and the associated institutional expectations for desired student outcomes (Boylan, 2002).

Successful developmental education efforts feature clearly specified goals and objectives for all courses and programs.

In addition to having a unified mission and philosophy of practice, successful developmental education efforts feature clearly specified goals and objectives for all courses and programs. Roueche (1973) notes that clear-cut goals are essential, both to set student expectations and to influence the development of a cohesive course structure having solid alignment between exit and entry skills across sequential levels. Further, the National Study of Developmental Education (Boylan, Bonham, Claxton and Bliss, 1992) found that developmental programs with written statements of mission, goals, and objectives had higher student pass rates in developmental courses than programs without such statements. Other studies connected mission, goals and objectives with higher pass rates on state-mandated tests and higher year-to-year retention rates for developmental students (Boylan and Saxon, 1998). The National Association of Developmental Education recognizes the importance of this element in effective programs in that it requires all programs seeking certification to describe both their philosophy and all related goals and objectives.



A.3 EFFECTIVE PRACTICE **The developmental education program is centralized or highly coordinated.**

RESEARCH FINDINGS A considerable body of research has examined the role of program organization as it relates to effectiveness of developmental education efforts. The consensus view among researchers originally established that a centralized model of program and service delivery was superior to a more distributed “mainstreamed” model (Roueche and Baker, 1987; Boylan, Bonham, Claxton, and Bliss, 1992; Boylan, 2002).

A centralized organizational structure places the delivery of all remedial courses, programs, and services in a separate department, supervised by a dedicated department administrator with its own identified line of budgetary and other resource support. Advantages cited for this model include more accessible, integrated support services and greater likelihood that faculty teaching remedial courses will be highly motivated and have specific expertise with developmental learners (Perin, 2002). Various studies have connected the centralized model with higher student retention and course success, as well as with higher first-term and cumulative grade point average (GPA). (Roueche and Baker, 1987; Boylan, Bliss, and Bonham, 1997; McCabe and Day, 1998). Evidence further suggests that the centralized model is more effective for students with the lowest skill

levels; when surveyed for their opinions concerning the most desirable structure, “many faculty thought centralization was most beneficial to the students” (Perin, 2005).

Despite the finding that centralized programs lead to more positive student outcomes, only about 38 percent of community colleges nationally operate from a centralized department (Shults, 2000). The alternative model, referred to as mainstreaming, distributes the teaching of remedial courses among various academic departments, such that single departments may teach both college-level and remedial courses. Advantages cited for this model include greater cost efficiency, better alignments between remedial and college-level courses, greater communication among faculty across levels (for a consistent transmission of college-level expectations), and reduced stigma attached to students who are not isolated in a separate department (Perin, 2005; Academic Senate, 2003). In 1991, the Academic Senate for California Community Colleges recommended against the centralization of basic skills into a stand-alone discipline, concerned that “the establishment of a separate basic skills discipline would lead to a two-tiered system, where basic skills students were regarded as inferior” (Academic Senate, 2000, 7).

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Recent studies have concluded that the demonstrated superiority of student outcomes associated with the centralized model may not be due solely to the structural organization, but may instead arise from the higher level of communication and collaboration associated with centralization (Boylan, 2002). This interpretation suggests that decentralized programs might achieve the same benefits with respect to student achievement as centralized programs, provided that they are highly coordinated. Boylan argues that decentralized programs still demand “coordination of developmental programs and services by an administrator with primary responsibility for campus-wide developmental education” (Boylan, 2002, 11). Additional traits of a highly coordinated decentralized effort include: regular meetings of all those involved in the delivery of developmental courses and services; articulation of common goals and objectives for all developmental courses and services; and the integration of developmental courses and academic support services.

A number of other factors have been identified related to the choice of developmental program organization. Some colleges may prefer to distribute developmental students across departments so that the whole college shares responsibility for their progress. Other factors involved in the choice of program structure include placement policy, size of the institution and its academic departments, and institutional politics. Due to the many issues and diversity of institutional conditions concerning each, the research literature fails to arrive at a consensus recommendation for a single “best” structural model for organization of developmental programs across institutions.



A.4 EFFECTIVE PRACTICE **Institutional policies facilitate student completion of necessary developmental coursework as early as possible in the educational sequence.**

RESEARCH FINDINGS Two schools of thought relate to the timing of developmental courses versus other college courses over the term of a student’s educational plan. If existing assessment procedures are presumed to be accurate indicators of a student’s actual level of preparation (and to the extent that basic skills competence is actually required for success in college-level courses), it is logical to infer that students are best served by completing preparatory developmental coursework prior to enrolling in other non-developmental courses. The other view holds that mandatory completion of a comprehensive basic skills pathway prior to enrollment in other courses may be seen as stigmatizing and restrictive to students’ engagement with the overall college experience. It may be that concurrent enrollment in carefully selected academic or vocational courses outside of basic skills areas could help in sustaining student motivation and providing early successes to enhance persistence. Acknowledging that both views

have merit, research overwhelmingly supports the notion that early assessment and completion of developmental coursework improves student achievement.

