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ABSTRACT

Comprehensive programs to enable students to acquire skills necessary for college work are discussed. It is suggested that developmental courses be supplements to regular academic courses. In starting a new developmental program, three factors are important: commitment of the school's faculty and administration to the program's success, adequate financial support, and a full-time director. Admission issues concern placement criteria, as well as whether developmental programs should be voluntary or mandatory. Classes are usually taught in a traditional classroom or a laboratory setting. In either case, class size needs to be low (i.e., 15 students). The bottom line in evaluating a developmental program is whether it enables underprepared students to acquire skills necessary to complete college. The areas in which remediation generally is provided include reading, writing, mathematics, and study skills. Personnel involved in developmental programs include the faculty, counselors, and tutors. Students who tend to need these programs include: foreign students, including refugees who have to overcome language and cultural barriers; athletes who have been given scholarships but who have academic deficiencies; minority students from disadvantaged backgrounds; and handicapped students who did not have access to adequate preparation. (SW)

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# The Case for Basic Skills Programs in Higher Education

Elinor P. Ross,
Betty D. Roe

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Series Editor, Derek L. Burleson

# The Case for Basic Skills Programs in Higher Education

by
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# Introduction

Students who lack adequate basic skills have been a challenge for higher education for more than a century. Basic skills programs existed in the nineteenth century at such institutions as Cornell, Wellesley, Vassar, and Yale (Brier 1984; Cross 1976). By 1915, 350 colleges had departments to prepare students for college admission standards (Maxwell 1980). The open-door policy adopted by many higher education institutions in the Sixties attracted great numbers of students who lacked adequate preparation for college-level work. By 1984, 2,300 of the approximately 2,800 U.S. institutions of higher education offered some form of developmental or remedial course (Department of Education 1984).

Large numbers of students are often in need of remedial reading instruction. For example, in fall 1982 the New Jersey Basic Skills Assessment Program found that 34% of entering freshmen needed remediation in reading (Morante, Faskow, and Menditto 1984). That same study found that 30% of entering freshmen were deficient in writing skills, 30% in computation, and 31% in elementary algebra.

The students who completed remediation courses in reading were found to be much more likely to stay in college a minimum of two semesters than ones who needed but did not take those courses. The students who took the courses also achieved higher grades than those who did not, and their retention rate was even better than the retention rate for students who did not need remediation.

At Eastfield College in Mesquite, Texas, of the 34% of new students who scored below the 9.0 grade level on the Nelson-Denny Reading Test and were counseled to take a reading improvement course, only 33% actually took a reading improvement course. These students outperformed their peers who needed the course but failed to enroll in it, based on hours attempted, hours completed, persistence rates, attrition rates, and grade point average for the year studied (Swindling 1982).

Enrollment in developmental programs has clearly increased in recent years, and it is likely to continue to increase through the 1980s and into the 1990s. Part of this increase may result from greater recruitment of disadvantaged students. According to demographic trends, there will be more white students from rural areas, more urban students, and more low-income students from suburban areas (Boylan 1985).

Higher education will have to handle this increase of underprepared students in one of four ways.

1. Colleges can restrict enrollment to only students who are adequately prepared. This policy would have the greatest negative impact on minority groups, low socioeconomic students, athletes, and adults who have been away from an academic setting for some time.

2. Colleges can admit these students and then fail them when they are unable to succeed academically. This would be costly in terms of attrition for the institution, loss of self-esteem for the student, and loss of potential value to society.

3. These students might be admitted only to community colleges and technical institutes and be required to remove deficiencies before entering four-year colleges and universities.

4. They can be admitted to all institutions of higher education and provided with adequate support services to remediate their deficiencies.

We support the fourth option because there is a widespread need that is not being adequately met. But higher education should work with school systems to increase levels of preparedness, and students should remove their deficiencies within a reasonable amount of time or be expected to withdraw from the institution.

Although most people readily accept remedial and developmental courses in community colleges, many feel that they are out of place in four-year colleges and universities. However, every institution has its lowest students, many of whom need remediation. For example, programs for underprepared students exist at Duke, Ohio State, MIT, and Stanford. Referring to Harvard's remedial reading program, William Perry (1959) said that Harvard's "remedial" students already were reading better than 85% of the nation's college freshmen, but they still needed help to measure up to the demands of their coursework.

On the other hand, it is true that not everyone belongs in college. Some people have career goals for which college study would be largely irrelevant. Some have such antipathy toward academic work that they would not likely succeed with any degree of remedial assistance, and others do not have the intellectual potential to succeed in the advanced courses even after they complete the remedial classes. For these people developmental programs would be inappropriate.

## Remedial and Developmental Education

The terms *remedial* and *developmental* are used interchangeably in much of the literature in this area; therefore, they have been used interchangeably in this fastback. Both terms refer to programs that work with students at present levels of achievement and help them to progress from there. If a distinction is to be made between the two, remedial programs are for more seriously disabled learners than are developmental programs. Differences are not so much a matter of concept as a matter of degree.

