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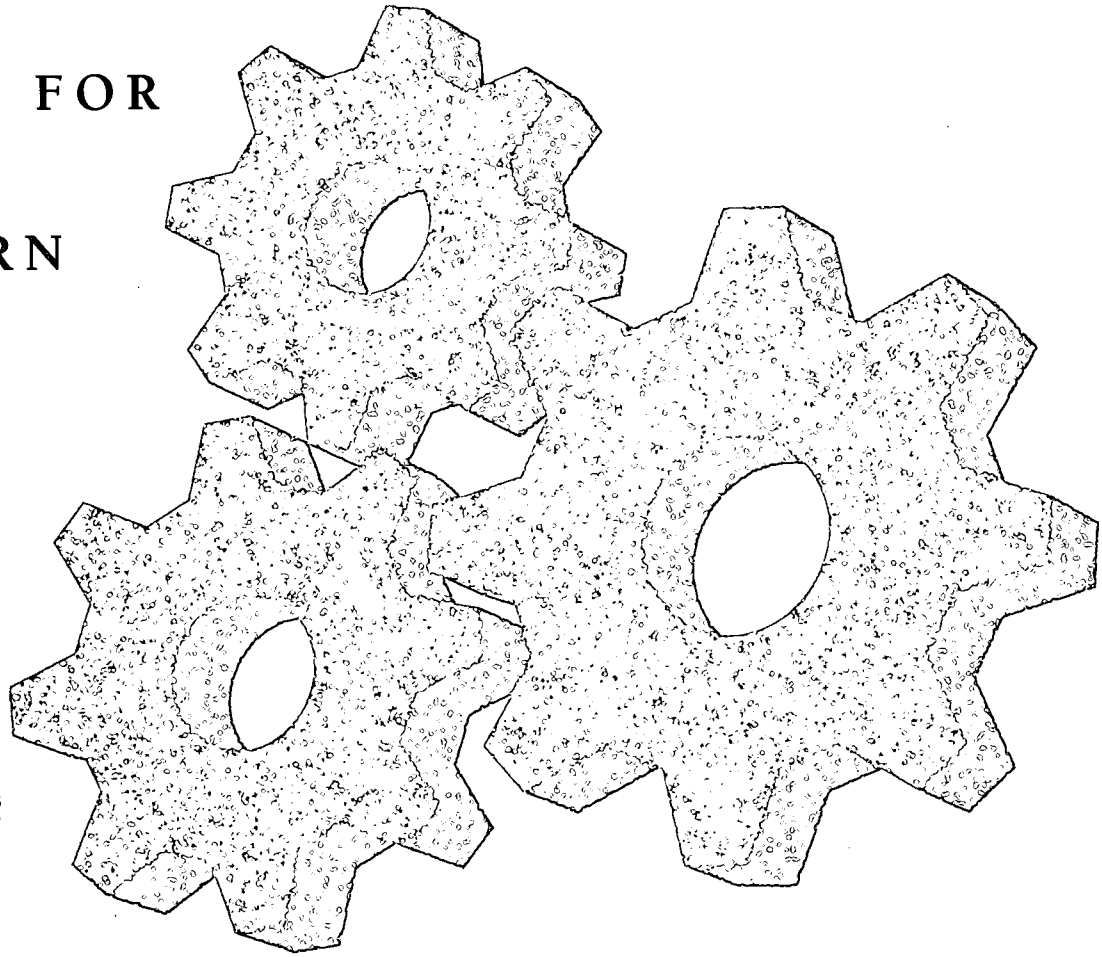
ABSTRACT

The U.S. problem of youth passing through school without a clear educational purpose has been compounded in the South by a variety of factors. Ways in which these transitions can be smoothed are reported in this paper. All children are capable of academic success, including some level of post-secondary education. The chances for realizing such success are much greater if young people experience education as a "seamless" path rather than a series of bumpy transitions. Chapter 1 "The Challenge," lays out the moral and economic challenges that require a shift in current approaches and entailing a push for academic achievement for all. Chapter 2, "Moving Toward Collective Responsibility," puts forward an overview of the special role of middle schools and community colleges. Chapter 3, "Pieces of the Puzzle," discusses the fundamental elements required of schools and colleges if they are to provide a seamless path, particularly for disadvantaged young people. Model approaches are described as seeds for crafting local approaches. Chapter 4, "Tying It All Together," offers insights from people who have initiated efforts at school change and it discusses lessons from other community-wide educational partnerships. Appendices include a resource list, selected sources, and Project Step: Outreach Services Model. (EMK)

