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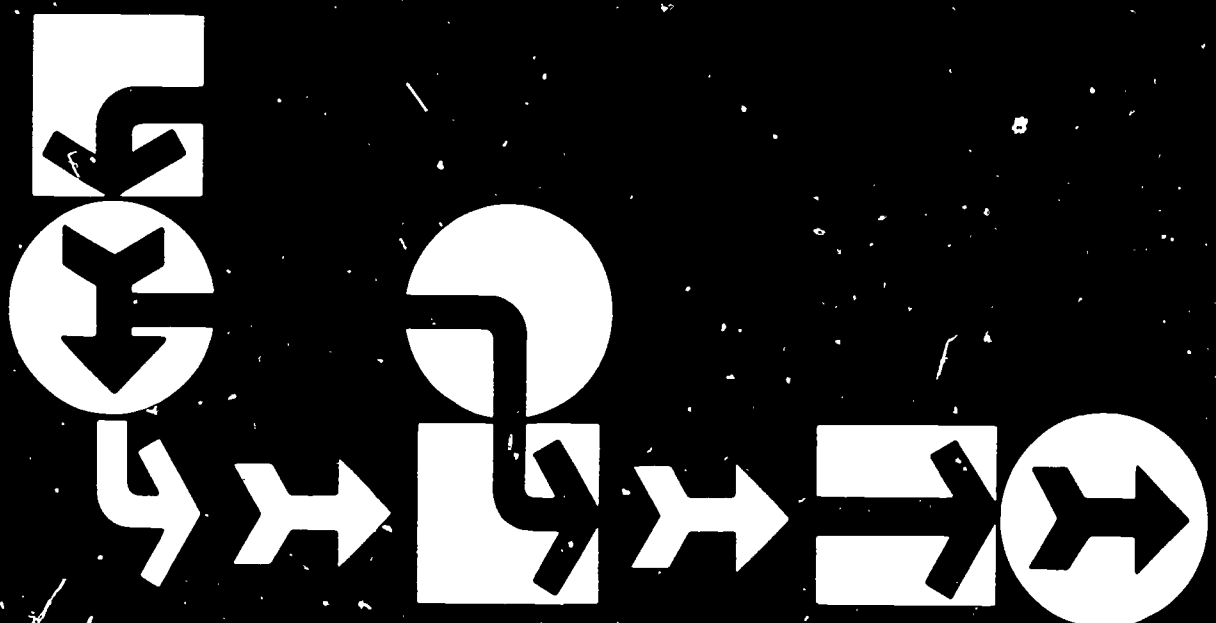
ABSTRACT

This guide provides information and guidelines intended to assist vocational administrators in developing and evaluating programs to improve the basic skills of vocational-technical students. Part one provides background information about basic skills and examines their role in vocational education. Discussed next are various program types, approaches, and staffing patterns that may be used in a basic skills program. The third part addresses the following aspects of planning for basic skills improvement: effective program planning; the planning process; students; staffing; facilities, equipment, and materials; and funding. A chapter on program implementation and criteria for evaluating program effectiveness concludes the guide. Sample forms/correspondence and activities are included in many chapters. (MN)

Improving the Basic Skills of Vocational-Technical Students: An Administrator's Guide



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Improving the Basic Skills of Vocational-Technical Students: An Administrator's Guide

COMPETENCY-BASED VOCATIONAL EDUCATION ADMINISTRATOR MODULE SERIES

Consortium for the Development of
Professional Materials for Vocational Education

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The National Center for Research in Vocational Education
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FOREWORD

The need for competent administrators of vocational education has long been recognized. Preservice and inservice administrators at both the secondary and postsecondary levels need to be well prepared for the complex and unique skills required to successfully direct vocational programs.

The effective training of local administrators has been hampered by the limited availability of high-quality competency-based materials specifically designed for the preparation of vocational administrators. In response to this need, work began in 1975, under U.S. Office of Education sponsorship, to identify the competencies important to successful administrators and to develop modularized training materials that would address the competencies. This work continued in September of 1978 when seven states joined with the National Center for Research in Vocational Education to form the Consortium for the Development of Professional Materials for Vocational Education. These combined efforts resulted in the development, field testing, and publication of the initial twenty-nine modules and three supportive documents in the Competency-Based Vocational Administrator Module Series.

While these modules addressed all the competencies identified in the National Center's original research, the passing of time gave rise to new areas of need. Hence, since 1982-83, the Consortium has each year selected specific areas of need and undertaken the development of additional products to meet those needs. During 1984-85, basic skills was identified as an area of need, which resulted in the development of this guide to improving the basic skills of vocational-technical students.

Many persons participated in the conceptualization of this guide. A technical advisory panel was convened to identify the competencies that needed to be addressed and the type of material that would be most useful. Members of this committee included Kirby Barrick, Assistant Professor of Agricultural Education, The Ohio State University, Columbus; Robert Burchfield, Supervisor of Vocational Education, Northern Chester County AVTS, Phoenixville, Pennsylvania; James P. Greenan, Research and Development Coordinator, Department of Vocational and Technical Education, University of Illinois, Champaign; Larry Householder, Instructional Supervisor, Upper Valley JVS, Piqua, Ohio; Gayle Marco, Assistant Director, Center for Personnel Preparation, University of Pittsburgh, Pennsylvania; and Bertha Pitt, Assistant Director, Miami Lakes Vocational-Technical Education Center, Miami Lakes, Florida.

Several persons contributed to the development of this guide to improving the basic skills of vocational-technical students. Catherine C. King-Fitch, Program Associate, assumed major responsibility for preparing the initial manuscript and for revising the guide after field review; and Lois G. Harrington, Program Associate, edited the final version and prepared it for publication. Recognition also goes to the following persons who served as official field reviewers: Lonnie Hart, Director, Boulder Valley Vocational-Technical Center, Boulder, Colorado; Dale Hershey, Director of Adult Education, Upper Valley JVS, Piqua, Ohio; and Sheila Feichtner, Assistant Director,

Center for Vocational Personnel Preparation, Indiana University of Pennsylvania. Credit also goes to Robert E. Norton, Consortium Program Director, for providing program leadership and content reviews; and to Harry Drier, Associate Director of the Development Division, for his administrative assistance.

Appreciation is also extended to Robert Balthaser, Elaine Cadigan, Jacqueline Cullen, Carole Johnson, Helen Lipscomb, and Dominic Mohamed for their service as state representatives, state department contacts, and field-review coordinators. Last, but certainly not least, much credit is due Shellie Tremaine, Consortium Program Typist, for her patience and skill in processing the many words necessary to make this guide a high-quality document.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

CONTENTS

INTRODUCTION

Who can argue the importance of basic skills? People simply do need to communicate with each other, through written and spoken language, at some level of competency, in virtually every occupation and life role. They do need to think rationally and solve problems, and they do need a variety of other skills that are basic to a broad range of human activities.

It is also generally agreed that we have a problem. Too many of our students are graduating without having developed these skills to a functional level. All manner of solutions have been proposed, from reforming teacher preparation programs to establishing competency requirements for graduation; from revamping the elementary curricula to providing remedial programs for secondary and postsecondary students.

Whatever the long-range solutions may be, vocational educators must take immediate steps, for on the average, vocational students' basic skills levels are among the lowest. Their skill deficiencies deprive them not only of opportunities in the job market but of the chance to succeed in the occupational program itself.

This guide offers information and guidelines that you, as a vocational-technical administrator, can use to initiate needed changes in your program. Whether you are a vocational principal, supervisor, or department head; a dean of vocational education, state department supervisor, or other administrator--you have an important role in making change happen. In the literature pertaining to basic skills improvement, no point stands out more clearly than the importance of the administrator's role in bringing about improvement of basic skills. Unless you are actively involved and committed to the program's success--unless you care, work hard, and provide effective instructional leadership--it is very unlikely that the program will have any impact on the problem at all.

This guide is intended to help you prepare for your important role in basic skills improvement. Part 1 provides background material about basic skills and vocational education. Part 2 gives overviews and examples of types of basic skills programs, staffing structures, and instructional approaches that have been used effectively in those programs. Part 3 deals with program planning--the process and the factors you will need to consider. Finally, Part 4 provides guidelines for implementing the program, as well as criteria for evaluating its effectiveness.

PART ONE

BACKGROUND ON BASIC SKILLS

Chapter I

WHAT ARE BASIC SKILLS?

Basic skills are commonly defined as communication and computational skills. Or literacy and numeracy. Or the three Rs. However basic skills are described, we consider them to be skills basic to successful participation in adult society.

Much has been written and said about the nature of basic skills--how to define them, what skills to include, even what to call them. Before we consider the problems surrounding basic skills and vocational education, perhaps we should take a general look at what these skills are.

Title II of Public Law 95-561, the Basic Skills Improvement Act, defines basic skills as including these skills:

- Reading
- Mathematics
- Effective communication, both written and oral (oral communication is generally considered to include both speaking and listening)

From this basis, various educators have expanded the definition to include skills from other academic areas, ranging from science and social studies to reasoning and problem solving.

Proponents of experienced-based learning have defined "basic skills" as reading, writing, listening, and math; "life skills" as critical thinking, functional citizenship, and personal/social development; and "career development" as career knowledge, employability skills, and understanding of work.

Others have included interpersonal skills and "survival skills" among the most important skills required of new workers across a broad range of occupations. Employers want workers who can apply basic skills to work-related problems, who can think creatively about problems they encounter. and who have desirable "work attitudes."

The much-publicized report of the National Commission on Excellence in Education, A Nation at Risk: The Imperative for Educational Reform, declared the "new basics" to be English, math, science, social studies, and computer science.[1]

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1. National Commission on Excellence in Education, A Nation at Risk: The Imperative for Educational Reform (Washington, DC: U.S. Department of Education, 1983).

Indeed, computer literacy or keyboarding is increasingly being recognized as an emerging basic skill. Keyboarding should not be confused with computer science, which involves a higher level of knowledge and technical ability than is required at the basic level. Rather, the skills that are considered to be basic involve general familiarity with the capabilities and operation of electronic equipment, evaluation of software, selection of hardware, minor programming modifications, and transfer of skills from one brand of hardware to another. Such skills can enable a worker to be at ease with new machines and to transfer skills easily from one type of equipment to another.

The Vocational Education View

These various views seem to be little more than minor variations on a theme: basic skills appear simply to be academic skills studied in relation to employment settings.

In recent years, however, the field of vocational education has focused on basic skills in terms of the combined requirements of vocational-technical training programs and occupations. As vocational educators have studied the problem, they have attempted to define basic skills--variously referred to as "transferable," "common," "core," "generic," or "generalizable" skills--in functional terms.

> An important problem [regarding] . . . basic skills has been defining what they actually are. For example, what are "basic skills" basic to? Do they relate to vocational programs and/or the occupations for which students are being trained? Are they essentially derived from academia and assumed to be necessary and related to success in vocational programs and employment settings? These and other questions and issues suggest that basic skills need to be related directly to vocational education programs and services and the expected outcomes. . . .
>
> The concept of generalizable skills is commonly concerned with the transferability of cognitive, affective, or psychomotor abilities which are necessary for success across vocational programs and occupations.[2]

Basic or generalizable skills are critical assets that give the student and worker greater flexibility, greater potential for success in a variety of endeavors:

- Completing a vocational training program

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2. James P. Greenan, "Identification and Validation of Generalizable Skills in Vocational Programs," Journal of Vocational Education Research, 8 (Summer 1983): 47.

- Making the transition from school to work and successfully entering the job market
- Changing jobs
- Transferring task-related skills from one program or job to another
- Pursuing further education or retraining
- Seeking career advancement

A primary difference in the vocational education view of basic skills, then, is that basic skills are not simply a standard set of universally applicable skills. The basic skills requirements are derived from programmatic and occupational requirements. That is, for a given program area, basic skills are whatever nontechnical skills are determined to be basic to success in the program and entry-level employment.

Getting Specific--What Are the Skills?

A number of vocational educators have contributed to the identification of exactly what the transferable, common, core, generic, generalizable, or basic skills are. Lists of skills have been developed for various service areas.

For example, Pratzner and Russell[3] at the National Center for Research in Vocational Education examined transferable nontechnical skills, which they termed "quality of work life" (QWL) skills. They identified QWL skills in the areas of interpersonal and group processes, problem solving and decision making, planning, communication, thinking and reasoning, business economics, organizational management, and quality control. Further ongoing work at the National Center is aimed at developing service-area-specific guides for infusing QWL skills into the vocational curriculum.

Other lists have been developed around the country for specific service areas. Scanning the professional journals and newsletters, one can find a wide range of such products, developed by anyone from national-level organizations to individual instructors studying a single occupational area. Such lists vary--in what skills are included, in how the skills are grouped, and in the level of difficulty or complexity of the skills that are included (i.e., at what level a skill is no longer "basic"). While there are also many similarities among different lists, no single list or set of lists has been universally accepted.

For the sake of having a frame of reference for discussion, let's take a look at one effort to identify specific skills that are generalizable among

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3. Frank Pratzner and Jill Russell, The Changing Workplace: Implications of Quality of Work Life Developments for Vocational Education (Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1984).

secondary vocational programs. The Illinois State Board of Education identified from the literature over 100 basic skills in the following categories:

- Communications
- Mathematics
- Interpersonal relations
- Reasoning

The skills were clustered in the subcategories shown in sample 1, reviewed by employers and workers, and ranked by secondary-level vocational teachers in area vocational centers in Illinois. The degree of generalizability of the skills to secondary programs in agriculture, business, health, home economics, and industrial occupations was then determined (some validation has also taken place in postsecondary programs). Overall, a high degree of generalizability was found, although there were differences among specific skills in relation to specific programs.

The point that emerges again and again seems to be this: General categories of skills can more or less be agreed upon as "basic." The pie can be cut in a variety of ways, but there are common denominators nonetheless. However, the specific skills that are included in these categories, or pieces of the pie, necessarily differ from program to program because, ultimately, they are dictated by what is required for success in the program and in entry-level employment.

For the purpose of this guide, this element of vagueness needn't be an obstacle. For you as an administrator, the issue remains how to correct the problem of poor basic skills levels among vocational students, whatever those skills are determined to be in the individual program areas.

SAMPLE 1

GENERALIZABLE BASIC SKILLS AREAS AND SUBAREAS

Mathematics Skills

- Whole numbers
- Fractions
- Decimals
- Percentages
- Mixed operations
- Measurement and calculation
- Estimation

Communication Skills

- Words and meanings
- Reading
- Writing
- Speaking
- Listening

Interpersonal Relations Skills

- Work
- Instructional and supervisory conversations
- Conversations

Reasoning Skills

- Verbal reasoning
- Problem solving
- Planning

SOURCE: Adapted from James P. Greenan, Identification of Generalizable Skills in Secondary Vocational Programs: Executive Summary (Springfield, IL: Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 1983).

NOTES

Chapter II

THE PROBLEM AND THE SEARCH FOR SOLUTIONS

Students' low levels of ability in the basic skills have become a matter of national concern--to educators, employers, parents, and the general public. Large numbers of students are reaching secondary school severely deficient in basic skills. Alarming numbers are graduating from high school illiterate--unable to read and write; and many more have only very limited skills in reading, writing, and mathematics.

Postsecondary institutions report that the basic skills of incoming freshmen are, on the average, lower than ever before, and that many students simply do not have the most rudimentary skills needed for study and learning. Employers are demanding to know why the schools turn out people who can neither read, write, compute, or think!

For whatever reasons, basic skills levels have declined and the situation has become alarming. Fully one-third of the American population (by conservative estimates!) are functionally illiterate--unable to read the newspaper, traffic signs, instructions on medications, or menus. We are in the process of turning out another generation of illiterates, in even greater proportions. For one person's view of this alarming situation, see sample 2.

Basic Skills in Vocational Education

The problem is even worse in vocational education. The basic skills of vocational students, as a group, have been found to be significantly lower than those of students in academic or general education programs. Basic skills levels do tend to vary with the service area, and students' basic skills appear to improve somewhat during the course of the vocational program. However, research suggests that vocational students make smaller gains in the basic skills during school than do students in the academic and general curricula.

Whatever may have caused the situation, the fact remains that vocational students' basic skills levels are among the lowest of in-school youth. School dropouts as a group have the lowest levels of basic skills; and among this group, vocational program dropouts' levels are the lowest of all.

The serious state of basic skills levels in vocational education has raised profound concern. The need for improvement is clear. The National Advisory Council in Vocational Education cautioned that--

> mastery of basic skills is fundamental in today's world. . . . Only those students proficient in reading, writing, computing,

SAMPLE 2

ONE EDUCATOR'S POINT OF VIEW

I WAS ASKED, A FEW YEARS BACK, to organize a "literacy center" at a university. Optimistic but somewhat naive, I set about the task of raising funds. Within one month I was informed by a foundation officer that funds might be available, but only to support a writing program for undergraduates. By the second month I was accused of compromising academic interests by my failure to assign the first funds raised to salaries for doctoral assistants. In a few more weeks I was attacked for failing to respect the primacy of research goals. When it developed that I might have extra time, it was suggested that I might teach "better writing skills" to faculty members and graduate assistants who needed "help in learning how to write for publication."

One day I woke up to recognize that I had just invested half a year in every aspect of adult illiteracy except adult illiterates. I resigned abruptly and returned to literacy work within illiterate communities. "Too bad," a university administrator said. "You could have run a million-dollar program." It is too bad. A million dollars might have been available for research. Not a hundred dollars were available for taking action on the things we knew already.

Sixty million U.S. adults cannot read newspapers, understand the antidote instructions on a can of kitchen lye, or read the warnings of the sedative effects of nonprescription drugs. Millions of these people—young adults who are already parents—are denied all possibilities for reading to their children. They cannot supervise their work once they have entered the school system. They have no means by which to denounce the manifest deficiencies of the curriculum, administrator, or teaching staff to which their children are entrusted.

There is one thing, however, that most of these parents understand quite well. They see another generation of illiterate adults—this time their own children—ready for consignment to the same disabled lives that they themselves have led.

When I raise these points at university convocations, I receive repeatedly the same response: "Well, we have *our* problems, too. Our students' analytic skills are poor. They need more work in logical and coherent exposition. . ."

Not all dilemmas are equally important. Some count a little, some a lot, while others dwell within a separate kingdom of importance altogether.

The concern of many English scholars is not without grounds. Still, I am perplexed that their concern appears to stop at the college gates. If they do not choose to use their learning to face the needs of those who never get within 10 miles of those gates, they may succeed in polishing the skills of those already in their own secure domain: but they cannot fail to drive a deeper wedge between the people who already have a fair shot at success and those who have no chance at all.

When scholars abdicate, they do not leave a vacuum. They leave the field to those who are content to see a technologically proficient but denatured underclass prepared to do their will. Humanities professors do not "have the time" to deal with this. Who does? The answer is now clear. Corporate leaders, right-wing politicians, and the military are eager to take up the task.

The passive status of one-third of all American adults is now addressed in full commission sessions by executives of advertising corporations, U.S. Army specialists, and hard-nosed economic planners. Their primary ambition is to make available an inventory of mechanical proficiencies, appropriate perhaps to lower-level job slots in the enterprises they control, but hardly calculated to make possible an equal purchase on the wealth of those reflective satisfactions that enable any human being to be entirely human.

One such commission told us, in the spring of 1983: "Our nation is at risk." The only risks the commission named were military or commercial. We might not be able to sustain what was described as our "competitive edge" against the Russians, or regain that edge against the Japanese. The damage to democracy—the virtual exclusion of one-third of the electorate from meaningful participation in elections, the relegation of nonreaders to the amputated present tense epitomized by the 20-second news clip or the 60-second paid political advertisement on TV, the inability of 60 million adults to inform the future by a sensitive retrieval of the past—none of this appeared to strike the dignified commission with alarm. Mathematicians in Moscow, Toyotas at the docks of San Francisco—not the loss of history or of articulate and well-informed irreverence in our population—seemed to be the only dangers they perceived. The shallow answers they proposed now dominate the field of public policy in education. "Back to basics"—basic blind obedience and rote behavior—is the notable prescription they have recommended. Is this a prospect that the scholars in our universities are ready to accept? If they are not, why have their voices not been heard?

There is some unintended cruelty in this. A humanism that would scorn humanity and relegate compassion to "another expert" perpetuates those insular compartments that our humanists repeatedly deplore. To speak of the humanities in terms so narrow is to undermine the meaning of our language. "Back to basics" has been attacked as an unsubtle euphemism for a retrogression into basic privileged reward for very few and basic heartlessness toward those who are denied the means of access. Without the active intervention I propose, this is a charge to which there will be no responsible defense.

Artists and scholars from Robert Frost to David Riesman have addressed the dangers of a fragmentized perception that erects unnecessary but convenient walls between essentially related areas of our existence. "Before I built a wall," wrote Frost, "I'd ask to know what I was walling in or walling out." Before we build these walls of departmental isolation and myopic humanism, shouldn't we ask whom we are letting in—and how many million others we have casually consigned to wordless isolation on the outskirts of the kingdoms we control?

Those who wish to repossess the richness of the past, but manage to ignore the cruelty, and often savagery, that coexisted with those brilliant symbols resurrected in the golden glow of words pronounced by Matthew Arnold or Walter Pater, will not see the need to reach beyond such limited objectives as the excellence and higher standards they believe to be attainable at upper

academic levels. The illiterate status of 25 million fellow citizens, the exclusion from all humanistic studies of an additional 35 million marginal illiterates, and the intergenerational ordeal of millions of their children will remain for scholars of this sort a "grave concern," but will be left once more to advocacy by "others."