Nist (1985) differentiates between remedial and developmental reading programs by saying that remedial readers lack basic word attack and comprehension skills that they have been previously taught, while developmental readers lack the more advanced reading and study skills required for college work. If that is the case, it follows that remedial programs should have smaller classes, use easier materials that are not directly related to college courses, and extend over longer periods of time than developmental courses.

The term *remedial* is being used less frequently for programs for underprepared students in postsecondary education, perhaps because of its negative connotation. For example, the words *& Remedial* have been dropped from the *Journal of Developmental & Remedial Education*, and the professional organization for developmental educators has changed its name from the National Association for

Remedial/Developmental Studies in Postsecondary Education to the National Association of Developmental Educators. We will use the term *developmental* in most cases when referring to comprehensive programs that enable students to acquire those skills necessary to perform successfully at postsecondary levels, but we will use both terms when discussing courses.

## Research on the Effectiveness of Developmental Courses

Only recently has adequate research on the effectiveness of developmental programs been done. Cross (1976) argues that while most research before 1960 showed generally positive results from developmental programs, many of the studies were poorly designed. In the 1960s much research was emotionally charged and was used to defend remediation for minority students rather than for purposes of evaluation. Only since the 1970s has the design and evaluation of research related to these programs improved.

This recent research has supported mixed conclusions. Maxwell's (1980) review of research indicated that many reading-improvement programs, especially the individualized, counseling-oriented, and voluntary programs, resulted in improved grades. Effective programs usually extended for 40 or more hours and combined reading and study skills with counseling services. An analysis by Kulik, Kulik, and Schwalb (1983) of 60 evaluative studies also concluded that developmental programs for high-risk students were generally worthwhile. Those underprepared students earned somewhat better grades in regular courses and stayed in college slightly longer than students in control groups. However, Roueche, Baker, and Roueche's (1984) analysis of two major studies of postsecondary schools revealed that very few institutions evaluate their developmental programs adequately; so it is difficult to estimate their full impact on student achievement.

## Opportunity for Higher Education

Developmental programs have been justified with the argument that every student should have the opportunity to pursue higher education. Nevertheless, here are several reasons why this ideal cannot be

met easily. First, schools are not of equal quality, and some do not equip their students with the basic skills needed to succeed in college work. Second, some special students, such as international students, athletes, and handicapped students, may need extra assistance. And third, special recruiting programs have enabled a wide variety of students to attend college regardless of their experiences, academic background, or motivation to study. However, many ill-equipped students do continue their education when given the opportunity to overcome their deficiencies. Bloom (1971, p. 51) claims that "95 percent of the students...can learn a subject to a high level of mastery (for example, an A grade) if given sufficient learning time and appropriate types of help." William Moore (1984) argues that a good remedial program can help 50% of the students perform adequately in regular courses and help 25% to meet graduation requirements.

## Developmental and Academic Programs

Those who oppose developmental programs often argue that such programs dilute the academic programs. To accommodate underprepared students in regular courses, teachers may need to use high-school-level textbooks and reduce the length and difficulty of assignments. They also may need to use class time to help students achieve entry-level skills, therefore having less time to present course content. The results could be a watering down of coursework and a reduction of academic standards.

Remedial courses need not, and should not, dilute the academic programs that they accompany. Remedial courses should be additions to, not replacements for, the required coursework of a student's chosen discipline. Since they make it more likely that students will succeed in subsequent courses, the remedial courses actually support and enrich the curriculum.

Faculty who oppose the implementation of a developmental program argue that they prefer to individualize instruction within their classes and thus provide for weak students. But to accommodate underprepared students in regular classes takes excessive time from the academic program and still is likely to result in failures. Instead, the

academic courses should be supplemented with developmental courses for students who need additional work.

## The Cost of Developmental Programs

Developmental programs in higher education are expensive, and many people are concerned that they are not cost effective. Special materials, equipment, space, and administrative services are needed. The pupil-teacher ratio must be kept low, and many hours must be spent tutoring students outside of the regular class. Georgia spent more than $6 million in 1981 on developmental programs, and these programs cost Ohio State University between $10 and $12 million during the same year ("Toughening Up" 1982). The University of California system spent $5.5 million in 1982 on remedial programs (Astin 1985).

On the other hand, in the long run it may be cost effective to provide these programs in order to retain students. By keeping students in school, institutions continue collecting student fees; and many also benefit from full-time equivalent (FTE) reimbursements. Adjustments in funding formulas could make developmental programs more cost effective. Also, in a period of decreasing enrollment, institutions with developmental programs can recruit students who would otherwise be ineligible for higher education. Thus, these schools can divert some of their resources to helping high-risk students and also increase enrollment in regular classes after students have attained the necessary skills.

## Impact of Developmental Programs on Students

Much concern has been expressed about the demoralizing effect that mandatory developmental courses have on students who already have poor self-esteem. One of our eager and enthusiastic freshmen asked what RDS on her registration card meant. When she was told she would be required to enroll in remedial or developmental studies, she began to cry. Although these courses may provide her with skills she will need and help her to succeed in her regular coursework, this girl is having a difficult time accepting her status.

Mandatory placement in developmental courses seems more effective than voluntary enrollment. Many students who are advised to take these courses do not enroll in them, and they later fail or withdraw from their regular courses. The negative effects of mandatory placement can be overcome partially with the help of a guidance counselor and by pointing out to students that there are hundreds of others taking these courses.