WALKING THE TALK

INCREASING EDUCATIONAL OPTIONS FOR SOUTHERN YOUTH



A BACKGROUND PAPER

MDC

ALLIANCE FOR ACHIEVEMENT

MDC works to expand the economy, develop the workforce, and increase per capita income in communities across the country, with a special focus on the South. Established in 1967 to help North Carolina make the transition from an agricultural to an industrial economy and from a segregated to an integrated workforce, MDC has spent the last 30 years publishing research and developing programs to strengthen the workforce, foster economic development, and remove the barriers between people and jobs. Since its 1988 publication of *America's Shame, America's Hope*, a study of how the educational reform movement failed at-risk youth, MDC has launched several projects to assist middle schools, high schools, and community colleges with the strategic planning, leadership development, and capacity building they need to increase educational and career options for low-income and minority youth.

The Alliance for Achievement set out in 1992 on a four-year quest to raise the academic achievement, college-going rate, and career opportunities of low-income and minority students in economically distressed communities throughout the South. Funded by DeWitt Wallace-Reader's Digest Fund, The Pew Charitable Trusts, and BellSouth Foundation, the Alliance launched collaborative "school-to-college-and-career" initiatives in six communities, managed by teams from local middle schools, high schools, and community colleges. Over the life of the project, team members helped forge partnerships among schools and employers on behalf of four objectives: more rigorous curricula, better career education, more parental involvement, and more effective academic and career guidance. The funding of the Alliance program ended in late 1996, but the Alliance-inspired teams and initiatives continue.

This report was written by Julie Thomasson and Sarah Rubin, with help from Carol Lincoln, Tom Faison, and David Dodson. Additional consulting assistance was provided by Holly Hatch and Jim Rosinia, formerly with the Center for Early Adolescence, and by Janet Kroll.

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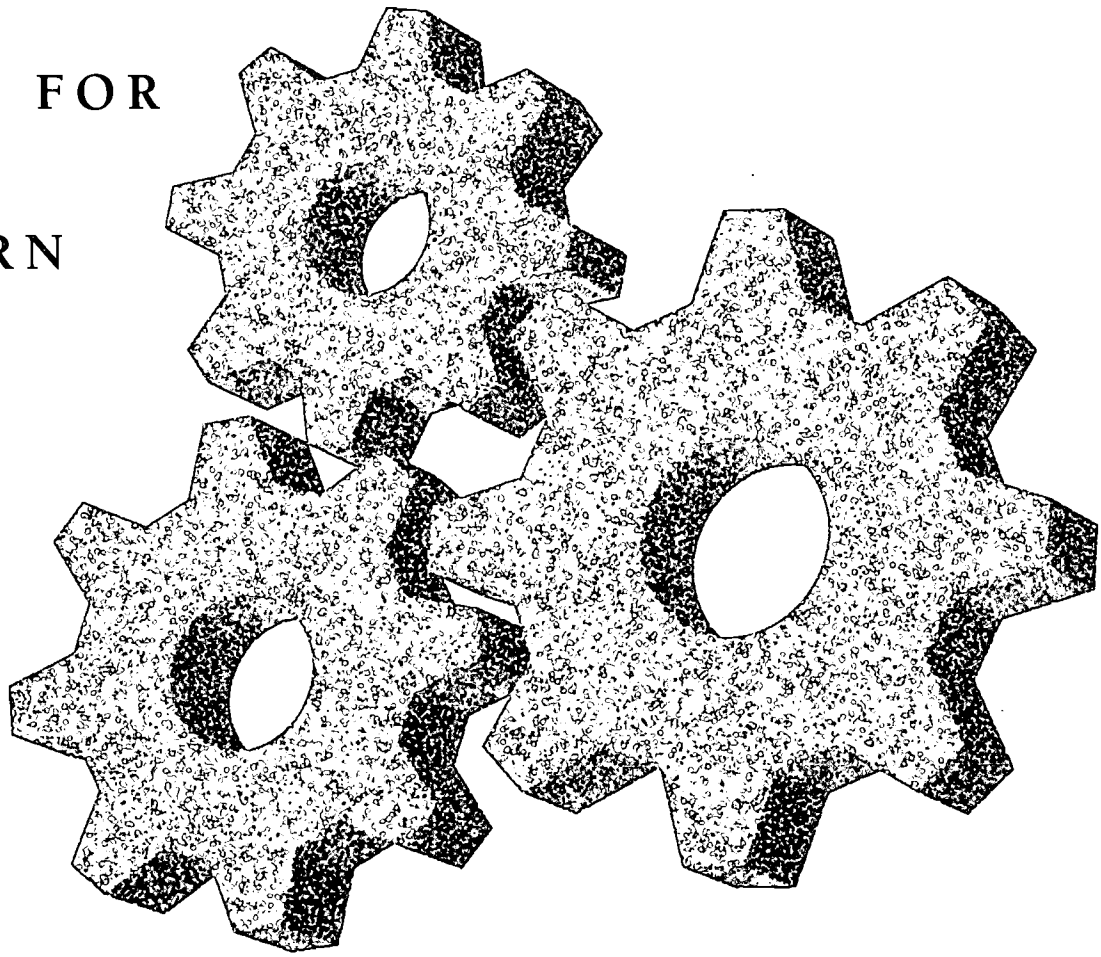