SO LONG as academic humanists resist the obligation to cross borders and participate in unfamiliar, openly political and therefore highly dangerous assaults upon societal injustice, there will be no potent advocates for the illiterate, no written expositions to be read by a society that manages to segregate its victims and anesthetize itself to the persistence of an anguish it has sealed away in Celluloid containers. Yet the containers do not always hold; and, in this case, the end result of our neglect is the persistent contestation that afflicts the university itself, that polarizes students while it pluralizes competence, that brings a final sadness like an early twilight to even the most insular of scholars and—at the end of a long journey—gnaws at the dream of excellence, tears at the fabric of democracy, devastates many, nourishes few, impoverishes us all.

The humanists may continue to pursue the narrow interests of their own profession, but they will not serve those interests well. Remediation at the college level will remain the only particle of decency within their reach; exclusion of the unprepared will be their sole alternative. Excellence and equity will be perceived increasingly as incompatible objectives, and the populist-elitist choice will grow progressively more bitter and extreme.

Many of those who long to resurrect a sentimentalized conception of 19th-century English education speak with a nostalgic yearning for the university as portrayed by Cardinal Newman, and for the school as described and idealized by Matthew Arnold. It should not be easy (but it still seems possible) to forget that Rugby Chapel and the academic life of Dublin coexisted with inordinate societal despair and exploitation. Divided consciousness prohibits many scholars from a recognition of the fact that humanism can and does repeatedly appear to flourish in the presence of dehumanized behavior.

If humanism is to be associated with the word "humane," it will not be because we say that it is so (or, in the most common verb form of a recent Rockefeller study, "should be"), but because we have engaged in a life struggle to *assure* that it is so. But this, in turn, requires that those scholars who prescribe for us the means by which to repossess and to transmit the best of what has been achieved before us must also struggle to escape the cellular perceptions that have balkanized that "best" in ways that murder to conserve.

THOSE whose special expertise includes the origin of words ought to recall that "classic," "classical," and "class" are cognates. The recent exhortations to return to classical ideals, whether described as Athenian or Jeffersonian, ought to be examined closely. Here, etymology and economics, ethics and aesthetics, excellence and ideology do coincide and offer us a hint of our own casual elisions. Do we mean "classical" or "class"? If the former has been subtly employed to mask the venal interests of the latter, even if without our conscious or malign intent, it should lead us to rethink our use of words and then to search our hearts.

The humanities will serve humanity only if their great protagonists can disavow their labels and unmake the walls that now demean them. Bitterly enough, it still seems possible that excellence may flourish in a moral void: it may be that certain kinds of brilliance, if protected and rewarded by extreme inequity, will profit in alarming ways by the exclusion of intrusive noise created by the suffering outside the academic walls. If this is the case, we have no right to claim for the humanities the humanizing patina that glows in almost every grant proposal and commission study.

If we do believe in what we say, then we should accept the obligation this entails. Neither rhetoric nor an affirming faith will do the job. If excellence is never democratic, access to "the excellent places" must be. Until this precondition is established by a solemn national commitment to achieve the universal literacy that many nations far less wealthy than our own have shown the will and the determination to pursue, all the talk about the need to reach "the best" will be class-serving and dishonest. Rugby Chapel cannot be rebuilt within the shadow of illiterate America. If we learn anything at all from Matthew Arnold, this should be a good part of the lesson.

SOURCE: Jonathan Kozol, "Dehumanizing the Humanities," Point of View section, The Chronicle of Higher Education, March 13, 1985, p. 8.

and communicating can achieve competency in modern vocational programs. . . . While education must stress the basics, it must redefine them to be work-related. . . . Ways in which vocational education and teaching of basic subjects fit together should be made clear to all teachers and administrators.[4]

The Search for Solutions

Whose job is it to improve the basic skills of vocational students? Much discussion goes on about who is at fault in the decline of basic skills levels and how to remedy the problem in the long term. Legal suits against schools that have graduated illiterate students have helped to focus attention on the need for both long- and short-term solutions.

Much hope is placed in the "back to basics" movement; it is hoped that this effort will produce elementary students who are better equipped in the three Rs.

It is asserted by some that setting minimal competency requirements for high school graduation will give students greater impetus to achieve. Such measures as raising the number of required courses in academic subjects and basing extracurricular eligibility on grades are also being tried in certain areas.

Upgrading teachers' ability to teach basic skills, through improved preservice and inservice training, is suggested as a necessary step in solving the problem. Courses in the teaching of reading have been added in some states (e.g., Ohio and Florida) as a requirement for certification. In other states, such as Illinois, teachers are required to take a course in special education, which addresses some aspects of basic skills.

Requiring prospective teachers to pass an employment competency test is a hotly debated measure. Advocated by some and mandated in a few states, the tests are decried by others as having an adverse effect on equal opportunity.

Including mastery of basic skills as part of teacher certification requirements is another approach. New standards in Ohio, for example, will require that teachers show mastery of basic skills. Some advocate requiring vocational instructors to possess at least the level of basic skills proficiency their students will need to have.

Many of these solutions may have merit for the long-term problem. But the fact remains that vocational-technical programs in secondary and post-secondary institutions are getting students with extremely low basic skills levels. Clearly, someone has to take responsibility for upgrading the basic skills of these students.

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4. A Nation at Work: Education and the Private Sector (Washington, DC: National Alliance of Business, 1984), p. 6.

Whose Responsibility?

Here again, there are different viewpoints about whose job it is and whose job it isn't. (Difficult problems have a way of always being someone else's responsibility.) However, educators from different fields have something to offer:

- English and math teachers are well qualified to teach communication and mathematical skills.
- Reading and language specialists are the best qualified to deal with severe problems requiring remediation.
- Vocational teachers are with the students the greatest amount of time, focusing on topics that usually have the highest motivational value to the students.
- Administrators--whether principal, supervisor, department head, or other--are in a position to affect policy, to establish priorities, and to set up systems that make things happen. (The administrator's role, which is a crucial one, is somewhat different from that of the teachers and will be discussed in greater detail later on.)

We will look at staffing more closely in chapter 9. The point to be made here is that improving basic skills is everyone's responsibility. It is an interdisciplinary problem that requires everyone's support, at every level, across disciplines and departments. The effort must be established and supported by administrators. It must be carried out and supported by academic teachers, vocational-technical instructors, and specialists.

Truly effective interdisciplinary, cooperative efforts are not easy to carry out. Many factors need to be considered and problems need to be solved. It takes time, commitment, and resources. But the results, in terms of improved basic skills, can be tremendous.

The Role of the Administrator

As a vocational-technical administrator, your role in implementing basic skills improvement programs will vary according to your level of responsibility. But regardless of your level--whether secondary principal, department head, or supervisor; whether postsecondary president, department chairperson, or dean--one thing is sure. No matter what type of improvement program is used, no matter how responsibilities are assigned, the program will not achieve its goals unless you give it 100 percent commitment.

Experience has shown that having leadership and support from the "top" is absolutely critical to success in basic skills programs. (And there is a "top" at every level--the state department, the system, the institution, the department.) Unless you make basic skills improvement a number one priority and back it with full commitment, unless you make sure it gets the resources needed to make it happen, it simply cannot achieve maximum effectiveness.

The interdisciplinary nature of the problem demands an interdisciplinary solution--cooperation among people, among levels, among disciplines. And that does not happen by itself. It involves motivating staff to commit themselves to the goals of the program; it involves coordinating their efforts; and it involves following through and holding staff accountable.

The presence of a positive, committed administrator has repeatedly been shown to be a key to successful innovation. In study after study, we see such phrases as the following describing the essential characteristics of programs that really work:

- Strong administrative leadership
- Strong schoolwide emphasis on reading
- Good school atmosphere
- Administrative structure specifically set up to facilitate change
- Agreement among faculty and administrators
- Administrators who have the ability and courage to establish a stable, educationally sound curriculum
- Administrators who act as instructional leaders, who are assertive, and who assume responsibility for evaluation of basic skills achievement

In subsequent chapters, as we explore program structures and strategies, it is important for you to identify your role--your part in establishing an effective program. Where do you fit? It may be policymaking or program administration at the state department level. It may be leadership of a vocational-technical institution. It may be support of interdisciplinary cooperation at the school department level, supervision of teachers within a department, or some other function. No matter what your administrative level, your role is a key to the successful implementation of basic skills improvement programs.

For more information on the nature of basic or generalizable skills, you may wish to read one or both of the following references:

- Greenan, James P. Identification of Generalizable Skills in Secondary Vocational Programs. Springfield, IL: Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 1983. ED 233 223
- Smith, Arthur De W. Generic Skills for Occupational Training. Prince Albert, Saskatchewan, Canada: Department of Manpower and Immigration, Training Research and Development Station, 1973.

To learn about various viewpoints on the problem of basic skills deficiencies, its extent and implications, you may wish to read one or both of the following references:

- Corman, Louise. Basic Skills Proficiencies of Secondary Vocational Education Students. Washington, DC: U.S. Department of Education, National Institute of Education, 1980. ED 197 086
- Kozol, Jonathan. Illiterate America. New York, NY: Doubleday, 1985.

NOTES

PART TWO

TYPES OF BASIC SKILLS PROGRAMS

Chapter III

PROGRAM TYPES

Generally speaking, basic skills programs in vocational education can be classified into three main types:

- Compensatory
- Support-oriented
- Institutional

Compensatory Programs

Compensatory or remedial programs are designed for students who, because of socioeconomic disadvantage, are low achievers who cannot succeed in the regular program. The idea is to help them compensate for the environmental deficiencies that have contributed to their educational deficiencies. The goal of compensatory programs is usually to prepare the student for regular classrooms or employment.

Federally funded compensatory programs to help disadvantaged students had their origin in Title I of the Elementary and Secondary Education Act. Programs funded under this legislation (e.g., Head Start, Follow Through, Upward Bound, Aid to Children of Migrant Families, and Right to Read) were intended to be supplemental to the regular programs, not to replace them. The funds could only be used to pay for the extra services provided to disadvantaged students, not the everyday, regular costs of their education. Parental involvement was mandated in the form of parent advisory councils.

At the secondary level, compensatory programs are often aimed at disadvantaged students or potential dropouts. In Dade County, Florida, for example, competency-based remedial centers provide instruction in basic skills alongside--simultaneous with--vocational training. Students must achieve competence in basic skills at given levels, based on occupational standards, in order to earn a program certificate.

At the postsecondary level, compensatory programs may be tied in with enrollment policies. Programs in some states, such as Ohio, have open enrollment; students are accepted wherever they are in their basic skills development. Compensatory programs may then be offered to help students build their basic skills while in school.

Other states have conditional open enrollment for students whose basic skills are so limited that they are unlikely to be able to succeed in the

program. Their enrollment is predicated on their taking remedial classes in the basic skills to bring their skills up to a minimum standard. The remedial program in this case functions as a prerequisite to full, open enrollment and regular scheduling of classes.

In some states, there is little or no provision for remedial programs at the higher education level. Remediation is provided through adult education programs. There are, for example, strict entry and exit requirements regarding basic skills in the community colleges in Florida. Thus, a student with poor basic skills would have to raise those skills, perhaps through adult education, before enrolling in the community college.

At the adult education level, compensatory education may take the form of such programs as the following:

- English language programs, such as English as a Second Language (ESL) or Vocational-Specific English as a Second Language (VESL)
- General basic skills development programs, such as Adult Basic Education (ABE)
- High school credentialing programs, such as General Education Development (GED) or the External High School Diploma Program (EDP)

Compensatory education has been the focus of much controversy over the years. Programs funded under the federal legislation have received evaluations ranging from scathing to quite favorable. Certainly there have been both effective and ineffective programs that fall in this large category of programs.

As compensatory programs (good and bad) have been studied over the years, the following characteristics have been identified in the programs considered to be effective:

- Strong administrative leadership
- Systematic planning, clear objectives, and a structured program approach
- Good school atmosphere, high faculty morale
- High expectations of students by teachers and administrators
- Strong schoolwide emphasis on reading
- Use of additional reading personnel in the school
- Personnel management that allows key staff, such as specialists, to work individually with instructors in the classroom
- Teacher-initiated individualization
- Flexibility in grouping students
- Careful evaluation of student progress

- Large amount of teacher time spent in training and program planning
- Longer working hours for instructors
- High degree of teacher authority over program and materials
- Parental involvement (at the secondary level)

Conversely, the following characteristics have been associated with ineffective compensatory programs:

- Anarchy--a number of different compensatory programs in operation in a single district, or different approaches within a school, without coordination
- Denigration of the role of the classroom teacher--for example, through use of "teacher-proof" materials, or overuse of para-professional aides and outside specialists
- Lack of objective evaluation--dependence on subjective evaluation of student progress and program success rather than a well-planned program of evaluation

An example of an effective compensatory-type basic skills program is presented in sample 3. While compensatory or remedial instruction is sometimes an appropriate approach (i.e., with students whose basic skills are extremely low), administrators should be aware of certain limitations, especially in secondary settings.

For one thing, remedial classes most often function as "pullout instruction," so the student usually misses some portion of the instruction going on in the regular program. And very often, the student whose basic skills are low is the student who can least afford to miss a portion of the vocational curriculum. Another drawback is that there tends to be a stigma attached to participating in an identifiable remedial program.

Another potential problem in remedial programs--one that you can help guard against--is the tendency to ignore occupational goals in setting competency standards. Too often, basic skills teachers, whose own background is in the academic curriculum, assume that all students should achieve the same level of skill, without regard to occupational goals. If a remedial program is part of your institution's solution, it is important that provision be made for vocational teachers to assist in determining basic skills goals for their students.

Support-oriented Programs

Support-oriented programs are designed to reinforce the basic skills achievement of vocational students. The emphasis is on the proficiencies students have already achieved in the basic skills--and maintenance of those proficiencies--rather than on deficiencies.

SAMPLE 3

MODEL COMPENSATORY PROGRAM

IMTS
Department of Technical and Vocational Studies
University of West Florida
Pensacola, FL
(904) 488-7153

The Individualized Manpower Training System (IMTS) in Florida is a compensatory program that has been in existence since 1971. Under the management of the state department of education, the program now serves over 100 schools, primarily postsecondary. The system centers on diagnosis of basic skills; prescription of learning activities and materials to meet specified instructional objectives; and management of learning within a learning resource center.

Funding

Programs are funded under P.L. 94-482. Local schools make a grant application to the state department as part of their master plan. Initial grants provide up to 100 percent funding, including salaries; after the first year, funds are reduced somewhat.

Students and Setting

Funds under P.L. 94-482 are limited to programs/services for disadvantaged students. Programs have been installed in schools with high concentrations of disadvantaged students, including vocational-technical schools and community colleges offering vocational-technical programs. Students' primary location is in the vocational program; those in need of assistance are referred to the lab for regular periods of instruction.

Staffing

Learning resource centers are staffed with certified teachers in a wide variety of fields--not necessarily basic skills. A key factor in selection is their interest and willingness to work with disadvantaged students. New teachers receive three days of training, as well as ongoing staff development conference opportunities.

Materials

A carefully structured system of test instruments is used for diagnosis, and a prescriptive catalog of materials is provided. All materials are commercial, and the selection constantly grows and changes. Self-instructional materials in a wide variety are used.

Other Features

A key to the success of the program is the involvement of an advisory committee made up of people who actually work in the programs. The committee deals with problems, solutions, and curriculum revision, and advises the state department on the operation of the system.

SOURCES: IMTS program brochures and conversations with program staff.

In secondary-level support-oriented programs, instruction is usually provided by academic teachers, using vocational-technical content and materials to teach basic skills. Computer-assisted programs may be used for reinforcement. The vocational teacher may also support the basic skills instruction with reinforcement activities. In some cases, the vocational-technical instructors provide the instruction. Curriculum development is a joint effort of the vocational and the academic teachers.

At the postsecondary level (and in secondary settings where the vocational and academic facilities are separate), support programs often take the form of a separate course in basic skills. The course is usually infused with occupational content--either for one specific program or for a cluster of programs--the focus being on helping students to succeed in their technical programs. As is the case in secondary schools, development of such courses requires the joint efforts of technical instructors and basic skills teachers. However, where vocational and academic facilities are separate or where there is little or no contact between those two faculties, this may be more difficult.

Examples of support-oriented programs are presented in samples 4 and 5.

Institutional Programs

An institutional program is one that is integral to an organization (i.e., it has become institutionalized and is recognized as a functioning part of the permanent organization). Alternative school programs are an institutional approach to basic skills instruction used at the secondary level. These programs are usually designed for alienated youth: students deemed likely to drop out, who are disenchanted with the regular program, are offered an alternative setting for their education.

The instruction, usually offered in separate facilities, is typically informal and individualized, with an emphasis on work behaviors and attitudes. Often work experience is a part of the program, as well as personal and vocational counseling, vocational training, and job placement. Alternative programs generally are not established specifically to improve basic skills, but they provide basic skills instruction as part of preparation for employment.

Another institutional program, used at both secondary and postsecondary levels, focuses on learning centers and laboratories (learning skills centers, learning resource centers, reading centers, math labs, writing labs, and so on). These programs usually begin as support-oriented services and grow into viable organizations of their own.

Typically, labs and centers offer a variety of services for vocational-technical students in a given field or in a group of allied occupations (e.g., health occupations). They are places where students can go for diagnostic testing, instruction, tutoring, casual reading (if it's a reading lab), or additional help on basic-skills-related assignments. Centers and labs are

SAMPLE 4

MODEL SUPPORT-ORIENTED PROGRAM A

JAVA
Kentucky Department of Education
Bureau of Vocational Education
Frankfort, KY
(502) 564-2890

The Joint Academic-Vocational Approach (JAVA) is a support-oriented program developed by the Kentucky Department of Education. The program centers around a set of competency-based instructional materials that blend skills in the following prevocational and academic areas:

Prevocational		Academic
Agriculture	Health services	Citizenship
Automotive body repair	Home economics	English
Automotive diesel mechanics	Machining	Mathematics
Business/Office	Marketing/Distribution	Science
Computer awareness	Mining	
Drafting	Welding	
Electricity/Electronics		

The skills for the prevocational areas were selected from task analyses and competency lists, according to three criteria--that they (1) be exploratory (apply to as many jobs in the occupational area as possible), (2) have general educational value, and (3) represent actual job tasks (not made-up tasks for the classroom). Related academic skills were identified, and task assignment sheets were developed for use by teachers and students in both the academic and prevocational areas.

Funding

The program was initiated by the Kentucky Department of Education with some Chapter 1 and Vocational Education funding. Local districts shared in the development and paid participating teachers for a month of summer employment.

Staffing

Committees of academic and vocational teachers at each site took part in the development process. They worked approximately three months in the summer, during which time they participated in staff development activities and completed such tasks as analysis of competency lists, identification of skills, and development of materials.

Students and Setting

Students who participate in JAVA are ninth- and tenth-grade vocational students in urban and rural schools. Materials are also available for eleventh and twelfth graders. The materials are available statewide. In rural areas, the program has been found to be most effective where the vocational school is close to the home school (otherwise so much time for transportation is taken from the program that it is difficult to implement the program fully).

Materials

In addition to the task assignment sheets, the materials include matrices of vocational-academic skills, bibliographies, vocabulary lists, and lists of resources required for the assignment sheets.

Other Features

The program has been field tested in three different sites with students in grades 9 through 12 and achieved very positive results. Administrative support has been found to be a key factor in successful implementation of the program in local districts. Where administrators actively promoted the program, fostered success by choosing teachers they knew would cooperate, and followed up during the implementation process, the program was more highly successful.

SOURCES: "Not So Exotic JAVA," Open Entries (The Center for Studies in Vocational Education, Florida State University, Tallahassee), 3 (March 1984): 1; and conversations with JAVA program staff.

SAMPLE 5

MODEL SUPPORT-ORIENTED PROGRAM B

I CARE
Blue Mountain School District
Blue Mountain High School
Schuylkill Haven, PA
(717) 366-0515

The Individualized Computer Assisted Remedial Reading Program (I CARE) functions as a computer-based lab for students deficient in reading skills. Instruction in remedial math is also available. The program provides basic diagnostic/prescriptive instruction to students on an individualized and small-group basis. The self-paced materials provide immediate feedback, and students must achieve prerequisite levels of performance before going on to new material.

Funding

The program, which now includes three labs, was initiated through Title I funding for disadvantaged students, along with a vocational grant from the state.

Students and Setting

Students are referred to the program on the basis of standardized test scores or teacher recommendation. Vocational students spend a half-year each in the vocational-technical school and the home school. At the home school, they have two periods of English. One of these periods is spent in the regular English classroom, and the other is spent with the teacher in the I CARE lab. (Mathematics students usually take their lab time from a study hall.)

Staffing

The English (or math) teacher prescribes the program materials to be used with each student, and a teacher aide carries out the instruction. Teachers receive staff development credit for the limited training required to implement the program.

Materials

The reading instruction materials are available on disk or tape. They include five components: vocabulary, reading, reading and writing skills, audiotapes (vocationally oriented reading materials), and paperback books. Students cycle through the components, on a weekly basis.

Other Features

The I CARE program materials are made available to other schools throughout the nation through the U.S. Department of Education's National Diffusion Network (NDN). Recipients provide their own disks, and the only charges are in relation to staff development (if needed) and may include the cost of a substitute for the one-day inservice training and any travel costs that may be incurred.

SOURCES: Far West Laboratory for Educational Research and Development, Educational Programs That Work (Washington, DC: U.S. Department of Education, National Diffusion Network, 1983), p. B-9.37; I CARE PROJECT Information Kit; and conversations with I CARE project staff.

usually staffed by one or more specialists in the basic skill area, who provide a lot of individual attention, often using a diagnostic/prescriptive approach. A large variety of high-interest reading and audiovisual materials relevant to the vocational-technical programs are provided, and learning activities are varied.

