This paper, which focuses on remediation at community colleges, is part of a series published by the Center for Community College Policy, designed to support state and local policymakers, as well as educational leaders who are interested in policy issues related to the two-year postsecondary sector. Providing academic support for remediation has become a major function of the community college and remains one of the greater challenges. Research indicates that from 30 to 90% of all community college students need some form of remediation. Long perceived as a high-cost item, remediation efforts might actually be cost-effective if one considers that students who eventually earn bachelor's degrees potentially generate more than $74 billion in federal taxes and $13 billion in state taxes while costing only $1 billion to remediate. Students need remediation for a variety of social, economic, and psychological reasons, and if they are to succeed, accurate assessment is needed to determine what the student's actual needs are and provide appropriate services. Recommended are a variety of policy options, including: (1) clarifying the roles of community colleges in meeting the education needs of skill-deficient youth and adults; (2) requiring accurate assessment and placement of students in learning environments; and (3) determining the specific knowledge, skills, and attitudes that functionally literate adults need in the 21st century. (AF)
REMEDIATION:
A MUST FOR THE 21ST-CENTURY LEARNING SOCIETY

By Milton G. Spain Jr.

INTRODUCTION
Remediation of academic and process skill deficiencies, and provision of support services for students underprepared for college, have become major community college functions. Researchers note that from 30-90% of all community college students need some remediation. And, education assessments and demographic projections support the view that 25-30% of all students will enter postsecondary institutions with some academic, psychological or physical challenge significant enough to impair their success if not compensated for or corrected.

Effective and efficient remediation is one of the greater challenges facing the community college. Fortunately, research is revealing that remediation accompanied by quality learning support systems — that is, tutoring, counseling, centralized administration, etc. — can be done with long-term success and, compared with other social programs, in a cost-effective manner.

Remediation of academic skill deficiencies long has been perceived as a high-cost item in an institution's budget, but some experts are questioning this perception. A recent study pointed out that if only one-third of the students taking at least one remedial course were to earn a bachelor's degree, they would generate more than $74 billion in federal taxes and $13 billion in state and local taxes, while costing the taxpayer about $1 billion to remediate. Furthermore, the graduation rate for remedial students would have to drop below the 1% level before taxpayers would see a net loss on investment. If this scenario is accurate, investment in remediation is a sound economic decision for states and the nation.
II. BACKGROUND

Helping academically deficient students prepare themselves for college has been a feature of American education since Harvard opened its doors in 1636. As far back as 1828, the Yale Report called for an end to the admission of students with defective preparation. Charles W. Eliot, however, in his 1869 inaugural address as president of Harvard, took the opposing view, saying: "The American college is obliged to supplement the American school. Whatever elementary instruction the schools fail to give, the college must supply." These conflicting views reflect the historical debate over higher education's role, a debate as hotly contested today as it was in the 19th century.

Regardless of the debate, the practical community-based education offered by the community college has prevailed, and that includes remediation. In fact, the remedial function has become so pervasive that some critics claim the college transfer function has been displaced by the remedial function.

The National Center for Education Statistics reported in 1995 that approximately 35-40% of first-year community college students need one or more remedial courses and that three-quarters of all remedial students are found at the community college. Until the public schools enable more students to function at the college entry level, community colleges will be expected to bring a number of high school graduates up to the level necessary to enter and succeed in college.

III. POLICY OPTIONS

In a society concerned for its citizens' welfare, remediation will continue to be necessary for the country's social and economic well-being. The question then is how to make it more effective and efficient. Certain policies may be needed to accomplish this objective. Policymakers may want to consider policies that do the following:

- Clarify the appropriate roles of community colleges in meeting the education needs of skill-deficient youth and adults. Individual community colleges and state systems should review both their stated missions and current practices to determine the extent to which the remediation portion of their mission is clear and unambiguous to constituents.

- Require accurate assessment and placement of students in learning environments (i.e., courses, labs, tutorials, etc.) appropriate to their needs. Students need remediation for a variety of social, economic and psychological reasons. If they are to succeed, students seeking degrees or certificates must be accurately assessed and placed in the environment that best meets their needs.