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## Organizing Developmental Programs

In starting a new developmental program, three factors are paramount: commitment of the institution's faculty and administration to the program's success, adequate financial support, and a full-time director. Without the commitment of staff members, administrators, and the faculty at large, the program is likely to fail. Developmental education works best when an attitude of concern is felt throughout the institution. No less important is adequate funding, for financial resources must be available to administer the program, employ and train a large staff, and provide suitable materials. A full-time director is needed to coordinate all aspects of the program.

In view of the changing student body, flexibility is the key to designing developmental education programs. Courses can be offered at off-campus sites, in connection with businesses and industries, and at high schools as "bridges" to higher education. They can be designed as modules to be taken singly or in combination with other modules. In order to accommodate the scheduling needs of working students, some courses may be offered before or after working hours.

A holistic program in which faculty, counselors, and tutors work with the whole student is more successful than individual course offerings (Tremblay 1981). In a well-organized program, each component supports and complements the other. An integrated program facilitates communication among staff members regarding individual stu-

dents, who benefit from the full services provided by a unified program.

It is highly desirable for developmental programs to be coordinated not only within themselves, but also with disciplines throughout the institution. Learning study skills in isolation from course content does not necessarily enable students to apply those skills to coursework. Nor is it helpful for students to learn skills that they do not need to use in their regular courses. Unless the skills being taught in the developmental courses are relevant to the content of the academic curriculum, the program is not achieving its purpose. Des Moines Area Community College (Niemeyer 1982) has used a checklist to identify the minimum competencies in mathematics, reading-study skills, and English needed in its full-time academic programs so that there is a match between those skills offered in the developmental program and those needed in regular coursework.

Certain characteristics of developmental programs appear to be more successful than others in helping underprepared students. Small class size is important for individualizing instruction. Laboratories where students can work independently at their own pace with assistance from instructors or tutors are helpful for individualizing instruction. Clearly defined objectives within a structured program are important for helping students acquire skills.

In their study of every two- and four-year institution of higher education in the United States, Roueche, Baker, and Roueche (1984) found that most colleges and universities offer courses in basic skills for underprepared students. In addition to the courses, most programs include a variety of support services, including tutoring and counseling. In the larger universities, courses are usually offered as part of a separate academic unit or college learning center with its own organization and staff. In contrast, smaller institutions offer courses within traditional academic departments. The most successful programs have full-time directors who coordinate the programs.

Early and midterm intervention programs are implemented in some institutions to reduce failure rates in regular courses. Students who are performing poorly in these classes receive such support services as tutoring in course content, extra instruction in laboratory settings,

and interviews at the counseling center. While these students are not enrolled in developmental courses per se, they are receiving similar benefits through intervention.

Adjunct courses are offered in some schools for high-risk courses, particularly introductory courses in social sciences, mathematics, the sciences, and the humanities. This plan coordinates two courses in which a subject taught by a regular faculty member is matched with an adjunct skills class taught by a learning skills instructor. After determining the skills needed in the content course, the instructor of the adjunct course teaches these skills to the students. This plan appears to be working effectively at the University of Missouri-Kansas City (Friedlander 1984).

One issue is whether to offer credit for developmental or remedial courses. Some colleges allow students to substitute remedial or developmental courses for electives, thus giving credit for these courses toward graduation. However, giving full academic credit for remedial work reduces the integrity of the institution's program by accepting precollegiate work on the same basis as collegiate work. On the other hand, receiving no credit for time and effort spent removing deficiencies is demoralizing for students. A reasonable compromise that many institutions follow is giving credit for course completion (institutional or transcript credit), but not allowing the credit to count toward graduation (academic credit). Institutional credit increases the students' commitment to the program and rewards students for meeting course requirements. It also enables students to qualify for veterans' benefits, athletic grants, or other forms of financial aid and provides a basis for determining faculty load and formula funding.

## Entry Criteria

Admission to developmental programs involves two questions: 1) Should the program be voluntary or mandatory? and 2) What placement criteria should be used? Those who support voluntary admission say that students at this level will learn only if they are motivated to improve their skills, not because they are forced to do so. Students who are required to enter these programs may perceive themselves

as stupid and something less than real college students. Thus, nothing is gained by forcing students to take courses they do not wish to take.

Somewhat better than strictly voluntary admission is placement through the recommendation of counselors. Students with weak secondary backgrounds and low entrance-test scores are advised to enroll in developmental courses, but the students have the option of refusing. As a result, many students who need remedial work still fail to enroll in these courses and subsequently withdraw from school.

Mandatory enrollment of underprepared students lessens their risk of failure in regular college courses and relieves faculty from teaching prerequisite skills to students who avoid taking developmental courses. Once criteria for admission are determined, placement is automatic for those students identified as having the greatest need for skill development. Although mandatory enrollment is the most effective option, Roueche, Baker, and Roueche (1984) found that most institutions do not require students to enroll in remedial and developmental courses.