Lab sessions are often set up on a voluntary basis and usually are attended in addition to regularly scheduled classes. Going to the lab may require a student to give up a study period or class.

Centers and labs require a permanent place. Some schools have managed with just a niche or a room. In other schools, centers and labs are more elaborate, similar to library facilities. Almost any size of place can work, as long as it is permanent and provides a barrier to outside distractions.

Providing a permanent place, rather than portable materials and staff, has several advantages. For one thing, it enables the staff to establish a casual, relaxing atmosphere where students feel free to drop in for help. It also provides space to display motivational materials, relevant posters, and records of student progress (if permitted), and to make reading materials available for casual use. The IMTS program (see sample 3, p. 24) is an example of a basic skills learning resource center.

Chapter IV

PROGRAM STAFFING

There are essentially three staffing structures for vocational-technical basic skills programs:

- Nonintegrated
- Integrated
- Combination

These terms refer to the degree to which basic skills instruction is integrated into the occupational program--whether basic skills improvement is primarily the responsibility of vocational-technical program staff or of staff in the academic areas.

Nonintegrated Staffing

In a program with nonintegrated staffing, basic skills are taught by subject-matter specialists in the conventional academic disciplines: English, math, science, and so on. There is no institutional or systemwide mandate for teachers in other disciplines to assume responsibility for the development of students' basic skills.

In schools or programs using this staffing structure, a general minimum level of competence (e.g., a given grade level) is set as the goal for all students, and competence levels are not tied to occupational requirements. Students who have very low basic skills levels are usually pulled out of regular classes and given remedial instruction by specialists.

For the administrator, this structure has some advantages, as follows:

- Staff development is unnecessary, because the teachers stay within their traditional disciplines; costs are therefore eliminated.
- No extra responsibilities are placed on the vocational teachers. This eliminates potential resistance on the part of vocational teachers to "doing someone else's job."
- The program may be easier to administer, because interdepartmental cooperation and coordination are not required.
- Physical changes to classrooms are unnecessary, so potential costs are eliminated.

However, there are also disadvantages with a nonintegrated structure. Unfortunately, most of the disadvantages are felt by the students.

- Students who have never succeeded in learning basic skills in traditional academic courses may do no better now in this structure.
- When basic skills are taught as strictly academic subjects, their relevance to the vocational program is less apparent to the students.
- The motivation some students derive from vocationally relevant course content is absent when basic skills are taught apart from the vocational program.
- Students do not learn how to apply basic skills to the vocational program content.
- Students with very low basic skills levels have to be pulled out of other classes for remedial work. This causes them to miss other important work, and it may also carry a stigma among classmates.

Integrated Staffing

In a program with integrated staffing, vocational-technical instructors are responsible for their students' basic skills instruction. The assumption is that there should be a relationship between the kinds of basic skills taught, levels of proficiency required, and the occupational requirements for a vocational-technical area.

In this structure, the vocational instructors identify basic skills requirements for their occupational areas. They then identify individual students' skill deficiencies and help the students improve in those skills in the context of vocational-technical content.

The following are some of the potential advantages of this type of program:

- Students may be more motivated to learn the basic skills because they are obviously related to job success.
- Because instruction is infused throughout the vocational program, more vocational students at all levels get basic skills instruction and reinforcement.
- Because vocational-technical teachers are more in tune with students' occupational interests and are more familiar with occupational requirements, instruction can be more carefully targeted to students' needs and interests.
- No extra personnel, space, or equipment is needed to carry out the basic skills instruction, thus saving added costs.
- Existing vocational-technical texts, with adaptation or supplements, can be used as a basis for the curriculum.

However, there are two sides to every picture. The following are some disadvantages of the integrated structure that should be considered:

- Vocational-technical instructors must split their teaching time between technical content and basic skills reinforcement (at least, it appears so at first; actually, with experience, teachers can usually mesh the two effectively with little time taken away from technical content).
- Vocational-technical teachers may be reluctant to assume responsibility for teaching basic skills and so may resist the new program.
- Some vocational teachers' own basic skills may be low, making them ineffective at teaching basic skills without extensive staff development.
- Students who take limited vocational-technical courses may end up receiving little instruction in basic skills if it is confined to those courses.
- Making this model work takes a good deal of administrative effort, because it requires interdisciplinary cooperation.
- Staff development is usually required, and this can be costly.

An example of an integrated program is presented in sample 6. In addition, some programs that are described elsewhere (e.g., JAVA, sample 4 p. 26) have elements that represent an integrated structure.

The Combination Structure

As the name implies, this is a combination of elements from the integrated and nonintegrated models--a shared responsibility for basic skills improvement. Elements of the two previous staffing structures (and of the program types discussed earlier) can be combined in many different ways, as best suits the needs of the particular institution or district.

For example, a combination program could include the following:

- English teachers incorporating vocational content and terminology into their courses
- Vocational teachers reinforcing the basic skills instruction provided by academic teachers
- Specialists assisting the students with the lowest skill levels
- Vocational teachers receiving training, on an inservice basis, to assess and teach basic skills
- Administrators encouraging interdisciplinary support among teachers for each other's efforts

SAMPLE 6

INTEGRATED STAFFING: MODEL PROGRAM

ILA: Diagnosis, Prescription, and Evaluation
Weehawken High School
Liberty Place
Weehawken, NJ
(201) 865-1506

The Individualized Language Arts (ILA) program is a language experience approach to improving the writing skills of all students. It is a prescriptive program that emphasizes the integration of writing skills in the content areas, as well as in English.

Students and Setting

The ILA program has been used successfully in rural, urban, and suburban schools, grades K-12 (including shop and home economics classes), as well as in college basic skills programs, adult education, and supplementary programs in written composition. It can be used in conjunction with other writing programs or alone.

Staffing

All teachers in all content areas may be involved. Schools that adopt the program with the assistance of the Weehawken program usually begin with an initial group of teachers and administrators, who receive two days of staff development. In addition to implementing what they have learned in their classrooms, the original participants expand the program in their district through inservice programs.

Content

At least three times a year, teachers evaluate student writing samples in terms of organization, sentence structure, grammar, and mechanics, using widely accepted language arts criteria. The teachers assign priorities to the needs of the students and develop learning objectives.

Then, selecting appropriate techniques from a resource manual that prescribes writing or rewriting techniques for all the content areas, the instructors attack the most serious problems first. The usual sequence of activities goes from motivational experience through discussion and planning, writing, rewriting, and oral presentations.

Monthly and yearly progress is monitored through a record-keeping system. Cumulative folders are kept for all students and passed along to the next year's teachers.

Funding

The Weehawken program was begun in 1970 with a Title IV-C grant. Later the program gained National Diffusion Network (NDN) approval and support for dissemination.

The ILA program is inexpensive to implement, the main costs being those associated with teacher training--either for paying substitutes used while teachers are in training or for paying the teachers themselves for time spent in training. Districts that have adopted the ILA program have found financial support through various sources, depending on their particular situations.

For example, some schools have had Chapter 1 funds available for training. Some have found assistance through their gifted and talented programs, basic skills programs, or Chapter 2 block grant monies. Others have used inservice money from their local budgets.

SOURCE: "Individualized Language Arts: Diagnosis, Prescription, Evaluation" (program brochures provided by the ILA program) and conversation with the project director.

The JAVA project (see sample 4, p. 26) illustrates a combination structure, in that curriculum materials are developed to enable vocational teachers to infuse basic skills instruction into their regular vocational curriculum and to enable academic teachers to use vocational content in teaching basic skills. Another example of a combination program is shown in sample 7.

The combination structure has perhaps the greatest potential for success, because it can be tailor-made to suit the resources, limitations, goals, and priorities of a particular environment. However, its success depends on interdisciplinary cooperation and on the ability of the administrator to make it happen.

Program Type and Staffing Structure: How They Relate

Because program types and staffing structures both have been discussed in terms of three models, it may be tempting to try to correlate them one-to-one. It isn't that clear-cut, however. Although compensatory programs usually have nonintegrated staffing, support-oriented and institutional programs can be set up in a variety of ways. The following chart depicts some of the most common ways in which the program types are staffed.

	Staffing Structures		
Program Types	Nonintegrated	Integrated	Combination
Compensatory	X		
Support-Oriented		X	X
Institutional	X	X	X

SAMPLE 7

COMBINATION STAFFING: MODEL PROGRAM

Cranston's Comprehensive Reading Program
Department of Reading Services
Cranston, RI
(401) 785-0400

The Cranston program is a systemwide reading instruction and management system aimed at improving students' reading skills. As a combination model, the program incl.. s instruction in the academic and vocational content areas, use of a reading specialist, remedial instruction, staff development, and districtwide articulation. The management system provides a process for developing, implementing, and monitoring a reading improvement program, and includes needs assessment, staff development, curriculum development, and implementation.

At the secondary level, the focus is on integration of reading skills with course content--enabling content-area teachers to help students apply reading skills in studying course content. Strategies are developed and compiled in learning modules geared to specific course areas.

Funding

Originally developed with local funds, the program later received some support through Title IV-C as an innovative program and then from the state's permanent school funds in conjunction with serving as a model program for the state of Rhode Island.

The Cranston schools disseminate the program through the National Diffusion Network (NDN), primarily in the form of technical assistance and access to program materials. Those wishing to adopt the program may find support through such sources as local monies, Chapter 1, or Chapter 2 block grants, depending on the local situation. Assistance in determining potential funding sources is available from NDN State Facilitators.

Students and Setting

At the secondary level, the Cranston program was initially implemented in English, social studies, math, and science. It has since been used in other areas, including home economics. The smallest unit in which the program can be effectively implemented is a school; districtwide adoption is quite effective.

Because the system is flexible, it can be tailored to a variety of settings. For example, in the Cranston program, students receive instruction in the academic content areas at comprehensive high schools. Students in home economics also participate through their occupational program. Intensified instruction for students with the lowest skill levels is provided through additional periods of reading in grades 8 and 9, and through the English program in grades 10-12.

Staffing

A key factor in the success of the program is the designation--for each school--of a reading specialist, who serves as a consultant to content-area teachers. The principal also serves as a key instructional leader. When schools adopt the program, staff development enables key staff to assist teachers in implementing the program. Training in curriculum development is also available.

Materials

Content materials already in use in the local district may be used, and emphasis is placed on identifying current high-quality materials for use in the programs. Additional development focuses on identifying priority reading or study skills and developing content-area strategies to infuse these skills into course instruction. This approach results in the students' improving their reading skills and instructors' teaching content more effectively because students are learning better.

Although Cranston's materials are available to new adopters, local agencies typically develop their own priority lists of study skills and content-area strategies to meet their own needs. The district is assisted in conducting a needs assessment to identify content to be taught, the most important reading skills associated with that content, and the extent of students' ability in those skill areas. This process results in the priority list of study skills. After staff development (if necessary), curriculum development takes place over a summer and includes development of a plan of action for implementation. Implementation takes place over the following school year.

Chapter V

PROGRAM APPROACHES

The following are some of the approaches that basic skills improvement programs are successfully using. Of course, this is not intended to be an exhaustive list of possible approaches; rather, it presents a sampling of the wide variety of approaches that can be used effectively to improve basic skills in vocational education.

Competency-Based Education

Competency-based education (CBE) has been found to be especially effective in the development of basic skills and has been used successfully in the various types of programs. Schools already using a CBE approach have found it particularly easy to add basic skills components to the programs.

Competency-based basic skills programs begin with an analysis of the basic skills required for occupational entry. The students' skill levels are also assessed, and instructional objectives are developed to meet each student's learning needs. The instructor and student then work toward achieving each objective, and mastery is determined on the basis of performance.

The instruction is planned to capitalize on skills the student has already achieved, while the student works toward competence in those not yet mastered. A great advantage of a CBE approach to basic skills instruction is that it permits the student to work at an appropriate pace and level. Evaluation of student progress takes place on an ongoing basis, to be sure that competence is achieved on one goal before the next is attempted.

Student Contracts

In some schools, instruction is based on student contracts, the theory being that students will invest greater effort in achieving goals they took part in setting. The first step in this approach is a thorough diagnosis of the student's basic skills. When weak skills are identified through the diagnosis, the student and teacher together write a contract for each objective to be achieved. The contract, which specifies the objective to be met and the means and materials to be used in meeting it, is agreed to by both parties.

The student monitors his or her own progress and, when the student thinks the objective has been achieved, the teacher evaluates the student's performance. When one contract is completed, a new one is agreed to for another skill or set of skills.

Tutorial Approach

Tutoring has been a successful approach in some programs because it makes it possible to provide extensive, individualized assistance to students whose basic skills levels are extremely low. This approach combines easily with many other strategies because of its individualized nature.

For example, individual students can be tutored on a regular basis, in addition to their regular instruction. The extensive practice and reinforcement they receive during tutoring can augment the learning of skills taught in the classroom and can help them internalize the development of basic skills.

Tutoring may be done by specialists, vocational-technical teachers, peers, or even volunteers from the community, after limited training. A nationwide program that began in Vancouver, Washington (the HOSTS program), for example, makes reading improvement a community project. Volunteer tutors are recruited from the community--through the newspaper, radio, TV, handbills, door-to-door canvassing, posters, and so on. Tutors work with students (youth and adult) using diagnostic/prescriptive lesson plans provided by teachers.

Peer Tutoring or Coaching

Students with more advanced basic skills have been used successfully in some programs as tutors for their less skilled peers. These students work with, or coach, students who have less proficiency in the basic skills, the assumption being that students will often be more receptive to and learn more from someone who "speaks their own language" than from an authority figure.

In most peer tutoring situations, the work of the students is supervised by the instructor, who selects content, activities, and materials suitable for use in peer coaching.

A fortuitous benefit of this kind of interaction is that, often, going over the lessons with their peers reinforces learning on the part of the tutors and helps them to internalize what they have learned. This arrangement also frees up the instructor to attend to other responsibilities in the classroom.

Use of Visiting or Consulting Specialists

Sometimes specialists in reading, writing, math, or other disciplines are used to provide instruction in their particular basic skill areas. The specialists visit the vocational-technical classroom on a regular basis to supervise basic skills instruction. Often, the instruction is jointly handled by the classroom teacher and the visiting specialist.

To prepare for this role, the specialist must study the technical texts to ensure that his/her goals and objectives are appropriate for the occupational program. The specialist works in collaboration with the

vocational-technical instructor in planning the curriculum, in defining goals and activities, and in integrating technical vocabulary and content into the lessons.

Another arrangement involving specialists is to have them work in a consultancy role, assisting the vocational instructor in developing goals, strategies, and activities that are appropriate for reinforcement of basic skills within the occupational program. The vocational instructor then carries out the instruction.

Use of Aides and Volunteers

When aides are available to the school, they are sometimes used to augment the basic skills program. These people work under the direction of teachers to establish one-to-one working relationships with students to improve their basic skills. They may supervise individual activities, organize practice activities, and otherwise give the students concentrated, personalized assistance in basic skills reinforcement.

Volunteers have been recruited by some schools to serve in a similar role (see the description of the HOSTS program, p. 36).

Cooperative Teaching

Cooperative teaching is the mainstay of integrated and combination staffing structures and of any approach that requires interdisciplinary cooperation. In programs that have taken advantage of cooperative teaching, instructors from the different academic and vocational-technical disciplines have cooperated in such varied activities as planning, goal setting, curriculum development, teaching, and evaluation.

Cooperative relationships help ensure that instructional goals are valid and relevant to the academic discipline and to the occupational program, that teaching strategies are appropriate for the students, that valid content and sound strategies are used, and that objective evaluation takes place.

Use of Vocational Materials in Basic Skills Classes

Some programs have retained the locus of basic skills instruction in the academic disciplines. When this is the case, basic skills teachers must study the vocational-technical goals, texts, and materials in order to plan learning activities that will lead to the vocational application of the basic skills being learned.

Ideally, the teachers use the occupational content as the focus for basic skills activities (e.g., specialized technical terminology is taught or real occupational mathematical problems are solved). This not only ensures that instruction is relevant, but it capitalizes on the motivational value of the

vocational-technical program. Through close interaction with the vocational instructor, the academic teacher can do a better job of spotting problems and helping students work toward occupationally relevant goals.

One way in which academic teachers keep the instruction focused on vocationally relevant content and goals is to incorporate a variety of vocationally relevant materials into the instruction. For example, trade magazines, descriptions of occupationally specific problem situations, forms and materials actually used on the job, job application forms, operation manuals, and other such materials all have potential use in basic skills activities.

Reinforcement of Basic Skills in the Vocational Program

This is the flip side of the support-oriented concept, and an approach that has seen much success. Using this approach, the vocational instructor incorporates activities into the curriculum that reinforce basic skills through practice. For example, the activities listed in sample 8 can be used to reinforce language skills.

This approach has the advantages we have discussed (motivational value of the occupational program, congruence with vocational goals, and so on) without taking much time away from technical content. The point in this approach is that there are many opportunities in the regular teaching day to reinforce basic skills, if only the teacher is alert to them.

Development of Teaching Guides or Catalogs

Quite a few programs have successfully teamed academic and vocational instructors to work together in developing teaching guides and other materials. Interdisciplinary teamwork makes it possible to mesh the teaching of basic skills and the teaching of occupational content in the instructional materials.

Such teaching guides usually address specific basic skills problems in a diagnostic/prescriptive manner. They provide instructional strategies for dealing with these problems, which can be used in the various vocational-technical program areas. The guides, or catalogs of instructional strategies, are used by vocational teachers to help remedy students' basic skills deficiencies.

Computer-Assisted Reinforcement

Computer-based programs are increasingly being used to provide basic skills reinforcement. Software packages are being developed to supplement existing basic skills instruction through programmed practice and reinforcement activities.

SAMPLE 8

ACTIVITIES TO REINFORCE LANGUAGE SKILLS

Speaking

- Making oral reports
- Responding to teacher's questions
- Participating in small-group discussions
- Participating in panel discussions
- Role-playing

Writing

- Writing in a journal
- Answering questions at the end of a chapter
- Making outlines
- Taking notes
- Doing research or term papers
- Writing essays
- Writing letters

Reading

- Textbooks
- Reference materials
- Paperback books
- Magazines
- Maps and charts
- Filmstrips

Listening

- Class lectures
- Guest speakers
- Student presentations
- Taped materials
- Teacher directions
- Films
- Television

SOURCE: Adapted from Arnulfo G. Ramirez, "Language," in Developing Basic Skills Programs in Secondary Schools, edited by Daisy G. Wallace, 20-30 (Alexandria, VA: Association for Supervision and Curriculum Development, 1982).

Use of computers as the management tool allows students to work individually and in small groups to complete components on specified basic skills. Other advantages are that instruction can be self-paced and students can receive immediate feedback. Most programs of this type are set up so that students must meet prerequisite performance levels before they can move on in the program.

Use of "Theory Rooms"

A so-called theory room is one way of providing facilities for basic skills instruction in an existing vocational shop or lab. An area is simply sectioned off, physically, as a place for basic skills activities to take place. Having such a place not only provides some barrier to outside distractions, but underscores the idea that basic skills are regarded as an integral part of vocational skill development.

Within the theory room, instruction may be provided by visiting specialists and/or the vocational instructor; aides or peer tutors may also be used. Posters, projects done by the students, trade magazines, and other high-interest materials may be displayed to reinforce the relationship of basic skills and the occupational program.

Vocational Student Organizations

Student organizations, such as FFA, OEA, HOSA, AIASA, DECA, VICA, and FHA/HERO, provide a variety of opportunities for basic skills development. Schools that have integrated these groups into their overall basic skills program have found that well-organized organizations can be the focal point for a great deal of reinforcement and practice of basic skills, including reading, writing, oral presentation, leadership skills, and mathematics. Their activities also contribute to such work-related attitudes and behaviors as citizenship, community service, and a positive work ethic.

For more information about basic skills programs--types, staffing structures, approaches, and examples--you may wish to refer to one or more of the following resources:

- Lotto, Linda S. Building Basic Skills: Results from Vocational Education. RD 237. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1983. ED 232 015

  This document analyzes various types and structures of basic skills programs currently being used in vocational education.

- Campbell-Thrane, Lucille; Manning, Kevin; Okeafor, Karen; and Williams, E. Jane. Building Basic Skills: Models for Implementation. SN 41. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1983. ED 232 016

  A review of program structures is presented in this document, with the advantages and disadvantages of each. A planning process is also presented in the form of a model scenario.

- The National Center for Research in Vocational Education. Category M: Assisting Students in Improving Their Basic Skills, part of the Professional Teacher Education Module Series. Athens, GA: American Association for Vocational Instructional Materials, 1985.

  This series of six modules provides practical teaching strategies for vocational teachers to use with their students. Modules are included on basic reading skills, technical reading skills, writing, oral communication, math, and survival skills.

NOTES

PART THREE

PLANNING FOR BASIC SKILLS IMPROVEMENT

Chapter VI

EFFECTIVE PROGRAM PLANNING

Assume that you have considered what skills are basic and why it is important to help vocational-technical students build and improve these skills, both for their future employment and for their immediate success in the program itself. Assume also that you have looked at various kinds of program options, staffing structures, characteristics, and approaches. Given all this information, how do you go about planning a program to address the basic skills problem in your institution or system?

Planning a basic skills improvement program is much like planning any other type of educational program. Your own role in that process will depend on your place in the system--whether state-level policy making, district- or institutional-level planning, local implementation, or other; whether secondary or postsecondary.

