



From Remediation to Acceleration Raising the Bar in Developmental Education

Some have called it postsecondary education's "dirty little secret." Others are less subtle, arguing that students who cannot perform college-level work should pay for their own remedial education—or sue their high schools for failing to provide adequate preparation. Still others believe that remediation serves as the necessary remedy for helping the underprepared meet the challenges of postsecondary learning.

Contributing to these wildly varying opinions over the value of remedial or developmental education is the lack of systemic information. While campuses and policy-makers debate the utility and expense of these programs, too little is known about the content and delivery of remedial education nationwide or the features of successful programs for the underprepared.

This issue of the *Landscape* reports on a recent effort to establish two baselines for remedial education: first, an account of its contours, content, and consequences; and, second, an identification of program characteristics that provide alternatives to traditional conceptions of remedial programs.

Establishing the Baseline, Then Aiming Higher

Well-known for his work on "accelerated schools," National Center for Postsecondary Improvement (NCPI) researcher Henry Levin of Stanford University, along with his colleague Bill Koski, has been investigating the potential of transforming remedial education from stigmatizing catch-up programs to opportunities that significantly advance students' academic capabilities.

As a first step, Levin and Koski reviewed the literature on remediation and interviewed researchers and educators who contributed to definitions of both typical and innovative programs. They found that, although remedial course work is offered at most two- and four-year colleges and universities, very little comprehensive information is available on its success in promoting student achievement and persistence. Levin and Koski also uncovered several models of remedial



programs that promise to accelerate student learning by tying content to course work and instruction and by emphasizing problem-solving and critical thinking.

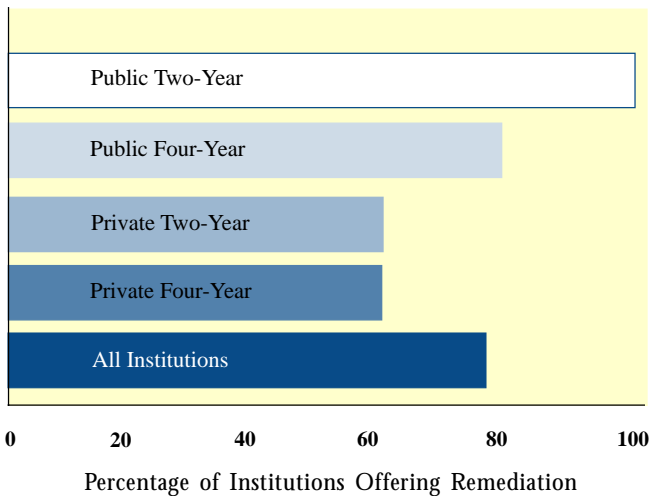
The 3 Cs of Remedial Education: Contours, Content, and Consequences

Remediation is one of the most widespread yet understudied components of postsecondary education. The most comprehensive information available gauges its contours—the extent of remedial education programs and the students served—through data collected by the National Center for Education Statistics (NCES).

The first measure provided by NCES reflects the percentage of postsecondary institutions offering remedial services, a rate that varies by institutional type but is generally higher for public institutions. According to the NCES, 78 percent of all postsecondary institutions offered at least one remedial reading, writing, or mathematics course in 1995 (Chart 1). Virtually *all* public two-year institutions and 81 percent of public four-year institutions

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Chart 1
Percentage of Institutions Offering Remedial Education in 1995,
by Institutional Type



Source: National Center for Education Statistics, *Digest of Education Statistics: 1995*, U.S. Department of Education

offered remedial courses, while 63 percent of private two- and four-year institutions offered them.

The second measure represents the percentage of students enrolled in these programs. According to NCES, 29 percent of all first-time, first-year students were enrolled in at least one remedial reading, writing, or mathematics course in the fall of 1995 (Chart 2)—which means that nearly one in three first-year students was engaged in remedial education.