Admission criteria for developmental programs vary, but for the most part they are based on some form of entry-level assessment. Standardized tests are frequently used to diagnose weaknesses. The Stanford Achievement Test is widely used in successful developmental programs, and the ACT and SAT are used by most universities. In some cases composite scores are the only criteria for placement. In others, such as Tennessee Technological University, individual scores are considered; and students with acceptable ACT composite scores must take the screening test developed by the state if they fall below the minimum acceptable score in even one area. Few programs rely on high school averages and Carnegie Units to determine a student's readiness for college work because these criteria no longer give accurate indications of competency (Roueche, Baker, Roueche 1984).

Once they enter the developmental program, students should be monitored frequently. Instructors should observe them during class or lab time and administer informal tests weekly. The institution should conduct a general progress assessment approximately twice each term. Student attendance should be mandatory and withdrawals from courses

should be discouraged. Students who are experiencing difficulties should be referred at once to counselors for help. Students should be monitored for two or three terms after completing the program to make certain that they are adjusting to their academic classes. The Academic Alert and Advisement System used in the Miami-Dade County Community College program notifies students of their status in the program at regular intervals and suggests appropriate support services when they are needed (Friedlander 1984).

Many postsecondary institutions have implemented orientation programs for high-risk students. These programs familiarize students with the policies and procedures of the institution and provide them with additional support services. Some offer handbooks with schedules of important dates, send letters reminding students of procedures to follow, or assign counselors to meet with students to discuss their problems.

## Grading

Opinions differ on grading policies. Some feel that grades are threatening to insecure remedial students and recommend giving no grades at all or at least no failing grades. For example, students who meet their objectives would get As and Bs, but students who fail to meet objectives would simply receive no grades. Others feel that grading should be rigorous and in line with institutional grading policies. Many prefer the concept of mastery learning, in which students simply take as much time as they need in order to remediate deficiencies. Roueche, Baker, and Roueche (1984) found that more than half of the developmental programs give traditional letter grades, while about 40% give nonstandard grades such as pass/fail.

## Exit Criteria

Exit criteria should be clearly stated for each course so there is no doubt about what the student must achieve to complete the requirements. The flexibility of an open-entry/open-exit policy allows students to enter and leave developmental courses according to their own

rates of learning. Some programs allow students to "test out" of courses when they feel they have met the objectives.

Realistically, limits must be placed on the length of time required to complete course objectives; otherwise, students could remain in developmental courses for years. Two terms for each course is often considered a reasonable limit. A student who fails to meet the objectives of a single course in two terms may be prohibited from taking that course a third time. This student may get counseling for setting alternate goals, re-enter the course after a specified period of time, or appeal the decision.

## Organization of Classes

Classes in developmental programs usually are taught in either a traditional classroom or a laboratory setting. In either case, class size needs to be low. Experience indicates that a reasonable size for developmental classes is 15 students and that a class with more than 20 students is unmanageable for individualizing instruction. Remedial classes need to be even smaller.

*Traditional classroom setting*. Many courses are organized in a traditional classroom structure. Students are assigned to classes that meet on a regular basis each week. These classes are designed to cover the material on which the students' tests have indicated that they are deficient. Unfortunately, in some cases, students deficient in only some of the designated skills are required to complete activities designed to remediate skills they already have mastered.

Students may be assigned to certain sections of the class on the basis of their performance on the placement test. In this way, students at similar levels of need are placed in class together, and class materials can be chosen to fit each specific class better.

In a traditional classroom setting the instructor generally presents much material through whole-class lectures. These lectures may be supplemented by demonstrations, films, filmstrips, class discussions, small-group activities, or other means. Independent assignments usually follow these lectures, and their completion often is monitored by the instructor in class, although there also may be homework assign-

ments. Much class time may be spent checking the accuracy and understanding of independent work assignments. Students with individual problems that need special attention may be given modified assignments. Some assignments may involve multi-level materials, with different students working at their own levels on different tasks.

Often a common textbook or workbook is used by all of the students in a traditional classroom setting, but it generally is supplemented by other textbooks, workbooks, and audiovisual materials that can be used by the instructor for individualization. A remedial class without individualized attention for the students is not likely to be successful.

*Laboratory setting*. When remediation is provided in a laboratory setting, the students generally report to the laboratory with results of their diagnostic screening tests and are given assignments based on their individual needs. Then they will be assigned specific times to work in the laboratory on their individual programs or allowed to come to the laboratory whenever their personal schedules permit. If students are allowed to develop their own schedules, then they usually are required to sign in and complete a certain number of hours of work each week. However, in some labs attendance is not mandatory and students attend only when they decide to do so, even if they have been referred to the lab by an instructor or counselor. In situations such as these, the students usually ask for assistance on immediate problems they face with their current classes, and they often do only the work necessary to overcome the immediate problem.

Students in laboratory classes use materials selected to fit their current levels of functioning. They are supervised by an instructor or laboratory assistant as they work through a series of materials designed to alleviate their problems. Their progress is carefully monitored, and periodic diagnostic tests may be given to assess whether it is necessary to modify the program of study. Instructors generally do not give lectures to all students in the lab; rather, they work with individuals or with small groups of students who have similar needs.