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Weissman, Bulakowski, and Jumisko (1997) examined the timing of remediation in relationship to overall program effectiveness. In a study of 2,028 college-ready students and 1,254 underprepared students entering in the same semester, researchers reported that completing developmental education courses during the first year of enrollment increased persistence, especially for those students least prepared for college-level courses. They also found that students who took developmental education courses during their first term of enrollment remediated at a much higher rate than students who did not attempt any developmental courses during their first semester. These authors conclude that the study supports a policy of requiring underprepared students to begin their developmental courses upon initial enrollment.

Similar findings have recently been reported in another nationwide study, the Achieving the Dream Initiative. This study found that students who successfully completed a developmental mathematics course in their first term of enrollment were more likely to persist and succeed from that point forward than those in other groups, including those who attempted but did not complete developmental math, and even those who did not require math remediation in the first place (McClenney, personal communication, 2006).

The actual practices of colleges with respect to the simultaneous enrollment of students in developmental and regular college coursework vary. In 1996, about two-thirds of colleges placed some restrictions on the regular academic courses that students could take while enrolled in remedial coursework. At least one study has compared success between college-ready students, underprepared students who did not remediate, underprepared students who completed remediation, and underprepared students concurrently enrolled in college-level courses (Castator and Tollefson, 1996). These authors found that both underprepared students who had remediated and underprepared students concurrently enrolled in developmental and college-level classes earned grades comparable to those of college-ready students, while underprepared students who did neither had lower grades. They conclude that colleges are justified in implementing policies requiring completion of remediation either prior to or concurrent with enrollment in college-level courses.

Some practitioners fear that relegating students to a core of developmental courses that must be completed prior to entering other course offerings may create a “two-tiered” system, singling out and perhaps marginalizing students in these programs. In arguing for concurrent enrollment, Maxwell asserts that college skills programs have historically been hindered by “enduring faculty myths.” One persisting myth is that “underprepared students will learn more if taught in separate classes and removed from the main body of students” (1997c, 324). The fact that students do in fact sometimes succeed when simultaneously enrolled in both developmental and college-level course is offered as an argument that prerequisite remediation is not needed. Grubb (1999) asserts, “the idea that remediation has to precede content learning creates a teaching problem” (184), in that such actions may tend to reduce students’ cognitive development activities to repetitive “skill and drill” exercises, disconnected from meaningful applications in content areas. To the extent that such practices characterize the usual methods employed in developmental courses, the point is well taken. However, if developmental courses are designed to develop enhanced critical thinking and to scaffold learning in ways that contribute to increased self-regulation and self-efficacy, such experiences may instead enhance student preparation for higher-level study.

Boylan (2002) observes that students are rarely exposed to instruction in critical thinking in high school; developmental students’ particular lack of this key ability leads to increased failure for these students. As developmental instruction moves away from simple repetitive practice to a more

fully developed focus on critical thinking and learning strategy development, the acquisition of these foundation skills has great potential for improving subsequent success in a variety of content disciplines. Boylan argues that this shift in approach during the earliest developmental courses may help students reduce the overall time spent in remediation.



A.5 EFFECTIVE PRACTICE **A comprehensive system of support services exists, and is characterized by a high degree of integration among academic and student support services.**

RESEARCH FINDINGS The majority of acknowledged studies of best practices in developmental education call for the offering of comprehensive support services for remedial students (Board of Governors, 2002; McCabe and Day, 1998; Neuberger, 1999; Raftery, 2005; Boylan, 2002; Roueche and Roueche, 1999). A review of 51 developmental programs reported that the “programs that showed the greatest gain in scores, GPA improvement, and retention also tended to be comprehensive in scope, mission, and services” (Boylan, 1983, 32).

Support systems have been described as existing at four “levels,” representing increasing potential to produce positive program outcomes (Kiemig, 1983). At the first level, remedial courses exist in isolation, with no additional outside support provided. Second-level programs offer some additional learning assistance, such as generalized tutoring not connected to individual courses. Course-related learning assistance is provided at the third level, in which trained personnel who have specific information about course content, assignments, and expectations engage with students either inside or outside of class. This would include support services such as Supplemental Instruction and course-embedded counseling models. The fourth level is characterized by the presence of comprehensive learning systems (for example, learning community models) in which all participants share the responsibility for providing monitoring, advising, and instructional support. In 1998, Los Medanos College based the reform of their developmental education program on this framework, moving toward third- and fourth-level services. This program was subsequently identified as “very effective” and is listed among several model programs within California community colleges (Academic Senate, 2003).