MDC

1996

A BACKGROUND PAPER

ALLIANCE FOR ACHIEVEMENT

FOREWORD

The national problem of youth passing through school without a clear educational purpose has been compounded in the South by a variety of factors, including an historic underinvestment in the education of poor and minority youth, school systems that undervalue the potential of those youth, and lingering misconceptions among poor youth and their families that success in the job market is unrelated to academic achievement.

In a region that is home to fine public and private universities and scores of community colleges, a majority of poor and minority adolescents and their families do not recognize the opportunity these institutions offer. And too often, those who do recognize the opportunity conclude it is academically or economically beyond their reach.

Walking the Talk was first published in 1992 as a background paper to help ALLIANCE sites clarify the challenges facing them and to present ideas for programs they could adapt locally. The 1996 edition is essentially unchanged from the first edition, and descriptions of programs reflect their status in 1992. However, names and contact information in the Resource List have been updated.

The paper is designed to synthesize some of the best thinking in the field about how to raise student aspirations and increase career opportunities. It describes an array of promising strategies and programs for showing middle grades and high school students that post-secondary education is a necessary, affordable, and accessible option. Included are sections on developing a school-wide focus on academic achievement, building career awareness and service learning opportunities, opening options for technical careers, and school and parental guidance.

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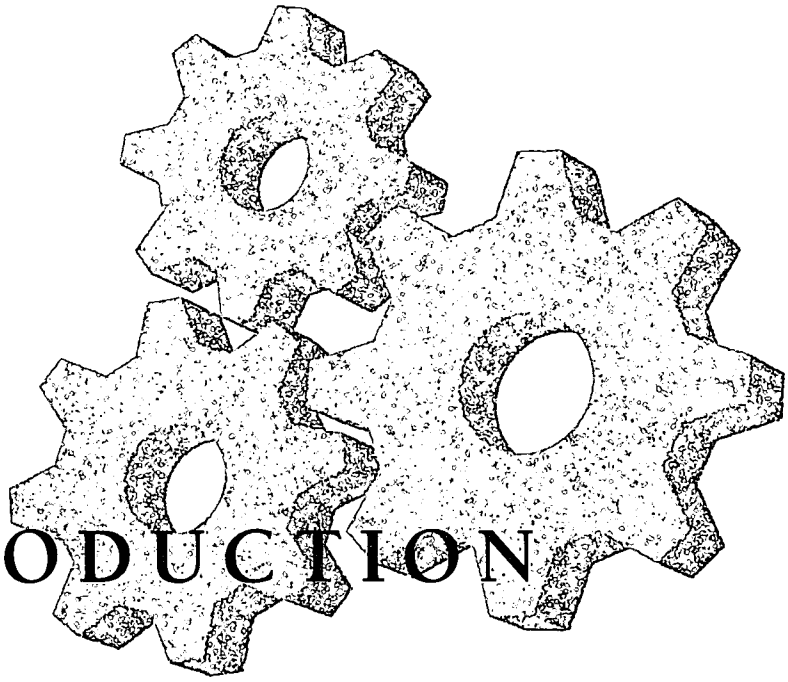