Laboratory instructors must have a good system for record-keeping. For each student there should be a record of diagnostic test results, the assignments designed to help that student overcome deficiencies,

progress made on assignments, attendance record, program adjustments based on observation and periodic testing, and posttest results.

The materials in labs often include programmed materials, autotutorial modules, and audiovisual presentations related to the needed skills. Labs may have materials on different skills at a variety of difficulty levels to meet the needs of different students.

Labs generally are furnished with individual carrels for independent work, chalkboards and overhead projectors for instructional sessions with small groups, and multilevel study materials. They also usually have a variety of equipment, such as rate machines for improving reading speed, tape recorders with instructional tapes in listening centers, microcomputers or computer terminals for computer-assisted instruction or word-processing functions, and film or filmstrip projectors with related instructional materials.

## Program Evaluation

Evaluation of developmental programs will differ among institutions in terms of the kinds of students served and the mission of the institution. Nevertheless, the bottom line in evaluating a developmental program is whether it enables underprepared students to acquire skills necessary to complete college. Many program components can be evaluated, but most important is the success rate of developmental students in their regular academic courses. Careful records must be kept on developmental students to see how many graduate or withdraw.

Ongoing evaluation can occur through informal procedures. Students can assess the effectiveness of their instructors and counselors, as well as the overall worth of the program. Staff members can determine the effectiveness of different types of teaching strategies and materials for different students. Regular academic faculty can determine how well former developmental students can apply the skills they have learned to new coursework.

Darrel A. Clowes (1984) designed a four-stage model for evaluating developmental programs. In the first stage activities within the developmental program are evaluated. During the second stage the

match between the developmental program and the mainstream curriculum is evaluated. The third step uses student progress and faculty, staff, and administrative judgments to reassess the goals of both the developmental program and the mainstream courses. Finally, in the fourth stage the measures used for evaluation are reconsidered in light of the new goals that have been set.



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## Courses for Developmental Programs

Although the developmental programs of different institutions vary greatly, the areas in which remediation generally is provided include reading, writing, mathematics, and study skills. These courses may be coordinated with each other; or they may exist as separate courses, sometimes offered in different divisions of the institution.

### Reading

Many postsecondary institutions offer reading-improvement courses. These courses need to take into account the types of reading skills that college students are expected to use in their classes. Although some of the students will need work on word-identification skills, a program that focuses on only these skills will not be sufficient. Areas that need to be addressed in these courses include vocabulary development, development of word-recognition and comprehension skills, development of skills for reading in the content areas, and rate improvement. Some reading-improvement courses also contain some study-skills components, since reading and study skills are closely linked.

Instruction in these skill areas should make use of connected pieces of writing that are similar to those that the students need to read in their regular classes. Often, the textbooks used by students in regular classes may be used in the reading-improvement courses.

Reading-improvement classes also need to develop the reading interests of students and to encourage positive attitudes toward reading. Many of these students previously have failed in reading and have developed negative attitudes toward reading in general. Periods of free reading by the students and periods of reading to the students by the instructor can be helpful in this respect.

## Writing

Colleges and universities provide remediation of students' writing skills through writing labs or through full-fledged courses. Skills addressed include constructing good sentences and paragraphs, using correct punctuation, learning the spelling of words used in compositions, using correct grammatical constructions, and writing coherent papers consisting of several paragraphs. The emphasis in writing lessons is often on three basic phases: prewriting activities, actual writing, and revision of the material.

Lambert (1984) has suggested summary writing as a good technique for basic writing classes. Summary writing allows the students to write complete selections and at the same time reinforces the skills taught in remedial reading classes (determining main ideas and supporting details). Writing summaries generally is stressed in study-skills courses as well. Summarizing is important for completing many assignments in regular classes, and knowing how to summarize can be very helpful when taking an essay test. This technique can provide links between many courses, which students previously viewed as separate and unrelated.

Hunter (1984) found that use of word processors in basic writing classes accomplishes several goals. It provides copy to students that is easily readable, limits the need for recopying that students often find onerous, encourages more extensive revision, and provides motivation to students who at first resent being placed in a basic writing class. Learning this new, up-to-date skill builds confidence in their abilities.

## Mathematics

Remedial work may be offered in basic arithmetic, elementary algebra, or both. These courses are necessary because many students do not have adequate computational skills, nor do they understand basic mathematical concepts. Many remedial students are somewhat afraid of math, feeling that it is far too complicated for them to understand.

Research has suggested that more than 50% of college freshmen may not be at Piaget's formal operational level of thinking. Therefore, the traditional lecture method of teaching mathematics probably should not be used in remedial mathematics classes. An approach based on the learning-cycle model of Atkins and Karplus can make learning mathematical concepts possible for students at a concrete operational level of thinking (Stepans 1984). The steps in this model are 1) introduction, 2) exploration, 3) concept invention, and 4) application. Such concepts as ratio and proportion, ratio of circumference to diameter, and factoring can be taught by this model.

Orsetti (1984) recommends that math homework done by developmental students not be graded. Although grading homework is often cited as a way to encourage students to do it, developmental students need to be involved in the process of identifying and correcting errors on homework.