Roueche and Roueche (1999, 29) have explicitly called for colleges to examine the comprehensiveness of support services available to developmental students, stating that “colleges must increase the support and structure they offer at-risk students who need support and structure more than any other students in higher education.” Services these authors note as being essential include mandatory orientation, assessment, and placement; expanded pre-enrollment activities; establishment of peer and faculty mentors; and more comprehensive financial aid programs.

One approach to integrated, comprehensive support for developmental students is the use of Learning Assistance Centers (LACs). Maxwell’s review of the literature concerning these centers (1997a) concluded that LACs commonly contain the following functions:

1. Academic evaluation and diagnostic testing
2. Instruction in study skills and learning strategies
3. Peer tutoring and/or professional tutoring
4. Supplemental instruction, or course-related, systematic, and highly structured group tutoring
5. Computer-assisted instruction and access to other educational technology

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6. Credit and non-credit developmental courses
7. Faculty services, such as research opportunities, assistance in developing Supplemental Instruction programs, cooperative learning demonstrations, and classroom support materials
8. Publication of LAC programs through newsletters and class and faculty visits
9. College administrators who are informed about LAC programs and services
10. Staff training and development activities
11. Referral to other programs and services on campus
12. Close relations with offices that provide personal, financial, educational, and career counseling and training for peer counselors
13. Integration with advising departments and faculty advisors
14. Program evaluation

Programs such as Extended Opportunity Programs and Services (EOPS) and Disabled Students Programs and Services (DSPS) also model the integration of a variety of student support services with academic instruction. The challenge for colleges often becomes one of scale: how to expand a service model that operates effectively for small groups to one that can be implemented across the institution. A variety of studies have confirmed that developmental students who have the services of a comprehensive learning assistance program available to them have been shown to make larger gains in academic performance than those that do not (Neuberger, 1999, 10).



A.6 EFFECTIVE PRACTICE **Faculty who are both knowledgeable and enthusiastic about developmental education are recruited and hired to teach in the program.**

RESEARCH FINDINGS The pivotal role of faculty in developmental programs underscores the need to ensure that these key personnel are knowledgeable, experienced, and motivated to work with developmental learners. Roueche and Roueche (1999, 26) argue that the success of developmental students is predicated on “faculty attitude and competence,” and they call for a mandate to recruit, develop, and hire the best faculty. These same authors note that instructors who choose to teach remedial classes, as opposed to being assigned to them, were characteristic of “successful” developmental programs. McCabe and Day (1998, 22) also recommend the use of “instructors committed to the students and the field.” O’Banion (cited in Cooper, 1979) goes so far as to recommend that remedial instructors’ discipline should be developmental studies. Perin (2005) recommends hiring instructors with experience and training in developmental education who are sympathetic to the needs of at-risk students, and further notes that this recommendation is more likely to be achieved in a centralized departmental structure than in a mainstreamed model. At the recommendation of its executive board, the New York College Learning Skills Association also advises the hiring of “appropriately credentialed, trained, educated, and experienced faculty and professional staff” (Neuberger, 1999).

Despite these and other numerous references identifying recruitment and hiring of eager, trained faculty as an exemplary practice, only 20 percent of institutions in a national study reported requiring full-time faculty to possess specific training for developmental education before teaching remedial courses (Shults, 2000). Furthermore, there is a noticeable gap in the research-based literature connecting these desired criteria with any documented increase in student achievement or any other student outcomes. In a related statement, however, Boylan (2002) does find a correlation between negative attitude of faculty toward developmental education and poor developmental program outcomes, but the specific effects are not noted.

Assuming that knowledgeable, well-prepared faculty with specific developmental expertise would contribute to successful students, what are the characteristics of such faculty? Attributes of effective developmental educators have been suggested by the Academic Senate (2003, 12) to include the following:

- Demonstrates content knowledge and the ability to deliver the content
- Varies instructional delivery methods
- Maintains organized and structured activities
- Possesses knowledge of learning styles and how to apply this information
- Provides critical thinking activities
- Relates the curriculum to the real world and careers
- Actively engages students
- Maintains high academic standards
- Engages in classroom research
- Engages in professional development activities
- Chooses to teach underprepared students and demonstrates a passion for working with these students
- Enjoys and respects students
- Sees the whole student
- Creates a “classroom community” learning environment
- Motivates students
- Engages in “intrusive” (proactive) student activities
- Encourages students to use all available support services
- Maintains an innovative spirit
- Knows how to and enjoys working with teams

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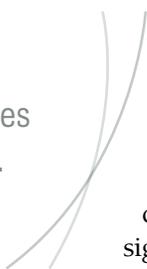
A similar list of attributes offered by Casazza (1996, 6) also adds consideration of the affective needs of learners, the ability to assess strengths and weaknesses and communicate them to the learner, the ability to assess individual development, and the ability to gradually release responsibility for learning and self-assessment to the learner.