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• Require initial training and ongoing professional development by educators working with underskilled students in a multicultural society. In an increasingly pluralistic society, remedial educators require not only specialized training in the content and processes of effective teaching but also preparation in the understanding and appreciation of cultural and ethnic differences.

• Require institutions to determine the extent to which students receiving remediation are benefiting from it. Simply to pass through a remediation program or set of activities does not necessarily ensure that the student has gained the appropriate knowledge, skills and attitudes. Ongoing systematic evaluation in both the cognitive and affective domains of learning is necessary to determine the effectiveness of the remediation.

• Provide the resources needed to train faculty and staff in the use of advanced learning technologies. Advanced learning technologies, particularly those associated with brain research and their impact on computer-driven learning systems, are becoming ever more important, if not essential, to effective and efficient remediation. The rapid changes occurring in technology demand ongoing professional development for persons working with students who have not fared well in traditional lecture-centered instruction and training.

• Foster a process for determining the specific knowledge, skills and attitudes functionally literate adults need in a 21st-century global economy. These policies can help educators determine the nature of appropriate remediation. Functional literacy is based in reading, communications (oral and written), computation and, increasingly, "learning-how-to-learn" skills, that is, thinking and problem solving. As the definition of functional literacy takes on a broader meaning in a postindustrial society, institutions periodically must redefine what it means to possess the basic skills necessary to live and work in a global economy.

• Require community college remedial educators to collaborate with secondary school leaders regarding the knowledge, skills and attitudes essential for successfully entering a regular degree or certificate program. Remediation is not solely the function of the community college. In fact, it is desirable to reduce the need for remediation in postsecondary education, something that can be accomplished only if educators at the secondary and community college levels communicate with one another about what students need.
Enable grassroots involvement of remedial educators in all areas of policy development. Policy development without the input and continuing involvement of those persons who actually implement the policy is both demoralizing and dehumanizing. Serious and respectful dialogue between policymakers and policy implementers will help ensure the kind of policy that makes a qualitative difference in students' lives.

Establish faculty:student and/or staff:student ratios appropriate for effective and efficient remediation. Because the typical remedial student brings not only inadequate knowledge and skills but also attitudes toward learning and schooling that may prevent success, policymakers need to take into account the labor-intensive requirements associated with effective remediation. Meeting these students' cognitive and affective needs requires remedial educators to invest large amounts of time in one-on-one efforts. Both the financial cost and the personal loss of self-efficacy is compounded each time a student fails and is forced to recycle through the education system. Remediation that works the first time around is more cost-effective and efficient for educators, students and society as a whole.

Assure access, diversity and educational opportunity for all academically underprepared adults within the community. Historically, remediation of academic skill deficiencies has been a means to bring uneducated at-risk populations into the mainstream of society, making it possible for them to achieve the "American dream" of self-sufficiency. For ethical, moral, social and economic reasons, community colleges must continue to heed the need for remediation among minorities, immigrants and other disenfranchised groups.

Ensure adequate and appropriate citizen involvement in policy development, analysis and oversight. Meaningful involvement in policy development is not only appropriate and necessary to empower remedial educators and administrators at the campus level, but is also desirable to involve citizens who are knowledgeable and committed to the practical and successful education of others. Citizen involvement at all stages of policy development, analysis and oversight can renew a community's commitment to remediation, as well as to all levels and types of education wanted and needed by the community.

Encourage and enable universities and senior colleges to contract with community colleges to provide remediation for students admitted to the university. Community colleges have become particularly adept at solving hard-core remedial problems. In many states, legislators have reduced the expectations that senior colleges and universities will provide remediation and have raised those expectations for community colleges. Legislators need to ensure community colleges are funded to carry out this part of their mission.
• Encourage community colleges to monitor the preparation of incoming high school students through diagnostic testing in all basic skill areas and report such data to local boards and state departments of education. Reporting the extent to which students from feeder high schools possess the basic academic skills and attitudes essential for college success will help secondary school officials modify their curriculum if needed and will inform the public about how well their schools are doing.

• Require community colleges to delineate their mission according to community-based priorities and available resources. Community colleges have fostered unrealistic expectations regarding their ability to provide effective education for every underserved population in the community. In their effort to keep the door open to all who would benefit, they too often have underestimated, for example, the educational and psychological needs of severely handicapped students, and the training and experience their staff need if they are to serve these students responsibly and effectively. Colleges need to set missions and priorities in line with community expectations and needs.