INTRODUCTION

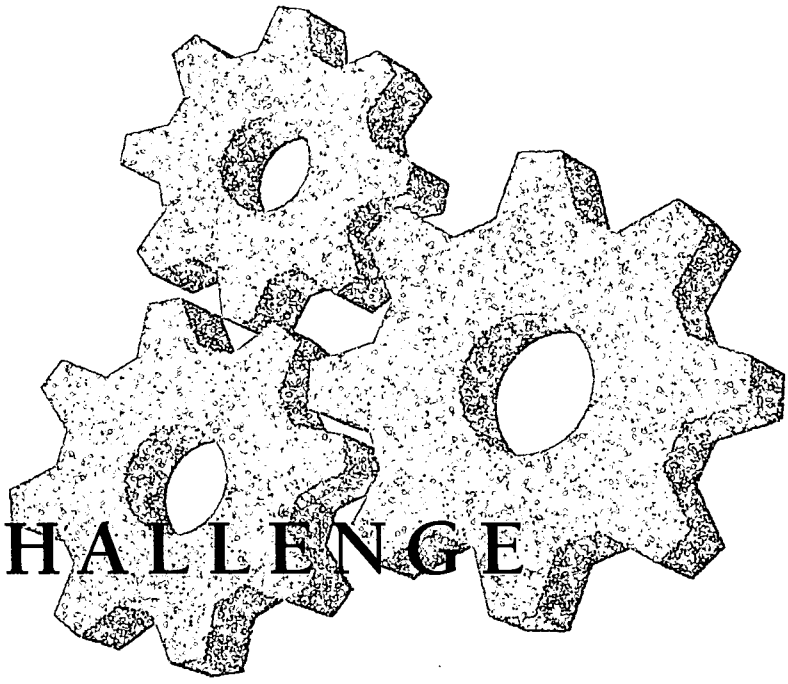
The ALLIANCE FOR ACHIEVEMENT is rooted in the belief that all children are capable of academic success, including some level of post-secondary education. The chances for realizing such success are much greater if young people experience education as a smooth or "seamless" path, rather than a series of bumpy steps, some of which are likely to throw them off balance. If this path is to be built, middle schools, high schools, and community colleges—working in concert with families and communities—must begin to take collective responsibility for its construction. No educational system has achieved this ideal. This "research primer" offers thoughts on what some of the elements of this ideal might look like, so that participants in the ALLIANCE can begin to build their own unique paths.

The paper is organized into four parts. Chapter I lays out our dual challenges—both moral and economic—that require us to shift current approaches and to push for academic achievement for all. Because the "bookends" of the ALLIANCE FOR ACHIEVEMENT are middle schools and community colleges, Chapter II puts forward an overview of the special niche of these institutions.

Chapter III, or "Pieces of the Puzzle", is the bulk of the paper. In this section, we discuss the fundamental elements required of schools and colleges if they are to provide for young people—particularly the disadvantaged—a seamless education path. These include: providing high expectations and a high content curriculum for students; offering career awareness and exploration activities; encouraging students with talent in math and science toward technical fields; and offering guidance and support throughout middle and high school, as well as college. Entire books have been written on each of these elements. This section is aimed at providing an overview of the range of issues to be considered in developing a partnership.

Within each subsection, model approaches are described that should be read critically. In putting together a collaborative partnership, each community will examine local needs and draw from the best ideas around. By including these models, we do not suggest that they be replicated. Rather, each has one or more seeds of good ideas that might be drawn on when crafting local approaches.

Chapter IV is devoted to lessons from the field. Here we offer insights from people who have initiated efforts at school change and discuss learnings from other community-wide educational partnerships. The ideas behind the ALLIANCE FOR ACHIEVEMENT are relatively new and untested, but we are not the first to chart this path. It will be important to draw on what others around the country have learned so far.



I. THE CHALLENGE

Until recently, public education operated on the belief that a child's intelligence and capacity to learn is fixed early in his or her life, that it can be measured as an I.Q. score.

In the past, the job of educators was fourfold:

- to identify students' capacity;
- to provide paths suitable to the intelligence and capacity of the students that would steer them towards an academic, vocational, business, or general track;
- to teach content knowledge, measured on standardized tests to prepare students for these tracks;
- and to prepare students to operate in a highly stratified industrial setting.

Few students in this model needed to master problem-solving or higher-order thinking skills, and large numbers dropped out of school.

The rising expectations for educational equity that came with the civil rights movement, combined with changing demographics and an economy that now requires higher-level skills and education for all jobs, have challenged this traditional model of education. Individual educators imbued with the belief that "all students can learn" demonstrated dramatically that students who had routinely been labelled as "low achievers" were capable of achieving high levels of academic success.