Development of a new program generally occurs in phases: planning, developing, implementing, and evaluating. Planning, of course, occurs first. And theoretically, the other phases follow in sequence and repeat in cycles. First you plan, then you develop, then implement, then evaluate. The results of evaluation are used in further planning, and so on and on.

However, if planning is to be effective in laying the groundwork for smooth implementation of the program, it must anticipate the events that will follow in the other phases. Everything that will occur later must be considered during the planning phase. Therefore, in this planning part of the guide, we will be discussing many things that will actually take place in those later phases.

Effective Planning

Before we look at the planning process itself, a few points deserve mention here about ways to ensure that your planning techniques are effective. As an administrator, you will be guiding or participating in the planning process, in one way or another, from beginning to end. Your role, depending on what you are trying to accomplish at any given time, may be any one of the following:

- Motivator
- Supporter
- Leader
- Delegator
- Manager
- Provider of resources

If the planning is to be effective, it must be systematic, cyclical, and cooperative. Let's look at how these characteristics apply in particular to basic skills improvement programs.

Systematic Planning

It is important that planning for basic skills improvement be systematic--methodical, comprehensive, and broad-based.

Methodical. The planning process should be based on an accepted administrative planning model, each phase and step methodically considered and carried out--"no stone left unturned," you might say. The effects (both short- and long-term) of each proposed action upon other parts of the curriculum should be projected and carefully weighed before any decisions are made.

The establishment of any new program, especially an interdisciplinary one, naturally has a significant effect on the other programs and the people who are involved. You should be aware of potential effects in order to avoid causing any unintended chain reactions.

Comprehensive. Thorough, comprehensive planning should precede implementation. That is, the plan should not actually be put into effect until the entire plan has been laid out. You should know exactly where you are going, from program inception to program evaluation, before you install any portion of the program.

This can help avert such situations as discovering too late that you should have been gathering evaluative data while the program was running. Or finding that competing priorities and limited time for staff development make it difficult to train teachers properly to implement the new program. Or finding the program bogged down in territorial squabbles when students have already enrolled.

Broad-based. The need for a systematic approach applies in another sense as well. Planning for educational change should encompass as broad a base as possible--an entire school at the very least, a whole system or campus whenever possible.

Over the years, the diversity of funding sources has made it possible in some school districts for a hodgepodge of basic skills programs to pop up without regard to what was going on "next door." A group of teachers in one school would get a grant providing funding for interdepartmental curriculum development. A nearby school in the district would decide to institute a compensatory reading and math program for vocational students. In another school, one or more departments would adopt new course materials to incorporate basic skills into the technical content. Still another school in the district would run a series of staff development seminars on reinforcement techniques.

Or, worse still, one grade level in a school would take one approach to basic skills instruction and another grade level would take a different approach.

Invariably, this kind of scattergun approach is less effective, and more costly, than a broad-based, systematic approach. Experience has shown that the greatest gains in students' basic skills levels occur when an overall, systemwide, well-articulated approach is adopted and commitment to making the program succeed is generated at all levels. Greater gains are also associated with maintaining a program that has been successful (albeit improving and refining it along the way), as opposed to jumping from one approach to another.

Cyclical Planning

The planning process must also be cyclical, not terminal. It should not end when the program is implemented, or even when a decision is made to institutionalize it. This is true for at least two reasons.

Flow. The first reason might be referred to as flow--what is learned in one planning phase feeds into the next phase. For example, what you learn about the seriousness of the problem in your school or area feeds into your decisions about delivery strategies. What you determine about your faculty's attitudes and preparedness for carrying out new duties feeds into your organizational efforts and staffing decisions.

Similarly, what is learned from program evaluation (which in one sense is an end point in program implementation) feeds into a new cycle of planning aimed at program improvement and, perhaps, institutionalization. And of course, program improvement and refinement should never end if you are striving for excellence.

Change. The second reason for cyclical planning has to do with the inevitability of change. Situations are constantly shifting, evolving, changing. For example, student populations change. Perhaps there is an influx of students with limited English proficiency; or the standards of basic skills instruction in feeder schools might rise or fall; or enrollments in vocational-technical programs might change.

There are sometimes changes in the available resources with which to address problems. New legislation may be passed, causing funding priorities to shift. Old funding sources may dry up and new ones may open up. Local monies for your program may increase or decrease with changing priorities. The eligibility of your program may change; for example, resources that were available for program initiation or experimentation may not apply to program continuation.

Schools or colleges may change their policies on enrollment, scheduling, staffing, use of facilities, selection of materials, graduation requirements, and other matters. Such policies can greatly affect how well a particular approach to basic skills improvement works in a given situation.

Furthermore, occupations change, whether because of technological advances, labor market shifts, or the changing needs of society. And as the jobs change, so may their requirements. Changes in basic skills requirements may call for changes in program goals and objectives, materials used in the program, and so on.

There are many other things that can change, of course. The point is, change is going to happen and it may affect your program. In fact, in tackling basic skills levels in the first place, you are trying to cause change; you want the situation to change--to "get better." With changes potentially taking place in so many different areas, it only makes sense to continue the planning and review process to ensure that your program continues to serve the purpose it was intended to serve.

Improvement of basic skills just isn't a problem that "gets solved" once and for all. You don't start a program and put it on automatic pilot. Both the problem and the solution must be monitored to be sure that the current situation is being dealt with in the most effective manner.

Cooperative Planning

It is also important that planning be a cooperative process between administrators and faculty. Research has shown that strong leadership by the administrator, shared decision making under the guidance of the administrator, and team behavior on the part of everyone involved are essential for successful development of new educational programs.

Experience has also shown that when teachers are involved from the beginning, not only in implementing the new program but in planning for the program, the program is much more likely to be effective and to last. Again, there appear to be multiple reasons for this.

Commitment. First, schoolwide commitment to improving basic skills levels is an absolute must. In a program that depends upon interdisciplinary cooperation, a shared sense of responsibility for the outcomes must be fostered. The administration and faculty must be in agreement on the need for change, the nature and extent of the problem, and what approaches are likely to work in remedying the problem.

This kind of commitment on the part of teachers is unlikely to grow if they perceive a program as having been "dumped" on them. Conversely, involvement in the planning process from the beginning naturally breeds a sense of ownership--of investment in the outcomes of the program.

Contribution. Another advantage of cooperative planning is that teachers can make a sizable contribution to the planning process. They can bring valuable information and insight to discussions about program options and goals. They know their students--what their strengths and weaknesses are, what motivates them, what will "fly" with them and what won't.

Instructors also know their programs and service areas. For example, vocational instructors can provide information or occupational program requirements. Likewise, basic skills teachers can provide information on methods of assessing skill levels and on effective strategies for teaching or reinforcing basic skills.

The teachers can inform each other and they can inform you. They may have very creative ideas about strategies for raising basic skills levels. As an administrator, you will want to take advantage of any means of increasing your own knowledge of the situation or of broadening your perspective on the problem and potential solutions.

Coordination. Finally, a major reason for cooperative planning has to do with your role as coordinator. One of your most important tasks in administering a basic skills improvement program is managing the interrelated efforts of the various groups and individuals involved.

A problem many administrators face in this situation is teacher resistance to change--to new routines, to new ways of thinking, and to altered role definitions. Some people are threatened by such changes. Teachers may feel resentful of added responsibilities and of the need to work closely with departments from which they once were comfortably insulated. They may be uneasy about their ability to learn new content or master new techniques.

Your role as a coordinator is likely to be much easier if you have cultivated a sense of cooperation among participants through the planning process. It is harder for a teacher to feel resentful about a decision he or she had a hand in making. Alliances among departments are apt to be stronger when each has heard the views of the others in shared decision-making sessions.

NOTES

Chapter VII

THE PLANNING PROCESS

Program planning for basic skills improvement involves seeking answers to a number of questions related to the whole cycle of program development:

- Assessment--What is the nature and extent of the problem? What is the climate for change?
- Examination of alternative solutions--What program options are possible? What are their costs and benefits relative to your organizational structure and resources? What is the best alternative (or combination of alternatives) for the situation?
- Implementation--What are the goals of the program? What will be required to develop and implement the program? How will human, financial, and physical resources be used to set the plan in motion?
- Evaluation--How will program success be evaluated? How will the results of evaluation be used in making judgments about program continuation, revision, and refinement?

As you gather the information with which to answer these questions, you will become better able to determine what type of program will work best in your school, college, district, or department and how you will go about putting it into effect.

Assessment

Early in the planning process, assessment essentially involves (1) identifying the problem--determining that there is in fact a problem that calls for change and exactly what that problem is, and (2) assessing the extent of the problem.

Problem Identification

How do you determine that a problem exists? Often, administrators are alerted by the concerns of teachers whose students can't cope with course requirements. Or students' performance on standardized achievement tests raises a red flag.

Some secondary-level administrators have reported that the need for change became painfully evident when their state instituted minimal competency requirements for graduation and large proportions of vocational students failed to meet those requirements.

Students themselves have raised the issue in some situations. Finding themselves ill-prepared to undertake further education or training because they couldn't read or write adequately, they have raised an understandable hue and cry about the quality of their secondary education. Employers, too, have often complained that some graduates of vocational programs can't perform adequately in the nontechnical skills.

Most often, a combination of these factors focuses attention on a potential problem related to basic skills. It may have been suspected for some time and just finally become so obvious that it can no longer be ignored.

Extent of the Problem

Once you know that a problem exists, the next step is to assess the extent of the problem. To plan a basic skills program intelligently, you need to be able to answer such questions as the following:

- In which basic skills does a problem exist? (Although we tend to lump basic skills together when we talk about them, they are in fact separate skills. What the various skills--math, reading, writing, speaking, thinking critically, and so on--have in common is that they are basic, they are important, and they exist at inadequate levels in far too many students.)
- What proportion of the student population has insufficient ability in these skills?
- How low are their skill levels?

Clearly, a situation in which, for example, 50 percent of the students are practically illiterate will call for a different approach than a situation in which a small percentage are severely deficient in reading skills and a larger proportion have minor problems.

You will need to make provisions for obtaining the information with which to answer these questions. There are a number of sources you may be able to use.

Faculty surveys. Some schools have begun in an informal way with a faculty survey aimed at testing the waters--getting a feel for where the greatest problems lie. Such a survey might, for example, ask teachers to rate their students' ability to do various tasks in the basic skills areas, or it might ask them to estimate what proportion of their students can do certain tasks.

Student surveys. Another informal assessment method that has been used is to ask the students to evaluate their own basic skills on a student survey. This approach is most often used in combination with teacher ratings of specific students' skills.

Performance tests. Another method that has been used in some schools is to administer a short performance test to all students. The test can be designed both to give the general assessment we have been talking about and to provide specific diagnostic data later about individual students' instructional needs.

Standardized tests. Scores on standardized achievement tests provide another good source of information. For example, in a secondary program, results may be available from one of the national achievement tests that are usually administered periodically. In either secondary or postsecondary programs, results may be available from tests taken during the intake process.

Surveys, while admittedly subjective, give a rough estimate of how bad (or not so bad) things are. A faculty survey has the added advantage of planting the seeds of awareness in the faculty that there is a problem that requires attention. If teachers are going to join in a partnership with you to raise students' basic skills levels, they must first agree that there is a problem. This awareness lays the basis for future cooperation.

Standardized test scores are usually more objective measures than the scores from less formal tests or surveys. They serve a useful purpose in giving a general picture of the achievement levels of a student group. However, they should be used cautiously, because they may be insensitive to cultural differences and they do not usually reflect the basic skills emphases of vocational programs. Most important, they should never be used for the purpose of screening individual students out of a program.

It is important to note that none of these strategies by itself is likely to be an accurate indicator of the situation, because of the limitations we have discussed. However, in combination they can tell you a great deal about the state of basic skills in your institution.

Climate for Change

A final kind of assessment that should be going on during this stage of planning is assessing the climate for change. The faculty's readiness to acknowledge the existence of a problem and to become involved in its solution are vital to the success of any program you try to implement. Their readiness and willingness may become apparent as you involve them in data gathering and planning.

If they are not ready--if they seem resistant to change--you will need to determine why and consider how to foster a more positive climate. Are there other problems--attitudinal, professional, interpersonal, territorial, political--that are getting in the way and need to be solved first? Are they just not sufficiently aware of the problem and its magnitude; do they simply need a better "sales job" from you on the need for change? If the other problems are unalterable at the present time, you may need either to postpone your efforts or to limit the scope of the basic skills program accordingly.

Examination of Alternative Solutions

Examining alternative solutions is one of the most complex stages of the planning process. The outcome of your activities will be the delineation of a program that has the greatest potential for impact on the basic skills problem in your particular situation. You will be considering questions concerning program types, staffing structures, characteristics, and approaches to be used; and the questions that must be answered are among the broadest and most far-reaching.

Type

What kind of program will meet the needs of your system or institution? In chapter 3, three major program types were presented: compensatory or remedial; reinforcement or support-oriented; and institutional or alternative setting. Will one of these types be both effective and feasible in your situation? Will a combination of these approaches be more effective?

Staff Responsibility

Who will be responsible for basic skills instruction? Will academic teachers have the major role, or will instruction in basic skills be infused throughout the vocational-technical curriculum? Will it be an interdisciplinary effort with shared responsibility? Who will have responsibility for which tasks?

Content and Students

Which basic skills will be addressed by the program? Who will be served? Will all students participate or only those in greatest need? Some programs are designed to serve a limited population. Others, especially those infused into the entire vocational-technical program, serve all vocational-technical students, no matter how high or low their skill levels.

What will govern student access to the program? How will students in need be identified? How will scheduling be handled?

To some extent, the results of your assessment will provide answers to these questions. Presumably, the program will address the skills in which you find deficiencies. And the students with low levels of skill will be among those served. But other factors also come into play. For example, if the need is great and your resources are limited, you may have to set priorities and decide who is to be served first and in what skill areas. If you obtain outside funding, there may be restrictions on who can be served. For example, funds may be limited to programs serving disadvantaged students.

You and your staff may be able to come up with creative solutions for stretching limited resources as far as possible. Perhaps you will decide to phase in program components. Or you might set up a schedule whereby students are served on a revolving basis. Or you might plan to involve community volunteers, peer tutors, or teacher aides.

Questions about such broad aspects of the program as staffing, content, and students to be served are not quickly answered. Every other factor you will consider impinges on the answers to these questions. In a sense, arriving at answers to questions about the nature and the structure of the program will be the culmination of all the planning you will do. And that point will probably be reached only after numerous cycles of the planning process.

Nowhere is the cyclical nature of planning more evident than here. It seems that you have to answer all other questions before you can answer these--and, ironically, none of the other questions can be definitively answered until you have answered these.

Most often, it's a case of assessing the problem and resources, selecting a tentative program structure that seems to address the problem, and then analyzing the requirements and resources associated with it. When this kind of analysis has been done, it generally becomes more clear whether the program you are considering is feasible and is likely to accomplish what you intend.

Implementation

Implementation is the process by which you put into effect the program you have planned. We will deal with actual implementatior in a later chapter. Planning for implementation calls for making decisions about questions related to scheduling, staff responsibilities for implementation, communication, and public relations. Questions such as the following should guide your planning.

Scheduling

When will the program be implemented? This may depend on such factors as the following:

- How long it takes to obtain funding for the program
- How long materials development or other time-consuming activities will take
- When a new school year, term, semester, or quarter begins
- Whether extensive staff development is required and when that will occur

Will you implement instruction in all the basic skills areas from the outset? Or will you perhaps phase in program components over time? Some schools

have chosen to implement one component as a pilot project before installing the rest of the program. This enabled them to iron out the bugs and to deal with unforeseen problems before launching a larger, costlier effort.

If materials development is required, when will it happen? How will it be coordinated with other phases of program implementation? When and how will revision and updating be handled?

What is the most efficient sequence for carrying out the program implementation? For example, some events probably can occur simultaneously, while others need to be completed before the next can be begun. You will need to develop a realistic schedule for completing the various steps, based on when you expect to implement the first phases of the program.

Staff Responsibilities for Program Development

Who will be responsible for each step in implementing the program (e.g., chairing of planning committees, assessment, fact finding, grant application, materials development, planning of staff development)? How are their roles interrelated? How will their work be coordinated?

How will those roles be decided? Some administrators choose to assign planning and implementation tasks, reasoning that by carefully pairing people and tasks, they can help to lay the groundwork for future cooperation. Others find that allowing participants to volunteer for various tasks creates a better atmosphere.

Public Relations

Will the active involvement of parents, community members, or employers in the program be sought? (For example, some programs have successfully used community volunteers to provide reinforcement and practice of new skills.) If so, who, and toward what end? How and by whom will their participation be sought? At what stage(s) in the planning do they need to be involved?

Will an effort be made to inform parents and others in the community about the program? Whether or not people outside the school will take part in implementing the program, research studies have repeatedly shown that students whose parents are actively involved in their education make better gains in basic skills. Parents who know about the program and who feel a part of it are more likely to provide reinforcement at home.

Employer support can be a valuable asset to a basic skills program. For example, often they can provide insight into the skills they consider to be basic for new employees (and which they feel haven't adequately been taught in the past). Furthermore, when employers have been involved in planning or implementation, they are more apt to feel positive toward the program. And when the community is happy about a program, the chances are better for continued support.

Communication

How will lines of communication among all those involved be established and kept open? How will they communicate with you and with each other during planning and after the program has been implemented? What will be each person's responsibility for keeping others informed, sharing, providing feedback, and so on.

What will it take to initiate communication between vocational and academic faculties? How can it be maintained? How will problems be handled?

Evaluation

Program evaluation is an important part of operating an educational program; it is absolutely vital when establishing a new one. Evaluation enables you to do the following:

- Judge whether your program is achieving its goals
- Make needed improvements or refinements in the program to ensure that the program does meet those goals
- Monitor how well the program continues to meet those goals over time and whether the program is in need of updating

In very practical terms, program evaluation can give you the facts you need in order to retain public support and justify applications for continued funding.

Unfortunately, evaluation is a step that too often receives inadequate attention. Sometimes worthwhile evaluation does not take place simply because insufficient planning was done in the early stages. When the time for analysis rolls around, there just isn't enough factual data--data that have been carefully gathered--from which to draw any valid conclusions.

Evaluating a basic skills improvement program is no different from evaluating other kinds of educational programs. In a later chapter, we will review some specific criteria for determining the effectiveness of a basic skills program. However, evaluation deserves mention here because designing a structured program of evaluation must be a part of your program planning. It should include provisions for the following:

- Formative evaluation--Information gathered during the program about the success of the program, problems that need to be addressed, revisions that need to be made, and so on
- Summative evaluation--End-point measures of program success to determine how well the program has met its goals
- Follow-up--Post-program indicators of the impact of the program

Formative Evaluation

Formative evaluation data may include both informal and formal feedback about the program. When used together, these types of feedback complement one another and help to give a balanced picture of program strengths and needed revisions.

Informal feedback. How will informal feedback about the program be obtained? For example, informal means of gathering information might include regular communication with students and with teachers about their reactions to the program: How do they feel about the program? Is it meeting their expectations? Are they having any particular problems? How could it be changed to run more smoothly?

Student attendance can also be an informal indicator of satisfaction. If participation is voluntary, are students taking advantage of the program? Even if participation is not voluntary, attendance may be a factor: Are a lot of students cutting class?

Formal feedback. What systems will be set up for obtaining more formal formative evaluation data? These can encompass all the strategies for assessment, diagnosis, data gathering, record keeping, analysis, and other tasks involved in monitoring student progress in the program:

- Courses completed
- Contracts made and met
- Competencies achieved
- Degrees of skill level improvement achieved

Provision should be made for evaluating all aspects of the program. For example, if staff development is provided, how will you know if it is effective: Through workshop evaluations? Through before-and-after observations of teacher performance? Through interviews?

Summative Evaluation

How will summative data be obtained? One of the following means of measuring and documenting student achievement may be the most suitable for your program:

- Scores on student achievement tests
- Student grades
- Competency profiles
- Diagnostic records

Follow-up

Provisions need to be made during the planning stage for obtaining follow-up data a year or more after the students have left the program. This may involve teachers at the next level, employers, or students themselves. What kind of impact did the program have on the students' success in terms of improved basic skills? Are next-level instructors or employers satisfied? Are the students satisfied?

In planning what kind of information to obtain, and the means by which to obtain it, you will need to consider policies in your state and institution, as well as the requirements of any funding agencies that will be involved later. For example, what kind of impact will you need to demonstrate in order to qualify for continued funding?

Factors to Consider

Given a planning process in which you will assess, evaluate options, implement, and evaluate, you need next to consider the factors involved in decision making. They relate to students; financial, human, and physical resources; and many other factors. In subsequent chapters, we will examine some of these factors.

NOTES

Chapter VIII

STUDENTS

Which students need to improve their basic skills? How many of them are there, and what are their characteristics? The makeup of your student population will have a direct bearing on planning with regard to which program options are appropriate in your situation.

Once you have identified the population, you will need to determine who will have access to the program and how they will gain access. How will you diagnose students' learning needs? Will ongoing diagnosis of students' skills be done throughout the program? What approaches or instruments will be used for diagnosis, and who will administer them? What kind of follow-up will be done--that is, how will you know if students have met their goals?

Answers to questions such as these should be sought early in the planning process, for the needs of students, after all, are at the heart of any basic skills improvement effort.

Student Characteristics

As you identify the students needing help with basic skills, such characteristics as skill levels, group size, extent of vocational concentration, and special needs should be considered.

Skill Levels

One very important characteristic of the student population to be served is their skill levels--whether their lack of ability in the various basic skill areas is more or less severe. An assumption of the reinforcement-type program, for example, is that the students have sufficient skills to "survive" in the vocational classroom. When this is the case, it is possible to isolate problem areas and give the students instruction and practice that are supportive of what they have learned (and are learning) in the academic classroom.