IV

POLICY QUESTIONS

1. What remediation models exist? Are they effective?
2. What assessment processes and procedures are available? Are they effective?
3. What professional development is provided for remedial educators? Is it adequate?
4. What accountability measures are in place, and are they appropriate and effective?
5. How well do postsecondary remedial educators and secondary educators communicate?
6. Are comprehensive approaches to remediation in place?
7. Are student/faculty ratios appropriate for effective and efficient remediation?
8. How do current remediation policies ensure access, diversity and educational opportunity?
9. How do current remediation efforts incorporate advanced learning technologies?
10. Are remedial educators teaching the skills and competencies necessary for successful college entry?
11. Are evaluation systems in place for determining the effectiveness of remediation, and do they work?
12. Are the needs of students with limited English-speaking skills being met?
POLICY LINKS

The challenge of remediation is not solely the purview of the community college. Historically, students' remedial needs have been addressed throughout the education spectrum, K-16. The following policy areas are among the most important for community colleges to consider:

- **Articulation with Secondary Schools.** In part, students are ill-prepared for entry into the community college because of inadequate preparation at the secondary level. Policy that encourages ongoing dialogue between community college educators and secondary school educators should be encouraged so students leaving high school are better prepared for college.

- **Articulation with Four-Year Colleges.** Community colleges increasingly are being selected as the postsecondary institution of choice when students need remediation. A high percentage of community college students are enrolled in one or more remedial courses that require satisfactory completion prior to advancement to upper-level courses and specified programs. In fact, students' successful transfer to a senior institution depends in part upon the success of the remedial program. Policy that fosters effective remediation at the community college level and encourages community colleges to contract with upper-division institutions for their remedial needs should be considered.

- **Articulation with Business and Industry.** Research shows that large numbers of adults working in certain sectors of the economy have serious literacy problems. Policy that encourages the community college and the business sector to work together to meet literacy needs of undereducated adults should be developed.

- **Articulation with Social Service Agencies.** Frequently, citizens in need of social services are also in need of basic skills education. Policies are needed to ensure that such citizens get the basic skills remediation they need to progress, as well as to eliminate replication or duplication of remedial services that could be more effectively provided by local community colleges.

- **Intra-institutional Articulation.** In many cases, students without the prerequisite skills are enrolled simultaneously in college-level courses requiring the very skill for which they are being remediated. While this often is done in the name of preventing the student from getting out of sequence in his or her chosen program of study, policy of this sort clearly will cause students to fail. Institutions must ensure their policies enhance, rather than discourage, student learning and that they are not designed simply for administrative convenience.
A New Remediation Model

Is the remedial model an appropriate one for the 21st-century? Today, when competencies and content change so rapidly they often are outdated or inaccurate before they are taught, a process-oriented, developmentally focused model may be more useful.

The 1988 report, Workplace Basics: The Skills Employers Want, developed by the American Society for Training and Development and the U.S. Department of Labor, Employment and Training Administration, proposed a model that might be included in a sophisticated system of remediation. Such a system, in fact, might be a foundation for the entire community college curriculum of the future. Here are the seven desired skill groups the report listed:

1. The foundation
2. Competence
3. Communication
4. Adaptability
5. Personal management
6. Group effectiveness
7. Influence.

Although this model is a radical departure from the remedial one, it is in step with research that shows that holistic, comprehensive learning systems appear to improve student learning better than isolated single-shot remedial courses and activities.

Regardless of the model chosen or the approach taken, it is unlikely that all students can be brought up to a functional literacy level. Knowing that a 100% success rate is impossible, colleges need to continue to develop interventions based on the best research about the teaching-learning process and human development.

According to the Commission on the Future of the Community Colleges, “Literacy is essential both for the individual and the society.... Community colleges must make a commitment without apology to help students overcome academic deficiencies and acquire the skills they need to become effective, independent learners.”

Remediating academic deficiencies and other functional literacy skills is essential to success in college and even more important to success in life. Research and good practice have shown that this can be accomplished.
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