Jaime Escalante, a math teacher in East Los Angeles whose primarily Chicano students passed the advanced placement calculus test, challenged educators to re-examine their belief and to review whether the real limits to educational achievement might be in the expectations, content, structure, and methodology in schools. Ron Edmunds, a professor of Education at Michigan State University, set out to identify "effective schools"—those in which students from low economic backgrounds were found to succeed academically on a par with students from more affluent schools. He found many, not just a few schools where this was happening.

New research on the brain and learning has demonstrated that intelligence is multifaceted and developmental. Students who do not perform well on standardized tests may be quite proficient when asked to reveal understanding in different ways. Howard Gardner describes this view of multiple intelligence in *The Unschooled Mind,* "This differentiated view of the mind harbors hope. Different students may be reached in quite different ways, and the disciplinary expert emerges as one who can exhibit his mastery in multiple, flexible modes."

Additional research has shown that traditional school practices create an environment that not only does not work to close the skill and knowledge gap that exists when students begin school, but actually worsens that gap, so that by fourth or fifth grade students who are labelled as slow learners are so far behind they never catch up. Practices such as tracking, grade retention, grading only for achievement and not effort, and continued remediation with rote basic skills before moving on to higher tasks have all been shown to be ineffective. In contrast, other practices such as cooperative learning, teaching thinking skills, and mentoring of students have been shown to have a positive

effect on student achievement.

This research has become so widely accepted that most educators will now tell you they believe that all students can learn. However, most teachers and schools have not yet aligned their behaviors and structures with the new thinking. It is always easier to "talk the talk" than to "walk the talk". Many involved in education find themselves at the uncomfortable juncture of changing a familiar framework. Do we really believe that all children can learn? If we do, what are the implications for what we do every day?

The process of changing schooling, including knowing what to change and how to go about creating that change, is difficult. What is clear, however, is that creating an environment where the belief that all students can learn and achieve academic success is an urgent imperative. Our children and our country's future depend on our will and ability to make these changes.

THE MORAL IMPERATIVE

The democratic principles of American society are inextricably linked to how we educate our children. If we expect all citizens to live together peacefully and to participate in the democratic process, then we must prepare young people for these responsibilities. Ideally, this process begins at home, but often by default, schools and the broader community carry it through.

Until now, we have fallen short for too many children, leaving them disconnected from society, largely unaware of their potential place in it and responsibility to it. The results are obvious, as young people turn to drugs, gangs, or babies. It is our ethical duty as educators and as a country to give our children an education that offers them a place in the American community, as capable and responsible citizens. It is also our ethical duty to insist on high standards, because the evidence is clear that academic achievement is the gatekeeper to expanded opportunity later in life.

THE ECONOMIC IMPERATIVE

Educators in the late twentieth century must grapple with an extension of the moral imperative that those of prior decades did not face. Morality aside, our own standard of living will depend increasingly on educating—and educating well—all children. The economic survival of each young adult depends on this, as does the nation's competitiveness in the global economy.

The new economy will have little use for people who cannot read, write, compute, communicate, and think critically. Already we see many jobs that formerly required a high school diploma now calling for a community or technical college degree. More and more jobs require four years of college. And fewer employers look twice at an application from a high school dropout. Ed Bishop, President Emeritus of the University of Houston and Chairman of MDC's *Greater Expectations* Advisory Panel points out, "In modern capitalist society, if you don't bring good skills to the labor market, you won't have much of an income. It's that simple."

Given the demographic trends foretold by the Hudson Institute's *Workforce 2000* report, with the available workforce shrinking as we approach the year 2000, we know that every person—including women, minorities, and immigrants heretofore undervalued—has an important role to play in the labor force and the economy. More recent national studies, including *America's Choice: high skills or low wages!,* confirm that America will lose its competitiveness unless we raise education and skill levels and involve women and minorities more productively in the workforce. But the South, as described in *Greater Expectations,* faces a particularly tough challenge in rising to meet the demands of the next century. With a bitter legacy of underinvestment in education, particularly for blacks, the South still funds its public schools at lower levels than the rest of the nation.

A task before us is to convince our youth, their families, the public at large, and all educators, that these trends must be reversed.