However, if the problem is so severe that students can't read the text even with help, or do the simplest calculations, or write a simple sentence, or make a basic rational deduction--then reinforcement alone is not going to work. Students who can't survive at all in these respects are going to need some major remedial work before they can cope in the occupational program.

Some schools have found that an alternative setting is most appropriate for students who have very low levels of basic skills combined with attitudinal problems. A separate setting in which the students receive both intensive

instruction in basic skills and assistance in developing appropriate work behaviors can create a greater sense of belonging for dropout-prone students. The feeling of commitment and of investment in the learning process can contribute to a positive environment in which greater strides in learning take place.

Group Size

The size of the group needing assistance also has a bearing. For example, if a small number of students have very low levels of skill, they may be successfully served by specialists giving remedial instruction. If a large proportion of the students need limited reinforcement and practice, their needs can usually be handled effectively by the vocational-technical instructor. If the needs of the students are diverse, a combination approach may work best.

If the size of the group and the severity of the problem are such that a comprehensive and costly approach appears necessary, you may have to try to secure outside funding before you can move forward.

Concentrators Versus Nonconcentrators

The intensity of the students' involvement in vocational education also bears some analysis. Vocational "concentrators" are those who are involved in a single vocational program and who attend classes in that program several hours a day, every day of the school week. This is in contrast to "nonconcentrators," who may either be exploring various programs one at a time or just taking isolated courses in the vocational department for nonoccupational reasons. Let's look at how well integrated and nonintegrated programs meet the needs of these groups.

Concentrators. An integrated program--one in which basic skills instruction is infused into the vocational program and tied specifically to occupationally defined requirements--has some advantages for this group:

- Amount of instruction--They are likely to receive more basic skills instruction because they receive it in all their vocational classes, not just in English or math class.
- Focus--The instruction is likely to be focused on skills they will actually need after they leave the program.
- Motivation--The job-relevant nature of the instruction is likely to motivate them to learn. (On the other hand, students in the same classes who have more advanced skills may be slowed down and become bored with the whole program.)

By contrast, a nonintegrated program--one in which basic skills are taught in academic classes separate from the vocational program--may have some disadvantages for concentrators:

- Focus--The basic skills instruction may be geared to the needs of college preparatory students and give inadequate attention to those of vocational students.
- Motivation--The instruction may seem irrelevant to the students because it lacks the tie-in with their vocational work.
- Intensity--Students will receive less basic skills instruction overall because it will be confined to one or two classes.

Nonconcentrators. The integrated approach would have some disadvantages for this group:

- Continuity--For students who are exploring different programs, their basic skills instruction would lack continuity. And to the extent that instruction was tied to specific occupational goals, the skills they learn might not be transferable from one program area to another.
- Amount of instruction--Students who spend very little time in vocational classes because they are just taking isolated courses would lose out on basic skills instruction if it were tied to their vocational courses.

Thus, these students might profit more from receiving basic skills instruction separate from their vocational courses.

Other Characteristics

Such characteristics as disadvantagement, age, or special needs will also affect the appropriateness of certain types of programs and strategies. For example, if a large proportion of your students are economically disadvantaged, you may qualify for financial support as a compensatory program. However, funding obtained in this way must be used only for the benefit of the disadvantaged students. Therefore, infusion programs in which all students are served in the context of the vocational program would not qualify.

Funding is also available for programs to help students with special needs acquire transition skills, and these can include basic skills. These funds also have restrictions concerning how they can be used. It pays to know the makeup of your student body!

If you have a large number of students with limited English proficiency, you should consider whether language is at the root of their basic skills problem. It is quite common, for example, in areas with high concentrations of immigrants, for reading and writing skill levels to be low, while math skills are average or high. (Language doesn't necessarily get in the way of performing mathematical operations learned in the home country.) It may be appropriate in such cases to plan an English as a Second Language (ESL)

program or a Vocational-Specific English as a Second Language (VESL) program, at least as a part of the overall basic skills program.

If you have adult students, they are likely to have a wide range of skill levels, life experiences, and degrees of academic readiness. They also may have varying goals in participating in the program. Adult students' needs can be met within any of the program structures we have discussed. However, basic skills education for groups of adults most often takes place within such non-integrated programs as ESL or VESL, Adult Basic Education (ABE), General Educational Development (GED), or External High School Diploma Program (EDP). Whatever the program structure, it is important that the program be set up in such a way that individualized skill development activities are planned, and that instructional approaches appropriate for adults are used.

Access

If you plan to establish an integrated program, with basic skills infused into the occupational program, all vocational-technical students will automatically have access to the program. By virtue of taking vocational classes, they will participate in basic skills instructional and reinforcement activities.

If you plan a remedial or alternative-setting type of program, access becomes an issue. There are three major ways that programs deal with access to such programs: test scores, teacher referral, and self-selection.

Test Scores

In some programs, access to the program is based on need--that is, low levels of proficiency in the various basic skill areas. Perhaps all students with skills below a certain level (e.g., two or more levels below grade level) will be considered eligible for the program. If there is room for only a certain number of participants, students might be admitted on the basis of greatest need (i.e., lowest skill levels), until the roster is full. Or, the policy might be that anyone with a need will be welcome.

Proficiency levels may be determined through scores on standardized achievement tests, tests taken during the intake process, or performance tests given for the purpose of problem assessment or diagnosis.

Care should be taken that tests that are used for this purpose are valid, reliable tests appropriate for both the purpose and the student. For example, if the students are adults, one of the tests developed specifically for adult learners should be used.

Teacher Referral

Many programs accept students on the basis of teacher referral. Teachers (vocational instructors or others) who realize that a student is having

trouble, and suspect inadequate basic skills as the cause, can refer the student to the program for assessment.

In many cases, especially in remedial programs, students need to stay in the program until their skills reach an adequate level for them to pursue their educational goals. Counseling may be provided along the way if it becomes apparent that their progress is not consistent with their current goals.

Self-Selection

Some institutions have found--especially when their programs are based on resource centers, labs, or alternative settings--that the necessary relaxed, positive environment is enhanced by voluntary participation by students. They advertise the existence and purpose of the program around the school, and students needing help are encouraged to take advantage of the program. Programs that are run in this way often have an open-entry/open-exit structure, and students remain on a voluntary basis as long as they feel they are gaining from the program.

Diagnosis and Monitoring

Diagnosis of basic skills normally occurs at the point of entry into the program, although some data for the diagnosis may have been provided by earlier assessment results. In many programs, diagnosis occurs as part of an ongoing diagnostic/prescriptive process.

After the initial testing, learning goals and objectives are established for the student and learning tasks assigned. (Often, this is done in the form of performance contracts agreed upon with the student.) As each task is completed, the student's work is evaluated to determine whether the objective has been met, before going on to a new objective and task. In this way, the student's progress is constantly monitored.

Many different testing instruments are available for the basic skills, although not all serve the special purposes of diagnosis. To be useful for diagnosis, tests must provide scores that can be related to a variety of explicit, teachable objectives--not just give a grade-level equivalent.

Most standardized achievement tests give results that are too general--results that cannot be used for planning specific instructional activities. Although both criterion-referenced tests and norm-referenced tests may yield diagnostic information, criterion-referenced tests tend to be more useful for a competency-based vocational program.

In planning the basic skills program, especially a remedial program based on diagnosis of student needs, you will need to ensure that sound diagnostic instruments are selected for use in the program. Sample 9 provides guidelines for test selection.

It is also important that program plans provide for a clearly delineated system for the use of diagnostic instruments, including the following details:

- Who will administer the tests
- When tests will be administered
- To whom tests will be administered
- How results will be used
- What kind of follow-up will be provided
- How confidentiality of student information will be ensured

SAMPLE 9

CRITERIA FOR SCREENING DIAGNOSTIC TESTS

1. Ready availability. For maximum usefulness, tests need to be available on call. This criterion excludes "secure" tests--that is, tests that are not readily available to teachers. It also excludes "fugitive" tests such as those that are printed only in research journals.

2. Appropriateness of grade-level coverage. Only tests covering levels of skill that are remedial for students' actual grade level are useful.

3. Adequacy of the development process. Only tests that have been field tested and shown to be reliable should be considered.

4. Planning usefulness. In order for tests to support educational planning, they must be truly diagnostic. To be diagnostic, tests must give scores for a wide variety of explicit, and teachable, objectives.

5. Availability as a "package." Tests are sold in a variety of forms, ranging all the way from brief survey tests to collections of many individual test forms. The most useful are tests that can measure a large number of objectives in a small amount of time.

6. Suitability for testing groups of students. The most practical tests are those that can be used with many students at once. At least two of the otherwise suitable diagnostic tests on the market require one-to-one testing. Such tests require an inordinate amount of your time in return for scores on small numbers of students.

SOURCE: Adapted from James A. Dunn, Peter Gray, and Elizabeth Martini, Resource Guide: Teaching Basic Skills through Vocational Education (Ithaca, NY: Cornell University, Cornell Institute for Occupational Education, [1982]), p. 1.

Chapter IX

STAFFING

Which teachers will be involved in providing basic skills instruction and/or reinforcement? Do you presently have adequate staff for the program? How well prepared are existing staff? What will be required to prepare them for their roles? Will new staff need to be hired?

How will other programs, departments, or personnel in the organization be involved or affected, and what kind of coordination does that imply? These are questions you will need to address as you plan how basic skills will be approached in your setting.

The Effect of Setting

Is your program a secondary or postsecondary program? Is it in a comprehensive high school? An area vocational-technical school? The setting in which you are trying to establish a basic skills improvement program will have quite an impact on the types of programs that are feasible.

Staffing is apt to be the aspect of program planning most severely affected by setting. Interdisciplinary efforts, in particular, tend to be much easier to set up in institutions where the general education and vocational faculties are in the same facility. When secondary students take all their vocational courses in one location and do all their academic work in another, for instance, cooperation between the faculties of the two facilities may be difficult to generate. If the faculties are under different administrations, it may be difficult for the one to have any impact on what the other teaches. It may require state- or district-level policies and leadership to achieve real coordination.

In postsecondary institutions, basic skills programs are apt to be primarily compensatory or remedial. Some students need to receive intensive instruction to raise their basic skills levels enough to cope with the technical curriculum. However, the students may find that the further they move away from their basic skills courses and into college-level courses, the more their skill levels deteriorate. Postsecondary administrators must build a partnership with faculty to solve such problems. They must set up real reward systems to encourage teachers to seek solutions and must provide resources to make change possible.

One institution in New York (Fiorello H. LaGuardia Community College) dealt with this problem by giving teachers released time to work with basic skills teachers to develop a catalog of strategies for reinforcing basic skills in the content areas. The strategies were designed to enable

instructors in the technical areas to gauge students' basic skills levels, integrate basic skills reinforcement into their teaching, create and prepare for tests, and obtain student feedback on the course. Then the instructors, working in interdepartmental groups, prepared for their courses by using the catalog to develop specific course materials. Long-range training and cooperation were instituted by forming interdepartmental teams of experienced instructors each year to teach similar teams of new instructors.

Staffing Decisions

We have discussed a number of staffing variations in conjunction with program types and staffing structures (chapters 3 and 4). Perhaps a review of potential staff roles would be helpful at this point, along with implications for decision making. A summary of staff roles and implications is presented in sample 10.

Basic Skills Teacher Roles

Basic skills teachers may take part in the vocational basic skills program in a number of ways, in both instructional and supportive roles.

Remedial teacher. Basic skills instructors may teach in a remedial program, where they diagnose problems and work with students, either in a group or individually, to build the needed basic skills.

In some cases, especially where students' skill levels are found to be extremely low, this may be the only arrangement that provides the intensity of instruction they need. In some postsecondary programs, for example, students may need to bring their skills up to a minimum level in order to be able to deal with the technical content of the program. Usually they need intensive work to do this before they begin other courses. Once they have achieved a minimum skill level, they will need to build and maintain those skills through continuing remedial work or through reinforcement within their other courses.

Tutor. Basic skills teachers may tutor individual students having trouble in the basic skills. This is usually most effective when comparatively few students need intensive help. Instruction can be completely individualized and, with the assistance of the vocational instructor, planned with occupational goals in mind.

Some of the problems associated with pullout instruction can be avoided because there is more flexibility for scheduling individual tutoring sessions with the students' occupational program in mind. A disadvantage of this arrangement is that it is time-consuming and therefore not very cost-effective if numbers are large.

Center manager. Some schools find it most convenient and cost-effective for basic skills teachers to manage a learning resource center or laboratory, where they may also teach, advise, tutor, and otherwise reinforce the learning

SAMPLE 10

POTENTIAL STAFF ROLES

STAFF ROLES	ADVANTAGES	DISADVANTAGES	TYPE OF PROGRAM
Basic Skills Teachers			
Remedial Teacher	Effective when skills are very low	In secondary pullout programs, students miss vocational content Stigma attached Occupational goals may be ignored	Remedial, nonintegrated staffing
Tutor	Effective when skills are low, students few Instruction can be tied to occupational goals Scheduling can be flexible	Time-consuming Not cost-effective if many students need help	Any type (compensatory, support-oriented, institutional; integrated or nonintegrated staffing)
Center Manager	Convenient Cost-effective with many students, diverse needs Can assume multiple roles Individual assistance possible	Without coordination with vocational teacher, may ignore occupational goals	Support-oriented or institutional (labs and centers)
Visiting Teacher	Vocational content motivates Occupational goals are focused on Takes burden off vocational teacher Expertise of basic skills teacher is used	Requires very close coordination	Support-oriented, integrated staffing
Advisor	Vocational teacher retains role of instructor Expertise of basic skills teacher is used Develops skills of vocational teacher in basic skills	Requires very close coordination	Support-oriented, integrated or combination staffing
Curriculum Developer	Draws on expertise, knowledge of both areas Produces materials geared specifically to vocational area	Time-consuming (but the materials last)	Support-oriented, institutional; integrated or combination staffing
Vocational Teachers			
Teaching or reinforcing basic skills	Vocational teacher is with students greatest amount of time Topics are highly motivational Teacher is familiar with occupational requirements	May be reluctant to take on added responsibility May lack training for basic skills instruction May have inadequate basic skills	Support-oriented, integrated staffing
Supplying goals, materials, etc., to basic skills teacher	Vocational teacher has access to occupational requirements	Basic skills are taught apart from vocational content; may lack relevance	Any type, nonintegrated staffing

and application of basic skills. When students' needs are diverse and the number of students needing assistance is large, this type of approach can be quite effective.

Visiting teacher. In an integrated program in which basic skills instruction takes place in the vocational-technical classroom, basic skills teachers can take the supportive role of visiting teacher. The teacher visits the class or shop on a regular basis to teach basic skills in relation to the technical content. This arrangement requires close coordination between the basic skills teacher and the vocational teacher to ensure that the instruction focuses on occupationally important skills and technical content.

Advisor. Another supportive role is that of advisor to vocational instructors. In this role, a basic skills instructor helps vocational instructors identify students' basic skills problems, devise learning activities to reinforce basic skills in the context of the vocational-technical curriculum, evaluate progress, and deal with special problems. Again, this arrangement requires very close coordination between the teachers.

Curriculum developer. In some schools, basic skills teachers and vocational teachers work together to develop instructional materials that incorporate both vocational and basic skills content. For example, for a specific service area, the teachers would identify basic skills required to meet occupational goals and together develop materials to teach or reinforce them. Materials often include diagnostic/prescriptive teaching strategies appropriate for the service area. The materials are usually made available to the rest of the faculty, who "personalize" them for their own courses.

Materials development may be done during summer months in preparation for the following school year. Teachers who are involved in the development effort may then take part in training other faculty to use them. This strategy has been used successfully at the institution, district, and state department levels.

Vocational Teacher Roles

Vocational teachers, like basic skills teachers, can be involved in a variety of roles, both instructional and supportive. Some of the ways they can support the work of the basic skills teachers have already been discussed. For example:

- Supplying occupational goals, terminology, materials, etc., to basic skills teachers
- Conducting supportive activities in class to reinforce basic skills
- Taking part in joint curriculum development

However, it is a somewhat different problem when vocational-technical instructors are planning to infuse the teaching or reinforcement of basic skills into the occupational curriculum. The integrated program rests on the assumption that students have some level of skill already. Vocational

teachers are not going to do major basic skills remediation with their students. Rather, their efforts will probably be confined to limited instruction aimed at reinforcing occupationally defined basic skills and providing opportunities for practice and refinement of those skills.

Preparing Teachers to Determine Students' Basic Skills Requirements

Both vocational and basic skills teachers may need assistance in determining the basic skills requirements of vocational students, although for somewhat different reasons. The vocational teacher knows vocational requirements, but not necessarily as they relate to basic skills. The basic skills teacher knows basic skills requirements, but not necessarily as they relate to vocations.

Vocational instructors. You will need to ensure that vocational instructors have the means for determining what specific basic skills are needed for entry into the occupations in their specialty area, and at what levels. For example, if they have occupational analyses (task inventories) for their specialty areas, these can be reviewed for tasks requiring reading, writing, oral communication, mathematics, or other basic skills. Basic skills specialists may be able to help in this kind of review.

If they do not already have occupational analyses, existing analyses are available from a number of sources. For example, state divisions of vocational or occupational education often have copies of analyses that have been done. The National Center for Research in Vocational Education at The Ohio State University in Columbus, Ohio, has produced various materials through which existing task inventories can be identified. For example, Resources in Vocational Education and the Vocational Education Curriculum Materials (VECM) database are sources that may be useful.

The Vocational-Technical Education Consortium of States (V-TECS) is another potential source. This is a consortium of states that have joined together to conduct occupational analyses. If your state is a member, you can obtain their materials through your state department. People in non-member states can purchase V-TECS catalogs from the Curriculum Publications Clearinghouse at Western Illinois University (46 Horrabin Hall, Macomb, IL 61455).

Basic skills teachers. Often academic teachers do not understand the real, practical basic skills that are required in a vocational program (not everyone needs college-prep English!). If basic skills teachers are to work effectively with vocational students, they must have sufficient information about the basic skills needs of vocational-technical students. Their efforts should be aimed at helping students achieve competency levels required to meet their occupational goals. Generally this means encouraging the development of cooperative relationships between the academic and vocational-technical faculties so that relevant information is shared.

Overcoming Problems

Knowing the basic skills requirements is not enough; sometimes faculty are still unable or unwilling to teach or reinforce learning in this area. If that is the case, it is important that you identify and overcome any barriers to their taking part in basic skills improvement. Two common barriers are inadequate skill and reluctance.

Inadequate basic skills. What do you do when vocational-technical instructors themselves lack competency in the basic skills? And when you include a skill area like keyboarding among basic skills, many teachers (possibly a majority) lack background and skill. Teachers who lack basic skills themselves are ill-prepared to teach them to their students. They may not even be able to judge their students' performance effectively. This is a difficult question with no easy answers.

Some states are setting new standards for certification to combat this very problem. For example, in Ohio all teachers will need to demonstrate mastery of basic skills in order to be certified. This has promise for the future, but does little for the present problem.

At some point, you have to determine just how bad the situation is. Can the teachers' skill levels be raised sufficiently to enable them to do the job? There are various strategies that can be used to help them.

In-house workshops to develop basic skills may be helpful (e.g., a writing workshop, a keyboarding seminar, or a math skills clinic). They can be run either by specialists from your school or, if that poses a morale problem, by outside consultants.

Vocational-technical teachers can be encouraged to seek individual assistance from basic skills specialists in the school. If programmed instruction materials or computer-assisted instruction programs are available, the teachers can pursue some of the work on their own.

Teachers can attend outside courses on basic skills--adult education classes, summer courses at local colleges, continuing education courses, or others. Some schools pay tuition or provide released time for this purpose. Postsecondary institutions may be able to waive tuition.

These alternatives do exist; however, it is important to remember that an adult's ability to read and write, to add and subtract, involves human pride. As is the case with students, teachers in need of skill development should be approached with care. Constructive preparation for a new role should be the emphasis, not current lack of skill.

Reluctance. One of the biggest hurdles some administrators encounter is reluctance on the part of the faculty to get involved. Some vocational instructors insist that the teaching of basic skills is not their job. This may happen for a number of reasons.

A common reason is plain fear. Some teachers--especially those who have come from industry with little or no preparation for teaching--feel that they have their hands full just learning how to teach and manage a classroom. They are apt to feel threatened by the prospect of a whole new set of responsibilities and a content area with which they themselves may not be totally comfortable.

Another reason is natural reluctance to spread themselves too thin or to dilute their occupational program. Teachers often think that infusing basic skills into their curriculum will require adding great blocks of basic skills content to their teaching. And since time is limited, it follows (in their minds) that their current occupational course content will be greatly diminished.

On the other hand, English and math teachers sometimes are reluctant to tackle basic skills instruction because their training is at the secondary or postsecondary level and many vocational students who are deficient in basic skills need elementary-level work.

Finally, there is the age-old separation between vocational and academic departments, which sometimes have functioned seemingly worlds apart. The idea of now joining in a partnership, for whatever purpose, with a former adversary--or at least a former stranger--may seem very foreign--perhaps threatening to both faculties.

What can you do about reluctance and other negative attitudes? Are they really a barrier? Unfortunately, yes, they are indeed a barrier--one that it has taken some schools years to break down. But they need not be a permanent barrier. Attitudinal barriers generally are broken down in the process of building interdisciplinary cooperation.