## Study Skills

Many students come to college with poor study skills. Study-skills instruction offered to these students may consist of a separate course, or it may be integrated into reading-improvement or writing-improvement courses. In some institutions the counseling center offers help with study skills outside a formal class arrangement, and in some cases study skills are incorporated into the regular academic classes by instructors who see the need to relate these skills to the content being studied.

Topics addressed in study-skills programs typically include:

- Stress and time management
- Environment and preparation for study

- Study methods
- Use of textbooks, reference materials, and the library
- Effective note-taking, outlining, and summarizing
- Effective listening skills
- Techniques to increase retention
- Ways to study for examinations
- Problem solving and thinking skills

A study-skills survey made by the Communications Learning Center staff at Spokane Falls (Wash.) Community College showed that the five skills students felt were most important and most needed were study-reading, note-taking, test taking, time management, and vocabulary (Agopsowicz and Swinton 1984). In many programs, vocabulary is included in the reading-improvement course rather than a study-skills course.

Ideally, study-skills instruction would take place with the textbooks that students are using in their regular classes. In practice, it is not likely that a single textbook can be used by all students in a study-skills course unless the course has been structured around a particular class. To meet the students' needs for relevant material that is similar to materials in regular classes, Frager and Thompson (1985) have made use of news magazines. The contents of these magazines reflect material found in the students' academic majors, are a good length to use in class, and have relatively high interest for students.

In some study-skills programs, learning-style inventories are used to determine individuals' preferred ways of dealing with information. If students understand how they learn best, they can adapt better to the learning situations in which they are placed. If teachers know the different learning styles of their students, they can adapt instruction to individual needs (Posey 1984). Although it is not always possible for students to match each instructional situation with their preferred style of learning, they may be able to minimize learning loss if they are aware of their preferred learning style. A learner who learns best by doing may have to devise a way to use the information presented by a lecture in an active manner.

## Personnel and Support Services

Personnel involved in developmental programs include the faculty, counselors, and tutors. Working together, these individuals can offer the support services to help students overcome their deficiencies.

### Faculty

The faculty for developmental courses must be committed to the program and to helping students succeed. They should be competent in their subject matter and knowledgeable in teaching adults who need remedial work. They need to be flexible and willing to try new materials and techniques with students with academic or personal problems. This may involve referring some students to counseling.

Most important, good developmental teachers set attainable goals and encourage students to persevere by giving positive reinforcement for even small successes. These teachers make the students aware that they have strengths and the potential for success if they are willing to make the effort.

Unfortunately, with the increasing need for developmental courses, many institutions have resorted to "quick fixes." Teachers often are recruited for these programs on the basis of course-load distribution alone, without considering their qualifications. Even worse, many instructors are chosen because they are low on the academic totem pole.

Faculty who are thrust into these programs involuntarily are likely to resent being given what they perceive as an inferior assignment and may put forth only minimum effort. Such negative attitudes by the teacher will not escape the attention of students, who themselves may have negative attitudes about the course. The combination of a teacher who does not want to teach the course and students who do not want to be in the course is not likely to result in improved student performance.

The faculty of developmental courses must maintain contact with the regular academic faculty. For this reason, it is helpful for developmental course faculty also to teach regular courses in their disciplines. Furthermore, instructors of regular classes must share information about students' special needs with the developmental instructors so that steps can be taken to overcome deficiencies. Indeed, all the faculty should be informed about the goals and techniques of the developmental program.

Gordon and Flippo surveyed faculty in reading-improvement programs in the southeastern United States and found that 75% of their respondents "felt that on-the-job training was the most important preparation for their positions" (1983, p. 157). Internships or practicum courses could substitute for on-the-job training, but few teacher training institutions provide such experiences.

## Counselors

Many students who enter remedial courses have very poor self-concepts. Some feel that the university campus is a hostile environment. Some have poor time-management and study skills and find themselves unable to cope with their class assignments. Others have high levels of test anxiety and perform poorly on tests, even when they know the content. There are also those who feel that they should be in a particular major because their parents desire it or because it is the thing to do, even when the academic major fits neither their skills nor interests. These students would benefit from sessions with academic counselors. Counselors also can help students become aware of their own learning styles and achieve other goals that are not always easy to address in classroom settings.

Counseling should be available to all developmental students when they enter college to help them become oriented to the new environment, choose courses of study, and set goals. In addition, counseling should be available to these students on request or when they are referred by regular instructors. Some institutions require students who have poor attendance records or grades of D or F at midterm to report to the counseling center, where they are then directed to the services that they need (Friedlander 1984). Academic counselors generally are available to help athletes. At Indiana University prospective recruits are introduced to the counselor on their official visit to campus, and support services for the athletes are explained at this meeting (Kurpius and Rose 1982).

## Tutors

Many remedial students will not be able to handle course requirements without special tutoring. In some instances this tutoring may be done by thc regular instructor, or it may be done by a developmental instructor in conjunction with the instructor of the regular course. In still other cases it may be done by a peer tutor, another student who has had the course.

Tutors need a variety of skills, including keeping the client engaged in the activity, fostering positive attitudes toward the tutoring, setting appropriate goals for each tutoring session, keeping the sessions on target, and evaluating the client's progress toward a goal. Peer tutors often need assistance in developing appropriate diagnostic, questioning, reinforcement, and evaluation techniques.