Unemployment rates provide one indicator of the bleak economic prospects facing people with low education levels. In 1989, high school dropouts were twice as likely to be unemployed as high school graduates, who in turn were more than twice as likely to be jobless as college graduates.

The correlation of earning power and formal education level is equally alarming. In the 1970s and 1980s, times of declining real wages across the board, the real wages of male high school

dropouts declined by 42 percent, while male college graduates lost only six percent. In 1970, a man with a high school diploma could expect to earn a good living: a high school graduate's income was right at the national median. By 1988 the median was claimed by workers with one to three years of college, and the high school graduate's income had fallen to 89 percent of the median. During the same two decades, the income of male high school dropouts fell from 89 percent of the median to 71 percent.

The good news is that nationally, young people are staying in school longer. Fewer are dropping out of high school and more are going on to post-secondary education. However, too many youth still end their education with a high school diploma or less. And blacks and Hispanics remain substantially behind whites in educational attainment. These trends are illustrated by a glance at five indicators: grade-level achievement rates; dropout rates; college prep coursework; college-going rates; and longer-term outcomes.

□ *Grade-Level Achievement Rates.* Children start school relatively on par with one another, but by third grade, the average black or Hispanic students are lagging six months behind. By the sixth grade, they are one year behind, and they fall two full years behind their counterparts by eighth grade. By the time they graduate—if they graduate—they are three years behind white students.

□ *Dropout Rates.* In 1989, 12.6 percent of all persons age 16 to 24 were counted as dropouts. Groups with especially high dropout rates are black men (14.9 percent), Hispanic women (31.6 percent), and Hispanic men (34.4 percent).

The dropout rate has declined steadily over the past two decades, and rates for blacks have dropped dramatically from more than 20 percent in the 1970s. However, blacks still quit high school at a higher rate than whites. And for Hispanics, the dropout rate has hardly changed since 1970, remaining above 30 percent almost every year.

Education Level	Unemployment Rate
1-3 years of high school	11.8%
High school graduate	5.7%
1-3 years of college	3.7%
College graduate	2.2%

[*1990 Digest of Education Statistics*, Figure 23]

□ *College Prep Coursework.* How well are high school students preparing for higher education? Of all 1987 high school graduates nationally, only 12 percent completed the array of course requirements for college-bound students recommended by the National Commission on Excellence in Education. Women and minorities were under-represented: 10.9 percent of women completed this course-work, as did 8.3 percent of blacks and only 5.5 percent of Hispanics.

Because of mediocre academic preparation in high school, a high proportion of students need remedial education when they enroll in college. A 1989 survey of public colleges and universities in the South found this to be the case especially at two-year institutions, where one-third of all freshmen required remedial reading or writing, and 47 percent required remedial math. At four-year schools, one in four freshmen needed remedial reading or writing, and one in three needed help with math.

□ *College-Going Rate.* Since 1960 there has been a slight upward trend in the overall proportion of high school graduates going on to college, from about 50 percent in the 1960s to 59 percent in 1988. Still, given what we know about the academic requirements of most jobs of the near future, our current record is inadequate. Among 1988 high school graduates, the proportion enrolled in college (including two-year and four-year institutions) in October 1989 was:

Whites	60.7%
Blacks	45.0%
Hispanics	57.0%
Men	57.0%
Women	60.8%

[*1990 Digest of Education Statistics*, Tables 167,168]

□ *Longer-term Outcomes.* If over half of high school graduates immediately enter post-secondary education, what happens to them? As noted under *College Prep Coursework*, a high proportion require remedial courses in their first year. How many complete a degree program?

The U.S. Department of Education's "High School and Beyond" survey of 1980 high school seniors found these outcomes six years later: 18.2 percent had attained a bachelor's degree; 6.5 percent had an associate degree; and 11.9 percent had a license or certificate (from a post-secondary non-degree program). The majority, about 62 percent, had not completed any post-secondary

program. Women were over-represented at every post-secondary level except graduate degrees. Blacks and Hispanics were slightly overrepresented in attainment of licenses and certificates, and severely under-represented in bachelor's degrees.

While there has been a small overall increase in the proportion of students pursuing higher education in recent years, we have seen a *decrease* in the 1980s in the percentage of bachelor's degrees awarded to blacks, particularly to black males. Moreover, blacks receive only five percent of the bachelor's degrees in science and engineering.