Interdisciplinary cooperation is a big topic, one that is better left for a later chapter. Suffice it to say at this point that in the planning process, you will need to attack the problem in five areas:

- Involve the faculty in planning, from the very beginning, to break down barriers and build commitment.
- Set the facts straight. During the planning process, teachers need to learn exactly what is at stake, what is involved in the various program options, and what it means in terms of their responsibilities.
- Create a positive environment. Set an example of enthusiasm, commitment, and a sense of partnership; encourage innovation and creativity through your actions and your policies; and reward cooperative efforts among faculty.
- Build bridges in any way you can, at all levels--among administrators, between administrators and faculty, between departments; in professional and social contexts, in curricular and extracurricular contexts.

- Provide opportunities for staff development to enable teachers to do the job they need to do.

Staff Development

There are many questions to be answered during planning regarding staff development. As you evaluate program options and many staffing decisions, you will need to decide whether staff development would be required and, if so, what kind and for whom. As you plan staff development strategies, you will need to determine how, when, and where to provide it. The following are examples of the staff development issues you will need to consider. The issues and options are summarized in sample 11.

Content and Audience

Who will need training, and what kind of staff development will they need? You may need to provide training for basic skills teachers, vocational-technical teachers, or both. Basic skills teachers may need to learn about vocational programs and goals. All the teachers may need to learn how to carry out an interdisciplinary approach or use new materials. If volunteers or student aides are used, they may need preparation. Vocational-technical teachers may need to upgrade their own skills or learn how to reinforce basic skills in their classes.

For example, a course on reading in the content areas may be set up as part of an inservice program. This kind of program is designed to help vocational-technical teachers gain skill in helping students improve their basic skills. In these courses, teachers learn to present reading assignments so that students can make sense out of what they read. Techniques such as introducing new vocabulary, relating material to students' prior experience before they read it, and using study guides are taught. The intent of such courses is usually not to enable these teachers to become reading (or math or writing) specialists, but to enable them to apply the principles of reading (math, writing) instruction to their own content areas.

Two examples of staff development programs are presented in samples 12 and 13.

Resources

How will staff development be carried out? Will internal resources be used? Will you take advantage of inservice programs offered by other organizations (e.g., state education department, teacher training institutions, the district, or other schools)? Will outside consultants be involved? To answer these questions, you will need to analyze the expertise needed and the resources you have available, both human and financial.

A popular approach in many institutions has been to train only a small corps of teachers in the beginning. The first teachers chosen are usually the strongest, most enthusiastic faculty. After implementing the program for a while, the first group of teachers then trains another, larger group. This arrangement is cost-effective in that, if outside trainers are used the first time, the cost is only incurred once. Also, it has a multiplier effect: if one trainer taught five teachers, then each of the five teachers can train five more teachers the next time around. This approach also tends to have the effect of building grass-roots support for the program since the teachers begin "selling" it to their peers.

Timing

When will training take place? How much training time will be required? Will a workshop be offered in the summer in preparation for the new school year? Will training be offered during the year? Will staff development be a one-time event (e.g., a special seminar) or a program offered on an ongoing basis (e.g., periodic one- or two-day conferences or evening classes offered by colleges during the school year)?

Compensation

How will teachers be compensated for their participation? Will they be paid or given released time? Some schools, to enable teachers to take part in the planning and decision-making process or in materials development, have adjusted work loads (e.g., number of courses taught) to allow time for the added responsibilities. The same kind of arrangement might be developed for staff development. Some schools support outside course work through fee reimbursement or fee waivers.

The policies of your district or institution will affect how you answer these questions, as will agreements made between the educational agency and teacher organization(s).

SAMPLE 11

STAFF DEVELOPMENT ISSUES AND OPTIONS

Content and Audience

- Training for basic skills teachers
  - Vocational programs and goals
  - Program implementation
- Training for vocational-technical teachers
  - Basic skills upgrading
  - How to reinforce basic skills
  - Program implementation
- Training for aides, volunteers
- Training for all involved staff
  - Interdisciplinary approach
  - Using new materials

Resources

- Internal
- Other organizations
  - Teacher training institutions
  - State education departments
  - District
  - Other schools
- Outside consultants
- Teachers training teachers

Timing and Type

- Summer workshops
- Special seminars
- Periodic conferences
- Ongoing course work

Compensation

- Direct payment
- Released time
- Adjusted work load
- Fee reimbursement or waiver

SAMPLE 12

MODEL STAFF DEVELOPMENT PROGRAM A

VRP: Reading Power in the Content Areas
The Exchange
University of Minnesota
Minneapolis, MN
(612) 376-8234

Vocational Reading Power (VRP) is a staff development project designed to help teachers--both academic and vocational--to integrate reading into their courses. The focus is not on teaching reading, but rather on infusing practical teaching strategies that help reduce the gap between course reading requirements and students' reading skills. Students with severe reading problems or learning disabilities are served by other means, such as labs and remedial classes.

Funding

VRP was originally developed in the 1970s in four regional vocational centers in Michigan, with funding through Title III. It later was moved to Minnesota, and some funds from the National Diffusion Network (NDN) continue to support nationwide dissemination of the program.

Training Program

Training is provided to teachers in their home schools, usually in two-day sessions, depending on their needs. Although there is an established training package, attempts are made to look at what the teachers are already doing and to tailor the workshop somewhat to their real needs.

Components include student assessment, computer-based readability assessment, teaching strategies for incorporating reading into the classroom curriculum, occupationally specific vocabulary development, and an instructional materials system that gives access to current materials in the various fields.

Administrative Support

Experience has shown that the schools that adopt the program most successful are those in which sufficient commitment and resources are given to the program to make needed follow-up and monitoring possible after the staff development.

Another factor that affects successful adoption is staff turnover. Schools in which many of the teachers who are trained then leave the school are less successful than those that are able to retain their faculty. It is difficult to maintain proper continuity and cooperative involvement with excessive teacher turnover.

SOURCES: Far West Laboratory for Educational Research and Development, Educational Programs That Work, p. A-9.36; and conversations with program staff.

SAMPLE 13

MODEL STAFF DEVELOPMENT PROGRAM B

Northern Virginia Writing Project
George Mason University
Fairfax, VA
(703) 323-2217

The Northern Virginia Writing Project is one of the more than 100 sites of the National Writing Project, which originated in 1974 in Berkeley, California, as the Bay Area Writing Project. The program is based on the premises that (1) teachers must practice the skills they teach, (2) teachers are excellent teachers of other teachers, (3) teachers know little about writing but are intelligent and wish to learn about it, and (4) teachers must participate in professional activities in order to grow professionally.

In this staff development project, institutions of higher learning and the public and private schools of Northern Virginia cooperate to improve the teaching of writing for all students in all disciplines, from kindergarten through graduate school. The core of the program is the summer institute. Each year, 25 teachers attend a five-week workshop, where they learn to be better writers, better teachers of writing, and better evaluators of writing.

During the following school year, teachers who have taken part in the institute meet regularly, forming a network of mutual support. They implement in the classroom what they have learned during the institute, and they serve as teacher/consultants, sharing their knowledge and experience with their colleagues through inservice programs in their home schools.

Other services are available through the project, including single workshops, noncredit inservice programs, planning workshops, and courses.

Content

The program focuses on the writing process, including prewriting, outlining, structuring, composing, and editing. It stresses peer help, presentation to the class or small groups, striving for fluency before mechanics, and a number of other concepts supported by research on writing.

Funding

The original Bay Area project was begun through local district funds and additional support from the National Endowment for the Humanities (NEH) and state department of education funds. Directors of new projects often obtain assistance from local foundations, school districts, universities, state legislatures, NEH (NEH start-up funds depend on matching local support), Carnegie Corporation of New York, and other sources.

SOURCES: NVWP brochures and materials, and conversations with the project director.

Chapter X

FACILITIES, EQUIPMENT, AND MATERIALS

What kinds of facilities and equipment will be required? Will your program require new or remodeled physical space? Will new furniture or equipment be needed? Is there unused furniture or space available to offset these needs? What instructional materials will be used in the program, and what will be their focus (vocational, academic, or a blend)? The answer to these questions will be a direct outgrowth of the type of program you select.

The following are examples of issues you should consider in planning. The various options are summarized in sample 14.

Facilities and Equipment

If you are infusing reinforcement activities into the regular vocational curriculum, you probably will not need to plan for additional space or furniture. If you plan to set aside space for a special purpose (e.g., in making room for a center or laboratory, or for a theory room within a vocational area), modifications to existing property may be required. Construction and perhaps furnishing costs would need to be considered.

For an entirely new program or class (e.g., for a compensatory program), new space and furniture may also be needed. This might be accomplished by reallocating space to free up a room. In some cases, rental or some other arrangement may be necessary, depending on the situation at your institution.

In some cases, purchase or leasing of new equipment (perhaps audiovisual or computer equipment) will be necessary. A computer-assisted program would entail a fairly large start-up cost, unless a computer company can be persuaded to donate equipment. A new learning resource center or laboratory also usually requires an initial investment in equipment, such as audiovisual teaching aids and furniture. However, costs generally even out over time in these situations.

Materials

An integrated program will use vocational-technical instructional materials designed to reinforce basic skills development. Usually, existing instructional materials can be adapted, or supplements can be developed to incorporate basic skills activities. Existing job sheets and forms often provide a ready basis for developing supplemental activity materials. Some schools base their basic skills program on a new set of materials, either adopted in their entirety from another source or developed in-house.

SAMPLE 14

FACILITIES, EQUIPMENT, AND MATERIALS OPTIONS

Space

- Use existing space as is
- Remodel existing space
- Reallocate space
- Rent/lease additional space
- Add (construct) space

Furniture and Equipment

- Use existing furniture, equipment
- Adjust scheduling to get more use of existing furniture, equipment
- Rent/lease
- Buy new furniture, equipment
- Solicit donations

Materials

- Use existing occupational materials
- Adapt existing materials
- Develop supplements
- Develop new materials
- Buy new materials
- Obtain (borrow) materials from other programs, schools

A remedial program will use basic skills materials, and they should be designed to reinforce vocational-technical content and goals. Again, it may be possible to adapt existing materials to focus on occupationally relevant skills. Content and activities should be drawn from the vocational-technical program. Occupational job sheets, forms, and other materials can provide the basis for many activities. For example, a marketing and distributive education program would have many sales- and tax-related forms appropriate for use in teaching math skills.

A combination program or a center or lab might use diagnostic/prescriptive materials that fuse vocational and basic skills content. A variety of materials related to the service area are usually provided for student use, as needed, such as trade magazines, articles, sample forms, job applications, brochures, posters, and so on.

Provision of Materials

How will materials be provided? Will development of new materials be required? Can existing materials be adapted or supplemented? Are materials available from other sources, either commercially or through other vocational programs? If materials development, adaptation, or acquisition is required, who will do it? How will revision and updating be handled?

Developing your own materials. Various schools and state departments have successfully teamed academic and vocational teachers in developing instructional materials. One approach is to begin with occupational tasks that require use of basic skills. Instructional activities are then developed to teach or reinforce those basic skills within the context of the occupational tasks.

Another approach that has been successful is to begin with those basic skills tasks that cause students problems. Activities to teach or reinforce those skills are then developed in such a way that they can be related to occupational tasks in the various vocational specialties. The activities are often put together in some kind of catalog to be used by teachers in a diagnostic/ prescriptive manner.

Obtaining existing materials. No one wants to reinvent the wheel if they don't have to. A lot of work has already been done in developing vocationally oriented basic skills materials. Often, existing materials can be used as is, or they can be adapted for other programs. Schools that have developed materials will often share their developmental process, to be used as a model for new development.

Before you invest in the time, effort, and expense of new materials development, check into what is already available.

Sources

A good place to start is your state department of education. Area supervisors, vocational education curriculum specialists, and staff at state research coordinating units can be good sources of information about materials that have already been developed and about programs that are in the process of developing their own materials. A representative in the state department can also help you locate instructional materials through the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE).

The following are other potential sources of instructional materials:

- Major research and development centers--e.g., The National Center for Research in Vocational Education at The Ohio State University in Columbus, Ohio; The Vocational Studies Center at the University of Wisconsin at Madison
- National professional organizations and agencies--e.g., the Association for Supervision and Curriculum Development, American Vocational Association, U.S. Department of Education
- Professional journals--e.g., Vocational Education Journal, Journal for Vocational Special Needs Education, state-level vocational journals
- Other educators--e.g., faculty and administrators in other school systems, teacher educators at universities or colleges, county or regional specialists
- Documents that describe current projects and/or available materials--e.g., some of the source documents that are included in the recommended references listed on pp. 17, 41, 87, 119, and the inside back cover of this guide

Chapter XI

FUNDING

A basic skills improvement program may or may not require additional funding beyond the existing budget, depending upon (1) the type of program planned; (2) whether it involves any additional or separate services, facilities, and so on, beyond the existing programs; (3) the costs of any added features; and (4) the size of your current budget.

The first step, of course, is to determine the costs of the planned program. Costs will include such items as the following:

- Administrative, faculty, and staff salaries
- Released time for faculty involved in staff development or materials development
- Outside trainers for staff development
- Purchase of student instructional materials, teacher materials, diagnostic materials, or other program-related materials and supplies
- Purchase or lease of equipment or furniture
- Purchase or lease of facilities, or construction costs of remodeling existing space

If the existing budget will not accommodate the costs of the proposed program and efforts to obtain board approval for increased expenditures are unsuccessful, there are still a variety of sources of funding that may be available to you, including federal; state; private foundations; and business, industry, and labor (BIL).

One of the most important tasks in seeking funding for basic skills is to know your funding sources and their priorities and to target your requests accordingly. The student population needing assistance with basic skills is diverse; the students in your institution or district are apt to include disadvantaged, handicapped, adults, students with limited English proficiency, and/or other groups with special needs. Any one of these groups may be a high priority for a funding agency, and a basic skills program for that group might well qualify for the agency's support.

The trick is to match the priorities with the students and tap into the right resources. This is not to say that you should obtain funds by dishonesty; rather, it means that there are many ways to look at a given program. Yours may be addressing a number one priority--perhaps displaced homemakers, perhaps youth unemployment, perhaps special needs--of an agency that can help you, if only you can identify the agency.

A highly valuable resource for staying abreast of potential funding sources is the vocational/general education networks. Stay in contact with other administrators, both in vocational education and the general education mainstream. Cultivate networks of support. Be a part of the grapevine--who's funding what; who got support for a program and how they did it; what's in the air politically and economically. Be known among your peers.

This kind of exposure and mutual support can put you in the right place at the right time to take advantage of opportunities for financial support, whether from federal, state, or private sources.

Federal Sources

The following is an overview of some of the current federal sources of funding that might be applicable to a basic skills program. Each source has its own requirements and restrictions. Your state's special needs consultant can help to identify potential sources that fit your program needs and student population.

- U.S. Department of Education

  Office of Vocational and Adult Education
  Office of Postsecondary Education
  Office of Special Education and Rehabilitation Services
  Office of Bilingual Education and Minority Language Affairs
  Office of Equal Opportunity

- Carl Perkins Vocational Education Act of 1984, P.L. 98-524

  Title I - Vocational Education Assistance to the States
  Title II - Programs for Vocational Education Opportunities, including services and activities for the handicapped and disadvantaged
  Title III - Vocational Education Program Improvement, Innovation, and Expansion
  Title IV - National Programs, including Research (Part A) and Bilingual Vocational Training (Part E)
  Title VII - Women's Educational Equity
  Title VIII - Job Training Regulations

- Education of All Handicapped Children Act, P.L. 94-142
- Adult Education Act Amendments of 1984, P.L. 98-511
- Job Training Partnership Act, P.L. 97-300

State Sources

The situation with state funds is similar to that with federal funds. For example, state disadvantaged funds may be available to set up school reading labs and pay personnel to operate them. State rehabilitation services may have funding that applies to basic skills programs. Your state may have

targeted federal block grant monies for basic skills improvement. There may be state money for pilot programs. Again, state department of education personnel can help you target funding requests.

Foundations

Foundation sources are many and varied. Examples of foundations that may have funds applicable to basic skills programs include the following:

- Ford Foundation
- Kellogg Foundation
- Mott Foundation
- National Science Foundation

Once again, it is a matter of gearing the proposal to the foundation's priorities. A foundation's policies might not specifically support projects focusing on basic skills, but one of their priorities might apply to the kinds of students you have or to some aspect of your program.

For example, one of the Kellogg Foundation's current priorities is adult training and retraining. Certainly part of adult training and retraining involves the development of basic skills; if you have a student population made up of adults, there might be a basis for applying for such funds.

In general, it is not easy to gain access to foundation funding. Some foundations restrict their support to agencies in one geographic area. With some, it is especially hard to get a foot in the door the first time. Usually it takes a lot of lobbying, and competition for funds is high. However, once funded, it may be easier to obtain continued support from a foundation.

Many foundations require a short prospectus initially. If the prospectus interests them, the foundation then invites a full proposal.

BIL Sources

Business, industry, and labor (BIL) are other sources of potential support. Employers have a vested interest in your students' coming out of the vocational-technical program with strong basic skills. If you maintain positive working relationships with the BIL community, if you have developed a spirit of working together to produce productive members of the work force, you may have an ally that will be willing to help make a basic skills program possible.

Employers may be able to make contributions of equipment, materials, construction services, supplies, free loan of computer hardware and software, or even financial support.

NOTES

For additional information about instructional and teacher materials related to basic skills, you may wish to secure publications catalogs from the following organizations:

- Council for Basic Education
  725 Fifteenth Street, NW
  Washington, DC 20005

- Association for Supervision and
  Curriculum Development
  225 North Washington Street
  Alexandria, VA 22314

For additional information on basic skills materials, assessment, and diagnosis, you may wish to refer to one or more of the following supplementary references:

- Greenan, James P. Generalizable Mathematics Skills Assessment: User Manual. Springfield, IL: Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 1984.

  This document compares the reliability of teacher ratings, student self-ratings, and performance testing in assessing basic skills.

- Greenan, James P., and Powell, Jo Ann. Generalizable Mathematics Skills: Resource Directory. Springfield, IL: Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 1984. ED 248 344

  This directory provides an annotated bibliography of instructional and teacher materials related to mathematics, as well as a list of publishers.

- Dunn, James A.; Gray, Peter; and Martini, Elizabeth. Resource Guide: Teaching Basic Skills through Vocational Education. Ithaca, NY: Cornell University, Cornell Institute for Occupational Education, [1982].

  This document provides information on assessing student needs and judging readability of vocational materials, as well as sources of supplementary instructional materials.

- Educational Programs That Work

  Prepared by The Far West Laboratory for Educational Research and Development (San Francisco, CA), this is an annual catalog of approved exemplary programs in 12 categories, one of which is reading/language arts/mathematics/writing.

PART FOUR

IMPLEMENTATION AND EVALUATION

Chapter XII

IMPLEMENTING THE PROGRAM

Your program planning has been carefully and systematically done, and the following has been accomplished:

- The nature and extent of the problem have been accurately assessed.
- Alternative solutions, or program options, have been carefully examined in terms of such factors as students, staffing, facilities and equipment, materials, and costs.
- The groundwork has been laid for implementation, including securing funding, scheduling program development and implementation, defining staff responsibilities, establishing lines of communication, and obtaining public support for the program.
- Strategies have been planned for evaluating program effectiveness and for using evaluation results in program improvement.

Given that the above is true, then implementation of the program should go smoothly. What more can you do to ensure that the basic skills improvement program that you and your staff have planned has the greatest potential for success?

We have said before that the success of the program depends directly on effective leadership. In this chapter, we will look at several ways in which an administrator can provide that leadership:

- By establishing an administrative structure to facilitate change
- By fostering schoolwide commitment and high expectations
- By providing leadership for effective teaching
- By encouraging community support
- By building interdisciplinary cooperation

While some of the strategies discussed will focus on the role of the secondary school principal, it should be easy to see how administrators at any level can work toward achieving the same goals.

Establish a Structure for Change

Identifying a problem--in this case, vocational students' inadequate abilities in the basic skills--and planning a program to help correct the

problem imply change. And it is exactly this element--change--that is difficult for many educators to deal with.

Change can be threatening. It requires a person to leave behind old, comfortable structures and to venture into new ground. It may mean trying something new, difficult, and foreign. It may mean risking the exposure of one's own weaknesses. It may mean putting one's creativity on the line and risking failure.

You need to set up an administrative structure that makes change less threatening and, in fact, desirable. Such a structure requires mutual agreement, a conducive climate, resources, and rewards.

Mutual Agreement

First, there needs to be agreement between administration and faculty that there is a problem. This goes back to the planning phase; it is during that phase that you assess the problem and start to build awareness on the part of the faculty that the problem exists, is serious, and needs to be addressed.

There also needs to be agreement on the solution to the problem--the program that has been planned for basic skills improvement--and the roles and responsibilities of those involved in carrying it out. Through cooperative planning, you lay the groundwork for this kind of agreement. By involving the faculty in problem identification, assessment, and the other phases of planning, you should reach a point, prior to implementation, at which you can proceed with a common purpose.

Climate

Second, you need to create a climate in which people feel safe in trying the new, extending themselves, and risking failure. It needs to be understood that when students have low basic skills levels, it is a serious problem, one that will take time and a lot of hard work to correct. As with any new challenge, there will be failures along the way--innovations proposed that do not work as well as hoped, or programs in which the bugs need to be worked out before the desired results can be achieved.

It is important that you--and the faculty--understand this and that some degree of failure, occurring as the result of hard work and well-intentioned innovation, will be sanctioned. This is not to say, however, that you are expecting the program to fail; quite the contrary. The highest expectations for the program and for the students' potential success must prevail as a new program is implemented. But people must feel free to try, to fail without jeopardizing their position, and to try again, using another approach, along the road to success.