In several Chicago colleges, regular faculty have the option of offering extra assistance to students who are having trouble at midterm by offering a supplemental one-hour class. This class is funded by the adult education division. The supplemental course is optional, but most failing students can be persuaded to take it (Friedlander 1984).

In some cases support personnel come into a regular class and offer extra instruction in various skill areas. East Tennessee State University uses another approach in a speech course: the regular instructor incorporates a study-skills component in the course (Schneider

1982). Both of these approaches allow many students to be served at once.

Tutoring programs for athletes are common today. Many, like the one at Indiana University (Kurpius and Rose 1982), employ full-time staff rather than relying on graduate assistants to oversee the program and provide continuity. Full-time staff have time to get to know the athletes and can better meet their individual needs. Indiana University considers educational training, professional experience, and emotional maturity when selecting its counselors for athletes. In addition, individualized tutoring often is provided by graduate students or mature undergraduates who are gifted in particular academic areas.

## Dual-Function Personnel

Some programs use tutors who are trained to perform some counseling services. The University of Southern California prepares peer tutors/counselors in the following areas:

- Building rapport;
- Establishing credibility (letting the client know that the tutor/counselor is qualified to help);
- Assessing student needs (using a variety of assessment measures) and prescribing a course of action;
- Tutoring (breaking down tasks into manageable parts for the students, pacing the instruction, offering different approaches to tasks);
- Maintaining a task-oriented atmosphere;
- Keeping students informed about what is expected of them and what they can expect of the tutor/counselor and others involved in the program;
- Defusing tensions that occur in the sessions;
- Developing the student's self-confidence;
- Providing constant feedback to the student and eliciting feedback from the student;
- Recognizing and pointing out progress;
- Summarizing work sessions;
- Outlining work that remains to be done (Jones 1984).

If a skills-therapy approach is used in the remedial program, the instructor will need to know counseling techniques as well as skill-building techniques. For this approach, the tutor/counselor must conduct in-depth interviews "to discover whether the academic problems are a cause or result of personal problems which may include escape and avoidance defenses, unrealistic goals, or inadequate self-concept" (Schmelzer and Brozo 1982, p. 647). Then diagnostic tests are used to supplement the information from the interviews. Tests of reading skills, mathematics skills, and study skills may be used along with questionnaires on study habits and attitudes. Using both the interview data and test results, the counselor and student should make a list of the student's needs in order of priority. After a program has been laid out for improving skills, the counselor should continue to meet with the student to provide support and reinforcement and to plan changes in the program when needed. The skills instruction may be given by the counselor or by a tutor, but the counselor helps the student to determine when skill needs have been met (Schmelzer and Brozo 1982).

Skills-therapy personnel do not have to be licensed counselors but should have strong backgrounds in psychology and counseling. Although staffing a program with tutor/counselors is more difficult initially because of the need for expertise in more than one area, it should result in increased effectiveness of the program.



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## Students Who Need Developmental Programs

There are certain categories of students who tend to need developmental programs: international students, including refugees, who need help because of language or cultural barriers; athletes who have been recruited and given scholarships but have serious academic deficiencies; minority students who had reduced opportunities for skill development because of cultural or environmental factors; handicapped students who did not have access to adequate preparation because of their handicapping conditions; and other students who were unmotivated or immature in high school, or who have attended high schools that failed to provide a good foundation in basic skills. Of course, some students fit into more than one of these categories, which only compounds their difficulties.

### International Students

International students, even highly intelligent ones with good academic backgrounds, often have inadequate English communication skills. Idiomatic English used in class lectures, discussions, and even in textbooks can confuse these students. They often are reluctant to ask questions or participate in class discussions because they don't want to reveal their lack of language proficiency. They may try to make up for this by spending many hours in the instructor's office after class, or they may seek out a classmate to help them.

The language barrier is even greater for refugees, who usually have had less preparation in English than other international students. Refugees also must contend with their unfamiliarity with the culture. Many refugees, eager to participate in the educational opportunities available in this country, enroll in college courses with only a few months of English study. They may try to hide their language difficulties by nodding and smiling in response to oral messages, giving the impression that they understand when they do not. A mandatory English proficiency screening for all international students can identify those who need to be in the developmental program (Aikman 1982).

Many foreign students face a problem in reading comprehension because they lack sufficient background knowledge. As Adams and Bruce have pointed out, "comprehension is the use of prior knowledge to create new knowledge. Without prior knowledge, a complex object, such as a text, is not just difficult to interpret: strictly speaking, it is meaningless" (1980, p. 37). Foreign students frequently do not have the prior knowledge to understand textbooks written for U.S. students. These students often resort to rote memorization of facts and fail to gain a true understanding of those texts (Obah 1983).

## Athletes

Those who teach remedial courses know that scholarship athletes are well represented in those courses. Recruited by coaches on the basis of their high school athletic records, many of these students arrive at college with serious deficiencies in the skills needed for their academic courses. As high school athletes, these students enjoy special status and are often allowed to graduate without a good preparation for the demands of the college curriculum. In addition, in many institutions athletes are segregated from other students in special dormitories and kept on demanding practice, conditioning, and competition schedules that keep them from feeling a part of the college as a whole (Harrison 1981). In the classroom with other students, they may feel threatened if they are not prepared to do the course assignments. Their courses may seem irrelevant and uninteresting compared to the glamour of the sports arena.