A number of researchers mention the role of adjunct faculty in teaching remedial courses, and it has been noted that in public two-year colleges nationwide, 67 percent of faculty teaching remedial courses are employed part-time (Shults, 2000). In its 1998 survey of practices related to basic skills, the Academic Senate for California Community Colleges found that 56.5 percent of credit basic skills instructors were part-time faculty, with numbers up to 70 percent when non-credit courses were considered (Academic Senate, 2000).

Increasingly, California community colleges rely on an adjunct workforce to deliver the transfer, occupational, and basic skills curriculum. Implicitly, most instructors assume that the reliance on part-time faculty compromises student learning and potentially erodes academic standards; however, little research has been conducted to mark its specific effects. Using the National Center for Educational Statistics data, Jacoby (2006) attempts to evaluate the evidence regarding graduation, learning outcomes, and the use of adjunct faculty. Jacoby concludes that “community college graduation rates decrease as the proportion of part-time faculty employed increases” (1,100). He concludes that when “faculty-student ratios are low, the Integrated Postsecondary Education Data System (IPEDS) graduation rate rises from 21.1 percent to 25 percent ... Likewise, for schools...categorized as having the best (highest) faculty-student ratios, graduation rates rise from 26 percent to 34.6 percent” (1,097).

Further, Jacoby cites other research that questions the relationship between a reliance on part-time faculty and student engagement. Several studies indicate that because part-time faculty may be less

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likely to be integrated into the institution, they were also less available to students, affecting student engagement and assimilation into the college culture. Grading patterns were also noted by McArthur (1999), who cites a difference in grading patterns between part-time faculty and full-time faculty, indicating that part-time faculty have a tendency to record higher grades, due in part perhaps to decreased job security and concerns about student evaluation results.

Although this condition has been mentioned as a potential concern for effective practice, research has documented no significant differences in student outcomes between full-time and adjunct professors who teach remedial courses (Boylan, Bonham, Claxton, and Bliss, 1992). Programmatic outcomes, however, have been lower for institutions in which 70 percent or more of the developmental courses were taught by adjunct faculty (Boylan and Saxon, 1998). Since full-time versus adjunct status has not been shown to have significant impact on student achievement, it may be that the time commitment for coordination, planning and program development suffers when using large contingents of adjunct faculty. Boylan (2002) also notes that “best practice” institutions identified in his 2000 study had only about 50 percent of remedial courses taught by adjunct faculty, and further recommends that any adjunct hired be “fully integrated into the program and considered as valuable assets to the program” (56).



A.7 EFFECTIVE PRACTICE Institutions manage faculty and student expectations regarding developmental education

RESEARCH FINDINGS Related to the establishment of clearly-specified goals and objectives for developmental education programs, the communication of explicit expectations for both students and program providers enhances the effectiveness of developmental programs. Increasingly, students are coming to college with uninformed expectations that are not initially aligned with those of the faculty and the institutions. This mismatch results both from the increasing number of first-generation college students who lack role models to convey accurate expectations and from students’ experiences with the prevailing expectations in their elementary and secondary schools.

Research indicates that today’s high school students report studying only about six hours per week on average, that they are more frequently bored in or miss classes compared to a decade ago, and that many students matriculate into college “with an entitlement mentality” (Kuh et al., 2006a, 32). Kuh further notes, “One more reason expectations are more important is because so many traditional-age students appear to start college already ‘disengaged’ from the learning process, having acquired a cumulative deficit in terms of attitudes, study habits, and academic skills” (33). Early attention to correcting misinformation about what students can expect in college and what mechanisms exist to support them in the college environment should be formalized to ensure that students are able to set manageable, realistic goals. Studies recommend that institutional values and expectations be clarified “early and often” to matriculating students, and that such reinforcement be the shared responsibility among faculty, staff, and administrators of developmental programs.

In a benchmarking study of best-practice institutions, Boylan found that these institutions go to substantial lengths to make sure that that faculty, staff, and students each know what is expected of them to support the developmental education effort (Boylan, 2002). Upon hiring, institutional and programmatic expectations are communicated to faculty and staff via an orientation to the program, and they are provided with continuing in-service training to ensure that they have the resources needed and are meeting the expectations.

B.

Program Components

According to the literature, a number of specific programmatic components are characteristic of highly effective developmental education programs. These include:

- B.1 Orientation, assessment, and placement are mandatory for all new students.
- B.2 Regular program evaluations are conducted, results are disseminated widely, and data are used to improve practice.
- B.3 Counseling support provided is substantial, accessible, and integrated with academic courses/programs.
- B.4 Financial aid is disseminated to support developmental students. Mechanisms exist to ensure that developmental students are aware of such opportunities and are provided with assistance to apply for and acquire financial aid.