Resources and Rewards

Appropriate resources need to be made available to those who will implement the program. And those who truly commit themselves to the success of the program need to feel that their efforts will be rewarded.

Presumably, you will already have provided for any outside funding that is needed to operate the program as a whole. Those who will devote their time and energy to the development and operation of the program also need support, in terms of time, money, and recognition.

For example, teachers who will be developing instructional materials or otherwise helping to develop the program might be paid for time in the summer to do the work. If the work takes place during the school year, substitutes might be hired to give these teachers released time for their added responsibilities. Released time arrangements should be made on the basis of a written contract stating what the faculty member is to accomplish in the time allotted.

Another option is to arrange a reduced teaching load for teachers for the period during which they will have added responsibilities, such as coordinating development teams, consulting with content teachers, and so on.

Such provisions not only encourage teachers to devote their energies to the program, but they demonstrate that the administration is sufficiently committed to making the program work that it contributes real, tangible support to it.

Finally, faculty members should receive recognition for their contributions. The traditional rewards and incentives are promotion and tenure, and these should certainly be applied whenever possible and appropriate. Faculty should be invited to summarize their contributions to the program as part of the personnel review system that leads to professional advancement.

Public recognition is also very important. The contributions of personnel who helped to implement a successful program should be heralded among their peers--in professional association newsletters; in school newsletters and announcements; through positions of visible responsibility, such as staff training teams; and so on.

Foster Commitment and High Expectations

We are talking here about the inspirational and motivational role of the administrator. How do you get the staff of a school or a district or a college to buy into a program? To care? To believe that it really can work?

By Example

The first means is by setting an example through your own attitude and behavior. By demonstrating consistent, visible commitment to the basic skills

program, as well as a belief that the program can succeed, you can help the rest of the staff to adopt a similar attitude. People universally respond to others' expectations of them. It's the case of the self-fulfilling prophecy. Students whose teachers believe they can achieve tend to be more successful. Likewise, teachers whose administrators have high expectations of them tend to be more successful.

If you truly believe that the students can improve their basic skills and that the faculty can help them do it, that belief will be felt by the people involved in the program. It will be felt in your informal day-to-day contacts with people, in official memos and announcements, and in formal policies and standards. Hopefully, your own commitment will plant the seeds of commitment among the staff.

But your role doesn't end with mere belief and expressed commitment. Superficial commitment inevitably is seen through, and it undermines staff commitment to the program. A committed attitude must be reinforced by action. If you expect your staff to work hard in implementing the program, you must be willing to put forth the same kind of effort.

Through Support

Another means of motivating staff is through support--giving the right kind of support at the right time, as required for the task to be done and the people involved. Sometimes this involves being an advocate for the program and those who are implementing it. You may need to explain and defend the goals of the program and protect the staff from outside pressures or competing demands on their time and energy.

Sometimes your support will need to take the form of personal encouragement--a word of praise, a pat on the back, a suggestion or word of advice to help things run more smoothly. Teachers who will implement a new basic skills program need a sense of confidence. They need to feel that they are strong, competent teachers who have the ability to make the program work.

At other times your support should be given in the form of assistance. You might provide a teacher with the resources (e.g., clerical assistance, materials, supplies) or the information he or she needs to solve a problem. You might act as a linker, getting a teacher in touch with the right person in order to bring about a team effort. Or you might visit a teacher's class, observe his or her performance, and provide feedback or demonstrate another approach to help improve performance.

Through Accountability

We have talked about the "It's not my job" syndrome that sometimes stands in the way of successful program implementation. Before the program can really get off the ground, it must be accepted that basic skills improvement truly is everyone's job.

The surest way of driving home that point is to make each and every staff member at every level accountable for raising students' basic skills levels. You are responsible, other administrators are responsible, deans, department heads, teachers--everyone is accountable for the success of the program. Improvement of students' basic skills needs to be a stated goal--of the district, institution, department, individual teacher--by which success will be judged.

Through Communication

Finally, you can foster schoolwide commitment through an effective system of communication and sharing. Communication cannot be stressed enough. We will discuss additional strategies for fostering communication in conjunction with interdisciplinary cooperation. However, it deserves mention here because communication is so very necessary for the building of a sense of commitment to the program.

Among your most important tasks in program implementation are the promotion of information sharing and the establishment of a team approach to decision making and problem solving. You need to ensure that there are established channels of communication between you and other levels of staff and among the teachers involved in the program. And you need to ensure that those channels get used.

You lay the basis for communication by involving faculty in participatory planning. You need to build on that basis during implementation and to reinforce it as necessary. Make sure teachers are talking to each other. Make sure they have access to the information and human support they need. Make sure team meetings are taking place. Schedule general staff meetings frequently and encourage teamwork at the meetings.

Provide Leadership for Effective Teaching

Effective teachers are a critical element in improving students' basic skills. It is the teacher who creates the classroom climate, selects and uses instructional strategies, and interacts with students on a day-to-day basis. No one has more direct impact on the students. Part of your job as an administrator is to ensure that teachers are functioning as effectively as possible.

Providing leadership for effective teaching involves understanding--of the workings of your basic skills program and of the most effective strategies for teaching basic skills. Research has shown that a number of characteristics, which we will review here, are present in the most successful basic skills classrooms. As your program is implemented, you should be working with teachers to ensure that they are aware of these characteristics and that they are able to replicate them in their own classes.

In addition, you should ensure that school policies directly support effective teaching. For example, there should be clear guidelines protecting instructional time from such outside intrusions as intercom announcements, interruptions during class time, late entrances by students, and summoning of students for other purposes. There should also be clear and consistent policies regarding student behavior, including such issues as attendance, coming to class on time, deportment, and similar matters that affect how time in class is spent.

Time on Task

Time on task is one of those educational tenets about which we are apt to say, "Of course--everyone knows that." The more time students spend actively engaged in learning activities, the more they will learn. That makes sense. Unfortunately, no matter how obviously sound the principle may be, it tends to be ignored in far too many classrooms.

Studies of vocational classes have shown that a great proportion of students' time is spent on noninstructional activities, such as waiting for class to start, sitting, talking with friends, waiting while other students' work is checked, waiting for assignments or materials, listening to announcements, waiting for the bell to ring, and so on.

In effective programs, classes start on time and instruction continues until the bell rings. The vast majority of class time is spent on such activities as instruction, review, question-and-answer sessions, drill, guided small-group work, completion of written assignments, supervised seat work, and silent reading. A minimum of time is devoted to other activities, and intrusions are avoided.

Organization of Instruction

A structured instructional management system is an important factor for program effectiveness. Such a system is likely to include diagnostic/prescriptive approaches, a variety of teaching methods designed to correspond to students' learning styles, and a variety of instructional materials.

Further, the clarity of first-day planning and organizing is an important factor. The teacher who, on the first day of class, clearly sets forth for the students the course objectives and classroom ground rules and expectations, and who plans for such matters as seating, small-group work, and other classroom management matters, will have a better organized class in which more effective instruction will take place.

Climate and Control

A positive, democratic, and friendly climate in the classroom is extremely important for student achievement. When the focus is on constructive

activities, praise for skill achievement, positive reinforcement, and constructive criticism, students tend to respond positively and learn more. When, by contrast, the focus is on curbing disruptive behavior and maintaining discipline, or when such techniques as belittling, scolding, shouting at, or criticizing students are used, their performance suffers.

Interactive Instruction

Interactive instruction, in which all students are encouraged to take an active part in the learning process, has been associated with high achievement in reading and math instruction. Interactive teachers use such techniques as the following to engage their students:

- Give oral instructions for new work
- Discuss and review work that has been done
- Give immediate feedback
- Ask questions by calling on particular students
- Acknowledge correct answers and correct wrong ones in a supportive manner
- Relate new material to students' prior experience
- Introduce new vocabulary
- Make assignments and give information in a clear manner

Teachers should be encouraged to adopt as many interactive techniques as possible in working with students to improve their basic skills.

Assignment and Grouping of Students

It has been observed that students who achieve at the lowest level in the basic skills perform better in smaller classes with fewer distractions. This should be taken into account when assigning students to classes.

Further, instruction that occurs in small groups of three to seven students--or, in some situations, larger groups of eight or more students--has been found to be most effective for basic skills improvement. Teachers should be encouraged to use small-group instruction for some portion of their basic skills work. Classrooms used for basic skills instruction should be large enough to permit variable grouping of students, with room to work comfortably.

Another effective strategy in basic skills instruction is supervised seat work. On the other hand, a great amount of unsupervised seat work tends to contribute to low achievement. Effective teachers check students' work frequently and are apt to use individually prescribed learning activities based on assessment of students' needs.

Other Characteristics

A variety of other teaching strategies have been observed in studies of effective basic skills improvement programs. Sample 15 provides a partial listing. It is important that as you work with teachers in the implementation of the basic skills program, you visit classrooms, observe teachers in action, and provide feedback to help them develop a repertoire of teaching practices known to be effective in this context. If necessary, you might plan one or more staff development sessions to review such strategies and their place in the basic skills program.

Encourage Parent/Community Support

Parental and community support is present in virtually every existing successful basic skills improvement program. Research has shown that parents' interest and involvement are critical to their children's achievement in basic skills. The leadership they provide in the home affects the students' interest in improving their skills, their willingness to work hard for that improvement, their behavior in the classroom, and the amount they learn from their experiences in and out of school.

In addition to providing at-home support, parents and others from the community can contribute to a basic skills program in a variety of ways. Under the supervision of teachers, they can serve as volunteers in such roles as instructional aide, library aide, learning center aide, resource person, reading tutor, and so on.

Such voluntary involvement is most effective when it is initiated by the parents or community members themselves. As an administrator, you can actively encourage this kind of involvement.

Parents should be encouraged to participate in setting standards for improving students' performance. Open, two-way communication between home and school should be pursued by administrators and teachers alike. Such means as the following can help to establish open communication:

- Memos and telephone conversations to keep parents abreast of program activities and student progress
- Presentations at parent-teacher association meetings
- Invitations to help set up and equip new labs and centers (and similar overtures)

Many schools have also found that widespread support from business and industry and the community at large is available when schools make concerted efforts to improve their students' basic skills. Contributions in the form of donated time, equipment, guest speakers, or financial support all help the institution and the instructors to achieve the goal of better basic skills.

SAMPLE 15

EFFECTIVE TEACHING PRACTICES FOR BASIC SKILLS IMPROVEMENT

General

- Using clearly written basic skills objectives and informing students of the objectives
- Occupying a central role in the classroom--using strong leadership and a task-oriented approach and managing the class in a businesslike manner
- Doing adequate assessment and frequent evaluation of student progress
- Basing individual activities on assessment
- Asking direct questions related to academic areas
- Organizing learning around questions posed to the students and around specific tasks set for the students
- Asking questions near the students' ability levels in order to build on existing knowledge, foster success, and thus contribute to students' self-confidence and sense of themselves as successful learners
- Using the basic skills the students are striving to build as an example of correct behavior
- Being willing to meet with students for additional work
- Offering several different activities in a class period in order to develop speaking, listening, reading, and writing skills and to integrate these skills with other content being taught
- Discussing and reviewing classwork and outside assignments
- Using selective, token reinforcement of learning rather than frequent rewards, in order to help students develop a sense of self-worth and become less dependent on the teacher's response
- Using positive corrective feedback--praise and constructive criticism--in relation to academic work, but not in relation to nonacademic matters
- Using peer tutors
- Using volunteers and instructional aides for nonteaching tasks
- Using a variable grading system for remedial classes, to encourage effort and achievement by students with the lowest levels of skill

Reading

- Placing a lot of emphasis on reading, in all courses
- Having student read aloud

- Introducing and explaining new vocabulary
- Discussing what students read before they read it
- Relating current materials to lessons previously taught
- Using study guides for difficult reading assignments

Writing

- Teaching writing as a process, not a product. That is, emphasizing the prewriting stage (gathering information and planning), teaching during the act of writing, guiding students through such problems as false starts and digressions, and using real reader response as part of the postwriting stage
- Giving frequent writing assignments to provide ample opportunity for practice
- Using peer editing--students editing each other's work
- Requiring written answers on tests (as opposed to simply marking objective items) in content areas to reinforce the importance of writing as a tool in any subject

Oral Communication

- Providing a variety of activities involving development and practice of oral skills (e.g., question-and-answer sessions, oral presentations, narrated demonstrations, panel discussions, rap sessions, brainstorming, role-plays, simulations)
- Having students take responsibility for real-life tasks involving oral skills (e.g., making telephone calls, interviewing people, ordering supplies, delivering messages)
- Using examples of good oral skills (e.g., guest speakers, films, and television news shows) and discussing their effectiveness
- Using negative examples (e.g., specially prepared audio- or videotapes) and critiquing them
- Tying in with extracurricular opportunities for oral communication, such as vocational student organization activities, debate, and drama

Mathematics

- Focusing on using math for solving problems rather than computation alone
- Using occupationally realistic problem-solving activities
- Having students demonstrate how they work problems in order to pinpoint difficulties
- Using manipulative skill activities to demonstrate mathematical concepts
- Using visual aids (e.g., charts, diagrams) and tangible objects to demonstrate mathematical concepts

Help from the community will be obtained through your efforts at linkage, through your participation in existing networks, and through a well-planned public relations campaign for your program.

Build Interdisciplinary Cooperation

Finally, we come to one of the most important roles of the administrator in getting a basic skills program off the ground--and possibly one of the most difficult: building a working partnership among all the staff who will be involved in making the program work.

Unfortunately, there is no simple formula, no single approach that will work in every situation. Some schools that have been successful in building real cooperation between vocational and academic faculty have achieved it only through years of patient and persistent effort. On the other hand, there surely are institutions where a sense of shared commitment and cooperation already exists. In these happy circumstances, the task is to apply the existing spirit of cooperation to the task of establishing an interdisciplinary basic skills program.

There are, however, a few general guidelines that apply in most any situation, which can be tailored to your particular position.

Take Advantage of Networks

Cooperation begins at the administrative level. You can't expect teachers from different departments (who in many cases report to different department heads and in some cases never see each other) to cooperate in working toward a common goal if the administrators to whom they report do not pave the way in terms of policy, expectations, and support.

If you are going to build bridges between academic and vocational faculty, you must first build bridges among those who administer the academic and occupational programs. You will need to meet with other administrators, talk about basic skills and their place in the curriculum, and agree on priorities and ways to articulate efforts.

The networks, both formal and informal, are there at every administrative level. For example, you can tap into meetings of superintendents, administrators, district principals, or supervisors, to name just a few. Professional meetings and conferences provide additional opportunities.

Informal networks tend to be more elusive, but they, too, are there, in the many casual, extracurricular, and quasi-professional contacts you have with other educators. Taking advantage of informal networks takes the same kind of creativity as building other types of linkages.

Be Creative in Building Linkages

The approaches to building linkages are as many and varied as the people involved. Here are just a few examples of creative strategies that have been used successfully by administrators of existing programs.

One district furthered the cause of vocational-academic cooperation by assigning a vocational educator to the role of supervisor for academic teachers. An explicit goal of this supervisor was to develop cooperation between the two faculties.

So often, teachers from different departments go their separate ways simply because they don't know each other and don't realize they have anything in common. One school dealt with this problem by assigning teachers to three separate faculty rooms, and to specific desks in those rooms, to create a deliberate mix of general and vocational teachers. This approach has potential for helping to break down teacher cliques and providing opportunities for ordinary human exchange of ideas and opinions.

Setting up joint planning committees for basic skills, made up of instructors from every discipline involved, is another approach that serves the same purpose. As teachers work together toward common goals, alliances naturally form. The participants are apt to realize that everyone has something to offer and that everyone can benefit from one another's contributions.

Some administrators have found that extracurricular activities can provide access to informal networks they can use in building interdisciplinary cooperation. For example, a principal of an area vocational school might attend the home high schools' football games. This demonstrates interest in the schools whose general education departments also serve vocational students. It also develops a sense of colleaguiality and gives the principal opportunities to form informal alliances with other administrators and teachers.

Another approach is for the vocational principal to invite academic principals to vocational graduation ceremonies or to other events sponsored by the occupational programs. Additional exposure can be given to specific programs by having students provide a service to the academic or general education department--for example, arranging to have students in the cooking and baking program host high school dinners.

While some of these strategies seem to be unrelated to basic skills, they do serve a much needed purpose of getting people from different departments together so that they can discover ways of working together. The point is that you, as an administrator, need to identify natural opportunities for building linkages within the workings of your institution or district.

Set Up Communication Systems

An interdisciplinary approach requires that everyone involved communicate. Instructors need to work together in planning and implementing the

program, assessing students' skills, providing needed instruction, coordinating their work with the students, determining student progress, evaluating the program, and improving it as necessary.

Those who staff the program need to communicate with those at home and in the community, and vice versa. Faculty and administrators must keep each other informed. Teachers need access to as much information as possible about their students' past and present skills. In short, information has to flow in every direction.

You can work toward effective communication by setting up channels for sharing information and by setting an example through your own open, direct, two-way communication. You should make sure that plans are in place for supplying needed information; giving timely feedback; keeping colleagues, superiors, and support staff informed and up-to-date; staying in contact with students' families; and so on. Day-to-day casual interaction with teachers and discussions at staff meetings provide opportunities for gauging whether the channels are being used effectively.

Chapter XIII

CRITERIA FOR EVALUATING PROGRAM EFFECTIVENESS

In chapter 7, we discussed the need for planning strategies for program evaluation, including formative evaluation, summative evaluation, and strategies for follow-up. In this chapter, we will look at some specific criteria for evaluating the effectiveness of your basic skills improvement program--that is, conducting summative evaluation.

Sample criteria are provided in this chapter for evaluating mathematics, writing, oral communication, and reading programs. Of course, the general criteria you would use for evaluating any educational program also apply; here we are focusing on the standards for basic skills programs in particular. Your state department of education may be a good source of additional information on standards for developing effective basic skills programs.

Mathematics. The National Council for Supervisors of Mathematics has developed both criteria against which to measure the effectiveness of mathematics programs and a definition of basic math skills. Other organizations have developed similar criteria. Samples 16 and 17 present the definition of basic math skills and a list of program standards adapted from two sources.

Writing. Standards for basic skills writing programs were developed by the National Council of Teachers of English and are presented in sample 18. These standards were developed for use by states and school districts establishing comprehensive literacy plans; however, their application to an occupational basic skills improvement program is quite clear.

Oral communication. Standards for effective oral communication programs were developed by the American Speech-Language-Hearing Association and the Speech-Communication Association. These standards are presented in sample 19.

Reading. The Right to Read Office of the U.S. Office of Education (now the U.S. Department of Education) developed an assessment scale to use in examining existing reading programs and proposals for developing new ones. This scale (see sample 20 for scale items) provides a number of criteria that may be used in evaluating the effectiveness of a reading skills improvement program.

SAMPLE 16

DEFINITION OF BASIC MATHEMATICAL SKILLS

Ten Basic Skill Areas

Problem solving. Learning to solve problems is the principal reason for studying mathematics. Problem solving is the process of applying previously acquired knowledge to new and unfamiliar situations. Solving word problems in texts is one form of problem solving, but students also should be faced with non-textbook problems. Problem-solving strategies involve posing questions, analyzing situations, translating results, illustrating results, drawing diagrams, and using trial and error. In solving problems, students need to be able to apply the rules of logic necessary to arrive at valid conclusions. They must be able to determine which facts are relevant. They should be unfearful of arriving at tentative conclusions, and they must be willing to subject these conclusions to scrutiny.

Applying mathematics to everyday situations. The use of mathematics is interrelated with all computation activities. Students should be encouraged to take everyday situations, translate them into mathematical expressions, solve the mathematics, and interpret the results in light of the initial situation.

Alertness to the reasonableness of results. Due to arithmetic errors or other mistakes, results of mathematical work are sometimes wrong. Students should learn to inspect all results and to check for reasonableness in terms of the original problem. With the increase in the use of calculating devices in society, this skill is essential.

Estimation and approximation. Students should be able to carry out rapid approximate calculations by first rounding off numbers. They should acquire some simple techniques for estimating quantity, length, distance, weight, etc. It is also necessary to decide when a particular result is precise enough for the purpose at hand.

Appropriate computational skills. Students should gain facility with addition, subtraction, multiplication, and division with whole numbers and decimals. Today it must be recognized that long, complicated computations will usually be done with a calculator. Knowledge of single-digit number facts is essential and mental arithmetic is a valuable skill. Moreover, there are everyday situations that demand recognition of, and simple computation with, common fractions. Because consumers continually deal with many situations that involve percentage, the ability to recognize and use percents should be developed and maintained.

Geometry. Students should learn the geometric concepts they will need in order to function effectively in the three-dimensional world. They should have knowledge of concepts such as point, line, plane, parallel, and perpendicular. They should know basic properties of simple geometric figures,

particularly those properties that relate to measurement and problem-solving skills. They also must be able to recognize similarities and differences among objects.

Measurement. As a minimum skill, students should be able to measure distance, weight, time, capacity, and temperature. Measurement of angles and calculations of simple areas and volumes are also essential. Students should be able to perform measurement in both metric and customary systems using the appropriate tools.

Reading, interpreting, and constructing tables, charts, and graphs. Students should know how to read and draw conclusions from simple tables, maps, charts, and graphs. They should be able to condense numerical information into more manageable or meaningful terms by setting up simple tables, charts, and graphs.

Using mathematics to predict. Students should learn how elementary notions of probability are used to determine the likelihood of future events. They should become familiar with how mathematics is used to help make predictions such as election forecasts.