The study also compared students who took different courses of study in high school: general education, academic, and vocational. Not surprisingly, general and vocational students were more likely, on average, to have ended their formal education with high school graduation. A sizeable number of these students did, however, attain associate degrees, and a high proportion of vocational students obtained non-degree licenses. Students who were in an academic program in high school graduated from four-year college at twice the overall rate (see table below).

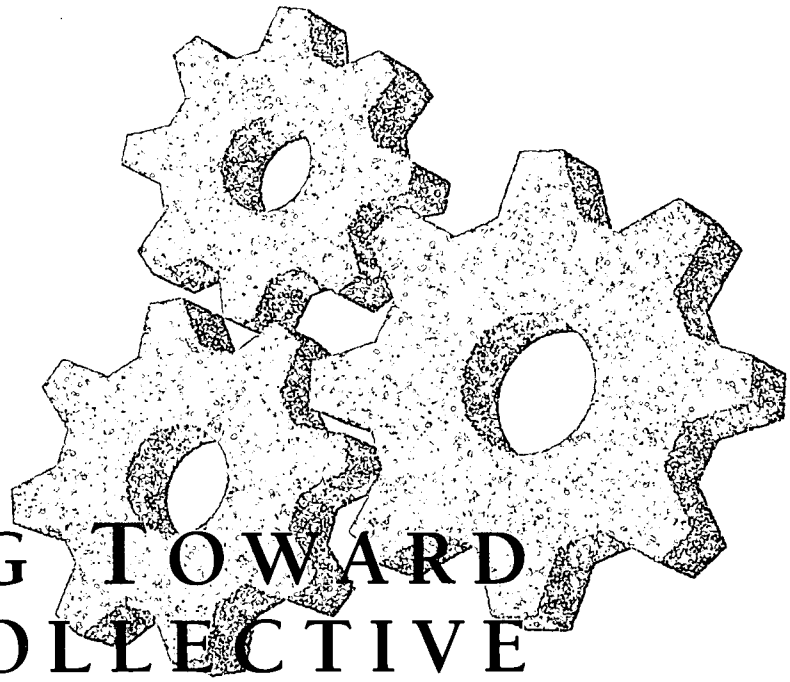
We know that over time, the economic growth of the nation will depend more and more on the educational attainment, skill levels, and productivity of minorities, women, and the poor. This is especially true in the South, where a greater proportion of new entrants into the labor force will be minorities and women. Our current record of academic achievement for our youth is inadequate, as is our level of effort. Because we are starting from farther behind in the South, we have much farther to go just to erase the deficits of the past and keep parity with national, not to mention global, standards.

As the economy of the 1990s and the future demands higher skill levels, post-secondary education has become an imperative, both for individual economic success and for the overall competitiveness of our regional and national economy. Anne Wheelock notes in *Crossing the Tracks,* "Given rapid technological change, young people . . . need an education that prepares them to be lifelong learners . . . By implication then, schools must assume that all students will at some time in their lives seek post-secondary education as a route to greater opportunity."

HIGHEST EDUCATION LEVEL ATTAINED SIX YEARS AFTER HIGH SCHOOL
(1980 High School Seniors Surveyed in 1986)

GROUP	HIGH SCHOOL	LICENSE	ASSOC. DEGREE	B.A.	GRADUATE DEGREE
All	61.8	11.9	6.5	18.2	0.7
Women	59.6	13.3	7.0	18.8	0.6
Black	69.4	13.9	5.3	9.9	0.9
Hispanic	70.2	13.8	7.3	6.8	0.2
Gen. Ed.	69.7	12.6	6.5	10.2	0.2
Academic	45.6	8.8	7.2	36.6	1.8
Voc. Ed.	72.8	16.2	6.9	3.6	0.0

[*1990 Digest of Educational Statistics,* Table 275]



II. Moving Toward Collective Responsibility

These moral and economic imperatives lead us to a common conclusion: that we must hold and deliver on higher educational expectations for every child—not just the "best" ones—so that post-secondary education becomes routine.

Nearly 80 years ago, John Dewey wrote that, "The world seems mad in preoccupation with what is specific, particular, disconnected." In facing the pressure to "fix the schools", not only from their own sense of moral imperative, but now from those worried about the nation's economic future, educators often pluck pieces of reform elements from an increasingly dizzying array of possibilities. The notion that academic achievement for all students should guide education, however, is profound, requiring a more systemic approach to change, both within a school building, between educational institutions, and among families and communities.