Even athletes who are not deficient in academic skills may have difficulty keeping up with classwork because of necessary absences during the season for their sport. Also, as a result of injuries, classes may be missed; or injuries may keep athletes from concentrating on their studies.

Developmental instructors must recognize the particular needs of athletes and work with them so they can meet scholastic expectations while continuing to participate in sports. Athletes typically need help with time management, study skills, and relating coursework to their long-term goals.

## Minorities

Some minority students face a language barrier of their own. Although they understand spoken Standard English, they often are unable to use it correctly in their written and spoken communications because they have grown up speaking a variant dialect. In classes in which Standard English is necessary, these students are at a disadvantage. They may see insistence on the use of Standard English as a form of discrimination rather than an effort to prepare them to succeed in the world of work. Their instructors not only have to teach them Standard English usage but have to convince them that fluency in Standard English will help them compete in the marketplace, even though their variant dialect may continue to serve them well in appropriate circumstances.

Developing self-esteem also is important for many minority students. They may feel uncomfortable where they are outnumbered by students whose cultural backgrounds are different from theirs. They need opportunities for positive interaction with others.

## Handicapped Students

Many handicapped students have gaps in their academic backgrounds because of particular handicaps. For example, hearing impaired students may have had difficulty in high school classes because they missed or misunderstood points made by the teacher. Or their word-recognition skills may be weak because their hearing impair-

ment did not allow them to master phonics. Visually impaired students may have fallen behind because the textbook reading load was too heavy or because they missed details when information was presented visually. In many cases all that handicapped students may need are accommodations that take their disabilities into account. These include special seating arrangements, amplifiers, large print sources, and special teaching techniques.

Handicapped students also may need to increase their self-esteem. They may feel inferior because they are not like their non-handicapped classmates. Emphasizing their strengths and using techniques to accommodate for their handicaps should have a positive impact on their progress.

## Other Underprepared Students

Many students are underprepared simply because of inadequate educational opportunities in the past or because of their failure, for various reasons, to take advantage of opportunities that existed. Some of the reasons for underpreparation are the fault of the school systems from which these students have come; others are the fault of home conditions or of negative attitudes within the students themselves.

Moving from school to school results in some students missing skills that are not taught in the same sequence in all schools. Students can also miss skill instruction by being absent frequently because of illness or truancy. Some students may fail to learn basic skills because of emotional problems that make it difficult for them to concentrate. Additionally, some schools do not offer all of the courses that would be desirable for college preparation. In cases such as these, developmental courses can fill the gaps so that students can progress normally in the regular college curriculum.

It is common for underprepared students to have a poor self-image. If they do not see that they are making progress, they may not apply themselves fully to the task or attend classes regularly. They also may need help in learning how to learn, something that all of their teachers could provide (Rabianski-Carriuolo 1985).

## Conclusion

Developmental courses in higher education institutions involve large numbers of faculty and students. They have the potential of rehabilitating underprepared students so that they can succeed academically. Clearly, a concerted effort is needed to reduce the number of underprepared students. But until that happens we must provide effective developmental programs in higher education institutions.

Efforts are being made to improve college preparation in the secondary schools. McCurdy (1985) reports that California State University hopes to reduce significantly the number of underprepared students by working through the public schools. Bandy (1985) reports that the Ohio State Department of Education has begun a program in the public schools to better prepare students for college and that a decline in underprepared students has already been observed. Recommendations from these programs and other sources include rigorous college preparatory programs, especially in science and mathematics, and better articulation between secondary schools and colleges regarding the skills needed to do college work. Early diagnosis is essential so that high school students who lack basic skills have time to learn them before graduation. Both students and their parents should be fully aware of requirements for college entrance. More rigorous requirements in teacher education programs also are recommended, particularly in content areas and writing proficiency.

Like it or not, the need exists and will continue to exist for developmental courses in college, even with stronger college preparatory curricula in our secondary schools. In this fastback we have identified those characteristics of developmental programs that are most effective for preparing students to do college-level work. They can be used for implementing new programs or modifying existing ones. These characteristics are:

1. A comprehensive, structured developmental program that includes math, English, reading, study skills, and such support services as tutoring and counseling;
2. Faculty who are committed to the program and provided with ongoing training;
3. Required entry-level tests and mandated basic-skill courses for students who lack minimum competencies;
4. A full-time director to supervise and coordinate the program and staff;
5. Limited number of courses allowed for removing deficiencies;
6. Course content relevant to the needs of regular courses;
7. Flexible programs designed to meet the needs of different students;
8. Adequate funding;
9. Continuous evaluation of all aspects of the program, particularly the success rate of students after they leave the developmental program.

We will never completely eliminate the problem of underprepared students, but we can alleviate it. More rigorous high school curricula will reduce the number of underprepared students; and better communication between high schools and colleges, along with more effective remedial and developmental programs, will increase the success rate of high-risk students.

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