Computer literacy. It is important for all citizens to understand what computers can and cannot do. Students should be aware of the many uses of computers in society, such as their use in teaching/learning, financial transactions, and information storage and retrieval. The "mystique" surrounding computers is disturbing and can put persons with no understanding of computers at a disadvantage. The increasing use of computers by government, industry, and business demands an awareness of computer uses and limitations.

SOURCE: Adapted from National Council of Supervisors of Mathematics, "Position Paper on Basic Mathematical Skills," in What Do We Know About Standards for Effective Basic Skills Programs? (Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education, Basic Skills Improvement Program, 1979), p. 2.

SAMPLE 17

STANDARDS FOR BASIC SKILLS MATHEMATICS PROGRAMS

Content

1. The mathematics program is based on a valid definition of basic mathematical skills [see sample 16].
2. Selection of mathematical skills addressed by the program is also based on an assessment of the skills required for the specific occupational area.
3. A tendency to emphasize computation while neglecting the other nine skill areas [see sample 16] is avoided.
4. The program relates concept development, skill building, and problem solving, with an attempt to balance the three components.

Program Planning

5. The planning process has provided for input by mathematics teachers and specialists, as well as by state and local professional mathematics education organizations and representatives of the community.
6. The program builds on existing support structures rather than establishing competing ones. Instruction is coordinated with that in other programs--such as Title I, special education, community education, bilingual education, and locally funded programs--to avoid conflict or competition among programs.
7. The program is designed to bring about improved instruction in basic skills in the classroom and avoids infusing another layer of bureaucracy that would be counterproductive to achieving that goal.
8. The program is designed in such a way as to avoid placing an extra management burden on teachers. To the extent that record keeping and management are increased, instructional staff are also increased.
9. The program addresses both short-range and long-range priorities in improving basic math skills.
10. The program receives the full support of building and district line administrators.

Instruction

11. Instructional strategies provide options to meet students' varying learning styles (e.g., learning centers, contracts, tutorial sessions, individual and small-group projects, games, simulations, community-based activities, and drill and practice).
12. Teachers use the full range of activities and materials available, including objects the students can actually handle.
13. Teachers receive adequate staff development to enable them to carry out the program effectively.
14. A positive, nonthreatening atmosphere, indicative of the general attitude of the institution or district, prevails in the classrooms.

Evaluation of Student Progress

15. Student evaluation is not based solely on standardized tests. Other alternatives--such as criterion-referenced tests, competency tests, and open ended assessments (observations, interviews, and manipulative tasks)--are used.
16. Testing methods and instruments have been chosen to guard against cultural and sex bias.

SOURCE: Adapted from National Council of Supervisors of Mathematics, "Position Paper on Basic Mathematical Skills"; and Ross Taylor, "Report of the Kansas City Coordinating Conference," in What Do We Know About Standards for Effective Basic Skills Programs? pp. 1-4, 5-11.

SAMPLE 18

STANDARDS FOR BASIC SKILLS WRITING PROGRAMS

Operational Definition of Writing

Writing is the process of selecting, combining, arranging, and developing ideas in effective sentences, paragraphs, and often, longer units of discourse. The process requires the writer to cope with a number of variables: method of development (narrating, explaining, describing, reporting, and persuading); tone (from very personal to quite formal); form (from a limerick to a formal letter to a long research report); purpose (from discovering and expressing personal feelings and values to conducting the impersonal "business" of everyday life); possible audiences (oneself, classmates, a teacher, "the world"). Learning to write and to write increasingly well involves developing increasing skill and sensitivity in selecting from and combining these variables to shape particular messages. It also involves learning to conform to conventions of the printed language, appropriate to the age of the writer and to the form, purpose, and tone of the message.

Beyond the pragmatic purpose of shaping messages to others, writing can be a means of self-discovery--of finding out what we believe, know, and cannot find words or circumstances to say to others. Writing can be a deeply personal act of shaping our perception of the world and our relationships to people and things in that world. Thus, writing serves both public and personal needs of students, and it warrants the full, generous and continuing effort of all teachers.

Program Standards

An effective basic skills program in writing has the following characteristics:

Teaching and Learning

1. There is evidence that knowledge of current theory and research in writing has been sought and applied in developing the writing program.
2. Writing instruction is a substantial and clearly identified part of an integrated English language arts curriculum.
3. Writing is called for in other subject matters across the curriculum.
4. The subject matter of writing has its richest source in the students' personal, social, and academic interests and experiences.
5. Students write in many forms (e.g., essays, notes, summaries, poems, letters, stories, reports, scripts, journals).
6. Students write for a variety of audiences (e.g., self, classmates, the community, the teacher) to learn that approaches vary as audiences vary.
7. Students write for a wide range of purposes (e.g., to inform, to persuade, to express the self, to explore, to clarify thinking).
8. Class time is devoted to all aspects of the writing process: generating ideas, drafting, revising, and editing.
9. All students receive instruction in both (a) developing and expressing ideas and (b) using the conventions of edited American English.
10. Control of the conventions of edited American English (supporting skills such as spelling, handwriting, punctuation, and grammatical usage) is developed primarily during the writing process and secondarily through related exercises.

SOURCE: Adapted from National Council of Teachers of English, "Standards for Basic Skills Writing Programs," in What Do We Know About Standards for Effective Basic Skills Programs? pp. 12-14.

11. Students receive constructive responses--from the teacher and from others--at various stages in the writing process.

12. Evaluation of individual writing growth--

    a. is based on complete pieces of writing;

    b. reflects informed judgments, first about clarity and content, and then about conventions of spelling, mechanics, and usage; and

    c. includes regular responses to individual pieces of student writing, as well as periodic assessment measuring growth over a period of time.

Support

13. Teachers with major responsibility for writing instruction receive continuing education reflecting current knowledge about the teaching of writing.

14. Teachers of other subjects receive information and training in ways to make use of and respond to writing in their classes.

15. Parent and community groups are informed about the writing program and about ways in which they can support it.

16. School and class schedules provide sufficient time to ensure that the writing process is thoroughly pursued.

17. Teachers and students have access to and make regular use of a wide range of resources (e.g., library services, media, teaching materials, duplicating facilities, supplies) for support of the writing program.

Program Evaluation

18. Evaluation of the writing program focuses on pre- and post-program sampling of complete pieces of writing, utilizing a recognized procedure (e.g., nolistic rating, the Diederich scale, primary trait scoring) to arrive at reliable judgments about the quality of the program.

19. Evaluation of the program might also include assessment of a sample of student attitudes; gathering of pertinent quantitative data (e.g., frequency of student writing, time devoted to writing activities); and observational data (evidence of prewriting activities, class anthologies, writing folders, and student writing displays).

SAMPLE 19

STANDARDS FOR BASIC SKILLS ORAL COMMUNICATION PROGRAMS

Definition of Oral Communication

Oral communication is the process of interacting through heard and spoken messages in a variety of situations. Effective oral communication is a learned behavior, involving the following processes:

- Speaking in a variety of educational and social situations--Speaking involves, but is not limited to, arranging and producing messages through the use of voice, articulation, vocabulary, syntax, and nonverbal cues (e.g., gesture, facial expression, vocal cues) appropriate to the speaker and listeners.
- Listening in a variety of educational and social situations--Listening involves, but is not limited to, hearing, perceiving, discriminating, interpreting, synthesizing, evaluating, organizing, and remembering information from verbal and nonverbal messages.

Basic Assumptions

1. Oral communication behaviors of students can be improved through direct instruction.
2. Oral communication instruction emphasizes the interactive nature of speaking and listening.
3. Oral communication instruction addresses the everyday communication needs of students and includes emphasis on the classroom as a practical communication environment.
4. There is a wide range of communication competence among speakers of the same language.
5. Communication competence is not dependent upon the use of a particular form of language.
6. A primary goal of oral communication instruction is to increase the students' repertoire and use of effective speaking and listening behaviors.
7. Oral communication programs provide instruction based on a coordinated developmental continuum of skills, preschool through adult.
8. Oral communication skills can be enhanced by using parents, supportive personnel, and appropriate instructional technology.

Program Standards

An effective oral communication program has the following characteristics:

Teaching/Learning

1. The oral communication program is based on current theory and research in speech and language development, psycholinguistics, rhetorical and communication theory, communication disorders, speech science, and related fields of study.
2. Oral communication instruction is a clearly identifiable part of the curriculum.
3. Oral communication instruction is systematically related to reading and writing instruction and to instruction in the various content areas.
4. The relevant academic, personal, and social experiences of students provide core subject matter for the oral communication program.

SOURCE: Adapted from American Speech-Language-Hearing Association and the Speech-Communication Association, "Standards for Effective Oral Communication Programs," in What Do We Know About Standards for Effective Basic Skills Programs? pp. 15-19.

5. Oral communication instruction provides a wide range of speaking and listening experiences, in order to develop effective communication skills appropriate to the following:
   a. A range of situations (e.g., informal to formal, interpersonal to mass communication)
   b. A range of purposes (e.g., informing, learning, persuading, evaluating messages, facilitating social interaction, sharing feelings, indulging in imaginative and creative expression)
   c. A range of audiences (e.g., classmates, teachers, peers, employers, family, community)
   d. A range of communication forms (e.g., conversation, group discussion, interview, drama, debate, public speaking, oral interpretation)
   e. A range of speaking styles (e.g., impromptu, extemporaneous, and reading from manuscript)
6. The oral communication program provides class time for systematic instruction in oral communication skills (e.g., critical listening; the selection, arrangement, and presentation of messages; the giving and receiving of constructive feedback; nonverbal communication).
7. The oral communication program includes development of adequate and appropriate language, articulation, voice, fluency, and listening skills necessary for success in educational, career, and social situations through regular classroom instruction, cocurricular activities, and speech-language pathology and audiology services.
8. Oral communication instruction encourages and provides appropriate opportunities for the reticent student (e.g., one who is excessively fearful in speaking situations) to participate more effectively in oral communication.

Support

9. Oral communication instruction is provided by individuals adequately trained in oral communication and/or communication disorders, as evidenced by appropriate certification.
10. Individuals responsible for oral communication instruction receive continuing education on theories, research, and instruction relevant to communication.
11. Individuals responsible for oral communication instruction participate actively in conventions, meetings, publications, and other activities of communication professionals.
12. The oral communication program includes a system for training classroom teachers to identify and refer students who do not have adequate listening and speaking skills, or who are reticent, to those qualified individuals who can best meet the needs of the student through further assessment and/or instruction.
13. Teachers in all curriculum areas receive information on appropriate methods for (a) using oral communication to facilitate instruction and (b) using the subject matter to improve students' oral communication skills.
14. Teachers in all curriculum areas receive education and training with appropriate materials for effective involvement in the oral communication program.
15. Parent and community groups are informed about and provided with appropriate materials for effective involvement in the oral communication program.
16. The oral communication program is facilitated by the availability and use of appropriate instructional materials, equipment, and facilities.

Assessment and Evaluation

17. The oral communication program is based on a schoolwide assessment of the speaking and listening needs of students.
18. Speaking and listening needs of students will be determined by qualified personnel using appropriate evaluation tools for the skills to be assessed and the educational levels of students being assessed.
19. Evaluation of student progress in oral communication is based upon a variety of data, including observations, self-evaluations, listeners' responses to messages, and formal tests.
20. Evaluation of students' oral communication skills encourages, rather than discourages, students' desires to communicate, by emphasizing those behaviors that students can improve, thus enhancing their ability to do so.
21. Evaluation of the total oral communication program is based on achievement of acceptable levels of oral communication skills, as determined by continual monitoring of student progress in speaking and listening, and use of standardized and criterion-referenced tests, audience-based rating scales, and other appropriate instruments.

SAMPLE 20

STANDARDS FOR BASIC SKILLS READING PROGRAMS

Reading Program Assessment-Scale Items

Planning and Management

1. The program was derived from data on (a) deficits in student's performance; (b) a variety of instructional approaches and instructional techniques; (c) the way students were grouped; (d) the instructional materials; (e) the support personnel; (f) the physical facilities; (g) student's dislike toward reading; (h) the existing diagnostic-prescriptive procedures; (i) the extent of community involvement; and (j) an information control and communications component, provided and kept up-to-date for the program.

2. The following people were involved in planning: (a) classroom teachers; (b) parents and other concerned adults; (c) principal, director, other staff members; (d) school or district reading specialists; and (e) central office administration.

3. The management included (a) a time-task allocation chart, (b) an itemized budget analysis, and (c) staff development inservice training.

Goals and Objectives

4. A variety of interested persons had an opportunity to contribute to program goals, including (a) teachers, (b) principal/director, (c) parents, (d) the school or district reading specialist(s), (e) students, (f) other staff members, and (g) community members.

5. A comprehensive set of goals and specific instructional objectives have been formulated to meet the following criteria:

   a. Outcome statements are derived from needs assessment findings.

   b. Accomplishment of each performance objective is absolutely essential to student reading-score improvement.

   c. Accomplishment of each process objective is absolutely essential to student reading-score improvement.

   d. The amount of time spent on any task in the program is directly related to the importance of its associated objectives.

   e. Projected outcomes and stated objectives adequately cover the cognitive areas essential to reading improvement (e.g., word recognition, comprehension).

   f. Projected outcomes and stated objectives adequately cover the affective areas essential to reading improvement (e.g., requesting additional reading materials, increased library participation, decreased absenteeism).

   g. Projected outcomes and stated objectives adequately cover the psychomotor area (e.g., manipulative and motor skills).

   h. Objectives are evaluated on an interim basis (e.g., checked at designated times or intervals).

Instruction

6. The following tasks are done by the staff:

   a. Screening or diagnostic survey instruments are used to locate each student's major strengths and weaknesses in language and reading growth.

   b. Each student's program is designed to determine the best learning style for his/her difficulty, and learners are grouped differently for instruction in each skill area according to their varying levels of skill attainment and appreciation.

SOURCE: Adapted from U.S. Office of Education, Right to Read Office, "That All May Read," Reading Program Assessment Scale, in What Do We Know About Standards for Effective Basic Skills Programs? pp. 28-37.

c. Whole-class instruction is used.

d. Each student's attitude toward reading is gauged by observations and quizzes or assessments.

e. Assessments are made to determine whether speech and reading difficulties are caused by linguistic interference from another language or dialect.

7. The staff provides instruction addressing language and reading skills through (a) reading comprehension/word recognition and (b) verbal expression (written/oral).

8. The staff uses a variety of reading approaches, including (a) meaning emphasis, (b) linguistics, (c) modified alphabet, (d) language experience (building language skills from students' everyday experience)/responsive environment, (e) programmed learning, and (f) individualized reading.

9. The staff uses different methods and techniques for teaching reading, including (a) programmed instruction, (b) instructional TV/taped listen-and-look techniques, and (c) discussion groups and gaming/simulation.

Staff

10. Varying types of staff are used in support of the reading program, including (a) professional classroom personnel (credentialed); (b) team teachers or specialists, paraprofessional aides, and student aides or peer aides to assist the classroom teacher; and (c) central office administrative/supervisory personnel and special resource personnel (diagnostician, school psychologist, reading consultant, other specialists) to assist the program.

11. Staff and support services personnel have instructional competence; in other words:

a. They are familiar with different linguistic approaches to reading.

b. They understand the development of early language and perceptual skills.

c. They are aware of and know how to use varied instructional techniques.

d. They know how to meet the needs of the student with a special linguistic background.

e. They recognize the range of student attitudes toward school.

f. They engage in joint educational planning to achieve performance objectives.

g. They participate in activities that are geared toward professional growth (e.g., conferences, meetings, university/college classes).

Staff Development

12. The inservice education program is broadly conceived and continually utilized, as follows:

a. The majority of the staff participated in the development of the program.

b. Outside consultants and technical assistants were used in the development of the program.

c. The inservice program is task- and needs-oriented.

d. The majority of the staff attends the inservice program activities.

Materials and Facilities

13. The educational setting is conducive to meeting stated objectives; in other words:

a. Space is available that is suitable for instructional and assessment activities by individuals, small groups, and large groups.

b. There is adequate lighting in classroom and study areas.

c. There are safeguards for the control of noise.

d. Services are provided to remediate the physical factors that reduce the student's learning potential.

14. The instructional materials are appropriate to the instructional objectives of the reading program, as well as to the developmental needs of the learners.

15. The instructional materials are varied and include (a) developmental reading instruction materials; (b) reading games, devices, and programmed aids; (c) free, independent recreative reading materials; (d) audiovisual instructional materials; and (e) teacher-made instructional reading aids.

16. The school library, classroom library, or multimedia center functions as an integral part of the reading instructional program, and services include materials for individualized, developmental, and remedial reading.

Leadership Development

17. The administrator's knowledge and skills related to the provision and supervision of reading skills programs are being enlarged through (a) site visits to known exemplary programs; (b) attendance at special training seminars or workshops; (c) personal study of reading programs; (d) attendance at state, regional, or national reading conferences; and (e) visits within the school made during reading instruction.

18. The reading specialist's knowledge and skills related to the provision and supervision of reading skills programs are being enlarged through (a) site visits to known exemplary programs; (b) attendance at special training seminars or workshops; (c) personal study of reading programs; (d) earning of college or university credits related to reading; (e) attendance at state, regional, or national reading conferences; and (f) visits within the school made during reading instruction.

19. Materials designed to improve the effectiveness of staff development offerings related to reading are prepared and/or demonstrated.

Community Involvement

20. Representatives of parents and the general community participated in the following activities as the reading program was developed and implemented: (a) needs assessment, (b) program planning, (c) program implementation, and (d) program evaluation.

21. Parents and the general community were kept aware and informed through (a) a newsletter, (b) announcements in the mass media, (c) special community meetings, (d) parent/adult classroom visitations.

22. Community members were recruited and trained as tutors or volunteer aides to assist with reading instruction.

23. Community people served as interpreters or liaisons to community groups.

Program Evaluation

24. Evaluation of the reading program is being carried out as an ongoing function; in other words:

    a. Written evaluation results are returned to teachers on a systematic basis.

    b. Teachers are provided with assistance in interpreting evaluation data.

    c. In the evaluation, actual student outcomes are compared with intended outcomes (objectives).

    d. In the evaluation, actual teacher outcomes are compared with intended outcomes (objectives).

    e. The evaluation of program process objectives compares implemented processes with intended processes.

    f. The evaluation assesses the degree of both process and pre-existing variables that contribute to the program outcomes.

    g. Evaluation reports are prepared for both the technical staff and community members and are disseminated to their respective audiences.

25. Information used in evaluation of student progress or program effectiveness comes from a variety of sources and techniques, including (a) classroom records, (b) teacher-developed tests and worksheet exercises, (c) standardized reading tests, and (d) criterion-referenced tests.

26. Reading evaluation includes an assessment of the extent to which students use the skills they possess.

27. Teachers' competence in and attitudes toward reading instruction are assessed through (a) measures of teacher attitudes and (b) measures of teacher competence in and knowledge of the teaching of reading.

Chapter XIV

SUMMARY

In this guide, we have reviewed background on basic skills programs and guidelines for planning and implementing a program to improve basic skills in a department, institution, district, or state.

We considered various program types, including compensatory, support-oriented, and institutional; staffing structures, including integrated, nonintegrated, and combination; and a variety of approaches being used in existing programs.

We examined elements of effective planning and a model planning process, including assessment, examination of alternative solutions, implementation, and evaluation. Factors to consider in program planning were examined in some detail: students, staffing, facilities, equipment, materials, and funding.

And finally, we reviewed guidelines for implementing and evaluating a basic skills improvement program.

Now the challenge is yours. If basic skills levels are a problem in your setting--as they are in most--then it is up to you to mobilize your staff to examine the problem, consider the options and available resources, and plan a course of action.

Basic skills improvement is not an easy goal to achieve, but the rewards of success extend far. Your serious and committed efforts can help to open doors for the next generation of learners.

If you need additional help, there are many excellent sources of information you can turn to. Some have been noted in optional activities; others are listed on the inside back cover of this guide.

For additional information on implementing and administering effective basic skills programs, you may wish to refer to one or more of the following references:

- Vocational Studies Center, University of Wisconsin. Basic Skills Improvement: A Handbook for Reading, Math, Writing and Oral Communications. Arlington, VA: American Vocational Association, 1984. ED 241 699

  Designed for use by teachers with or without experience in teaching basic skills, this handbook provides a wealth of information and strategies for helping students improve their basic skills.

- Wallace, Daisy G., ed. Developing Basic Skills Programs in Secondary Schools. Alexandria, VA: Association for Supervision and Curriculum Development, 1982. ED 216 449

  This reference includes excellent chapters on teaching language, oral communication, reading, writing, mathematics, and basic skills in general, as well as several on providing leadership for effective basic skills programs.

- Burke, Fred G.; Ruh, Gustav, H.; and Havrilesky, Catherine. Using Research to Develop Successful Basic Skills Improvement Programs. Trenton, NJ: New Jersey State Department of Education, Division of School Programs, 1980. ED 193 262

  The authors of this document have reviewed research data relevant to basic skills programs and organized the findings in terms of classroom, administration, school climate, and parent/community involvement. They present many practical suggestions for improving the effectiveness of basic skills programs in regard to these four areas.

For additional information on standards for evaluating a basic skills improvement program, you may wish to contact one of the following people at your state department of education:

- Reading program director
- Evaluation and/or assessment program director
- Basic skills program director

In addition, you may wish to refer to the following document:

- What Do We Know About Standards for Effective Basic Skills Programs? Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education, Basic Skills Improvement Program, 1979. ED 180 016

  In addition to the standards that have been reprinted as samples in chapter 13 of this guide, this document includes

a discussion of the concerns of mathematics educators about the process of developing state plans for basic skills, issues and problems in the teaching and learning of basic mathematical skills, and guidelines for the professional preparation of reading teachers.

Additional Recommended References

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