Rates of enrollment differed by institutional type: 41 percent of first-year students at public two-year institutions and 26 percent at private two-year institutions were engaged in remedial course work, as were 22 percent at public four-year institutions and 13 percent at private four-year institutions. In some schools—particularly those in urban settings—these percentages increased dramatically. In the California State University System, for example, approximately half of first-year students required remedial course work in 1997-98; in

some community colleges in New York City, that rate is almost doubled.

Who is enrolled in remedial programs? The most comprehensive data on student demographics in these courses are found in an American Council on Education (ACE) research brief prepared by Linda Knopp and based on NCES' National Postsecondary Student Aid Study (NPSAS). In the 1992-93 academic year, NPSAS indicates that 13 percent of its universe of undergraduates were enrolled in at least one remedial course—not counting those who required remediation but failed to take the courses. Of these students, a majority (65 percent) were white, while only 15 percent were African American, 13 percent were Hispanic, 7 percent were Asian American, and 1 percent were Native American.

However, an analysis of the enrollment of students within each demographic group reveals that minority students are disproportionately represented in remedial education (Chart 3). While only 11 percent of white students were enrolled in a remedial course, 19 percent of African-American students, 19 percent of Hispanic students, 19 percent of Asian-American students, and 15 percent of Native American students were enrolled in 1992-93.

NPSAS also provides two measures of student enrollment according to socioeconomic status, represented by household income levels. Students taking remedial courses tend to come from low-income families. Among financially dependent students, nearly one quarter (22 percent) of those taking remedial courses reported an annual family income of less than \$20,000, while only 14 percent of those not enrolled in these courses reported the same income level. At the other end of the socioeconomic spectrum, 43 percent of those *not* enrolled in remedial courses reported an annual family income of \$50,000 or more, compared to only 31 percent of

students from this income group who were enrolled.

No data capture the relationship between content and consequences in remedial education at the national level. Based on their review of existing institutional studies, however, Levin and Koski conclude that students who take remedial courses fare better than those who should but do not. On the other hand, compared to students who do not require the courses, remedial students do not perform as well.

Only one large-scale study addresses specific questions about the impact of remedial education on student performance in remedial courses, performance in later college courses, and persistence to graduation. The National Study of Developmental Education, conducted by Hunter Boylan of the National Center for Developmental Education at Appalachian State University, yielded a series of region-specific findings from its survey of 160 institutions and 6,000 students:

- Centralized developmental programs lead to significantly higher first-term and cumulative GPAs for students at four-year institutions, as well as higher retention rates at two-year institutions.
- Mandatory placement of students in remedial education works best for four-year institutions, but may be detrimental for two-year institutions.
- If remedial tutors are trained, their efforts can make a big difference in student GPA and retention at four-year institutions.
- Although program evaluation is relatively infrequent, it is positively related to retention at both two- and four-year institutions and to cumulative GPA at four-year institutions.

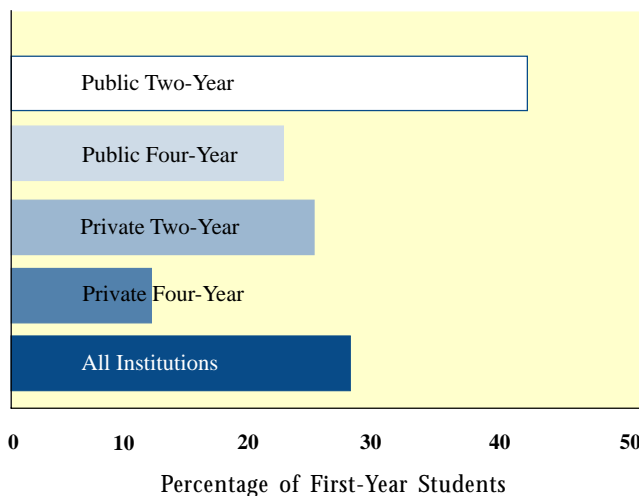
From the Ordinary to the Exemplary

While the content of most remedial courses reflects drill-and-practice methods in low levels of skill that are unrelated to most course work, other models represent exemplary remedial programs that may contribute to gains

in student persistence and achievement. Key characteristics of these programs include those that modify the structure of delivery or contain enriched and accelerated content.

Broadly stated, many of the exemplary remedial programs identified by Levin and Koski seek to link skill-building with college-level

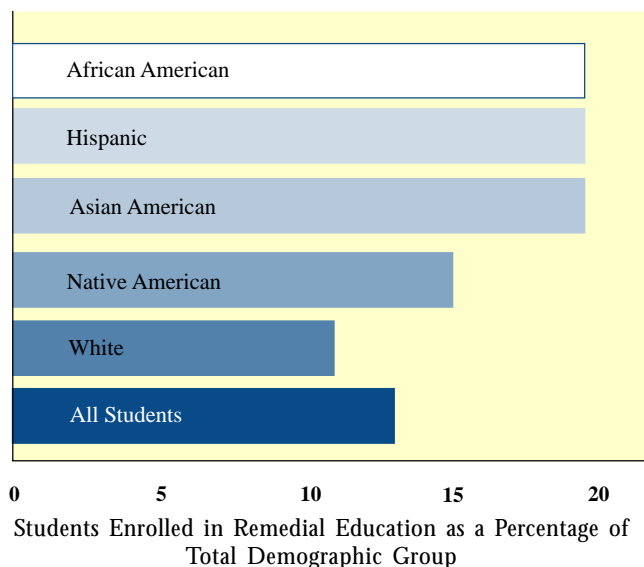
Chart 2
Percentage of First-Year Students Enrolled in at Least One Remedial Course in 1995, by Institutional Type



Source: National Center for Education Statistics, *Digest of Education Statistics: 1995*, U.S. Department of Education

content. These programs include *paired/linked courses*, which offer a remedial course subject—such as writing—to students who are simultaneously registered in a credit-bearing content course such as history; *supplemental instruction*, which teaches effective learning and study strategies in a course that supplements the remedial course; and *learning communities*, which are not specifically designed for remedial education, but can be used to foster community and to enhance intellectual interaction among remedial students and between students and instructors. There is substantial evidence that such content-based courses enhance persistence rates, improve performance in the linked content course, and may even bolster

Chart 3
Percentage of Students in a Demographic Group Enrolled in Remedial Education in 1995



Source: Knopp, L. 1995. *Remedial Education: An Undergraduate Student Profile*. Washington, D.C.: American Council on Education, Division of Policy Analysis and Research

future academic achievement.

Programs that seek to improve the critical-thinking and problem-solving skills of underprepared students across the curriculum also promise to enhance performance and persistence. In the Critical Thinking Program at LaGuardia Community College, for example, students enrolled in one key part of the program have nearly doubled the collegewide pass rate on standardized exit examinations in writing and reading.

On a more detailed level, Levin and Koski have identified several dimensions that may be central to the design of successful interventions for underprepared students:

- *Motivation*: Building on the interests and goals of the student and, ideally, providing credit.
- *Substance*: Building skills within a substantive, as opposed to more

abstract, context.

- *Inquiry*: Developing students' inquiry and research skills to help them learn about other subjects and areas.

- *Independence*: Encouraging students to explore independently other topics within the course structure to develop their own ideas, applications, and understandings.

- *Multiple Approaches*: Using collaboration, teamwork, technology, tutoring, and independent investigation as suited to student needs.

- *High Standards*: Setting high standards and expectations for all students and giving them the appropriate resources to achieve those goals.

- *Problem-Solving*: Viewing learning as a process of determining what needs to be learned and how—and then implementing the “how.”

- *Connectivity*: Emphasizing the links among different subjects and experiences, as well as how these links can contribute to learning.

- *Supportive Context*: Recognizing that learning is a social activity that thrives on healthy social interaction, encouragement, and support.

Perspective

As institutions begin to revisit the methods they use to teach underprepared students, other questions remain: What is the role of technology in delivering basic skills? Are colleges and universities dedicating adequate resources and faculty with developmental experience to remedial programs? How are state-level policies and laws affecting remedial course offerings?

In addition to answering these questions, Levin and Koski will ultimately design an evaluation model for remedial programs to help institutions develop their own programs and add to the current wisdom about what works for educating underprepared students. □