Currently, even when an entire school or district has set out on a clear path toward raising achievement levels of all students, more often than not, attention is fragmented among the elementary, middle, and high school years. Increasingly, however, we are recognizing that collaborative partnerships among the K-12 levels, community colleges, and four-year institutions are helpful in improving specific practices as well as pushing and pulling students toward high academic achievement and higher education.

Forging a path together—across institutional lines—is no easy task. It means overcoming years of pointing the blame and recognizing that educators at all levels face common problems. It also requires an end to the traditional academic "pecking order" that worries more about who's on top than how to dig in and work together toward common goals.

Yet in order to "walk the talk" of academic achievement for all children, it is becoming clear that a common path is the only path. What happens in middle school determines the level of academic success that a child can achieve in high school and beyond—or even whether the child will remain in high school or drop out. And if a student is to enter and succeed in higher education, high schools must actively continue the process of insisting on rigorous academic work, combined with the encouragement this requires. The same applies to colleges and universities. The fact is, the educational path *is* a continuum. Whether or not it is "seamless" depends on the ability of educators and others to take collective responsibility for seeing children through it.

To do this requires an ability to see student potential at every phase of the continuum and to acknowledge that our work is not

complete until students reach the end of the road—not just the next stage—successfully.

MIDDLE SCHOOLS AS THE LAUNCHING PAD

"Young adolescents face significant turning points. For many youth 10 to 15 years old, early adolescence offers opportunities to choose a path toward a productive and fulfilling life. For many others, it represents their last best chance to avoid a diminished future."

[Turning Points: Preparing American Youth for the 21st Century]

Early adolescence is a time of dramatic change, when young people face many challenges as they begin to form their own identity. They think about values and grapple with moral conflicts resulting from their increased independence. They confront questions about the relationship between themselves and their peer group. They make more decisions for themselves and learn to take responsibility for their choices. And they confront all these challenges while coping with the enormous physical, emotional, and social changes of early adolescence.

During this time, young people are faced with choices whose ramifications will have major long-term effects. Indeed, educators increasingly recognize middle schools as the launching pad that can propel young adolescents either toward a future rich with educational or vocational options or a future of constrained possibilities. In middle school or junior high, students choose or are placed in academic courses that will determine the high school curriculum they follow and, in turn, their prospects for attending college. They make choices about whether to stay in school or drop out. And some are drawn to pathologies that throw them off the path of academic achievement, such as pregnancy, drug abuse, or delinquency.

Too many early adolescents and their families are unaware of the awesome power of the decisions they will make at this age. While many 10-15 year-olds may have vague notions about occupations, they have limited awareness that the time has come to prepare for those occupations by taking the "gatekeeper" courses that can lead to college or a technical career. Developmentally they are just beginning to have the cognitive ability to even conceive of a future; thus, their sense of the relationship between their present actions and their future choices is quite limited. And too often a lack of adequate guidance from adults at school, home, or elsewhere in the community results in options being closed at an early age.

Furthermore, many—especially low-income and minority youth—are insecure about their academic and financial ability to attend college. They have few role models, and their teachers and counselors often hold low expectations of them. In addition, limited expectations imposed by a lack of exposure minimize children's and families' visions about future options.

Along with low-income students, girls often make self-limiting decisions during the middle school years. As girls approach puberty their behavior reflects a heightened influence of traditional sex roles. Even the formerly most assertive girls moderate their behavior to avoid competing with boys. By ninth grade, girls plan to take less math than boys and plan to pursue careers that require little math, even if their academic records show strong math skills. By making this choice, they preclude many potentially rewarding career options.

The challenge to us, then, is to create middle schools with the environment, curriculum, and necessary guidance that will help children and their families envision a richer array of options, understand that more options are accessible through success in gatekeeper courses, and realize the accessibility and affordability of post-secondary institutions.

COMMUNITY COLLEGES: A CRITICAL STEP ON THE CONTINUUM

Community colleges offer geographic and financial accessibility to students who might otherwise discount post-secondary education. They offer both technical and academic training and are emerging as the transition point for many to an immediate career or a baccalaureate degree. In fact, community colleges enrolled 44 percent of all first-time college freshmen in 1985, up from 24 percent in 1965. (The term "community colleges" is used here to refer to any two-year public post-secondary institution.)

Community colleges are rooted in a varied history. In some states they evolved from traditional junior or technical colleges; in others they sprang full-blown as an effort to support the South's

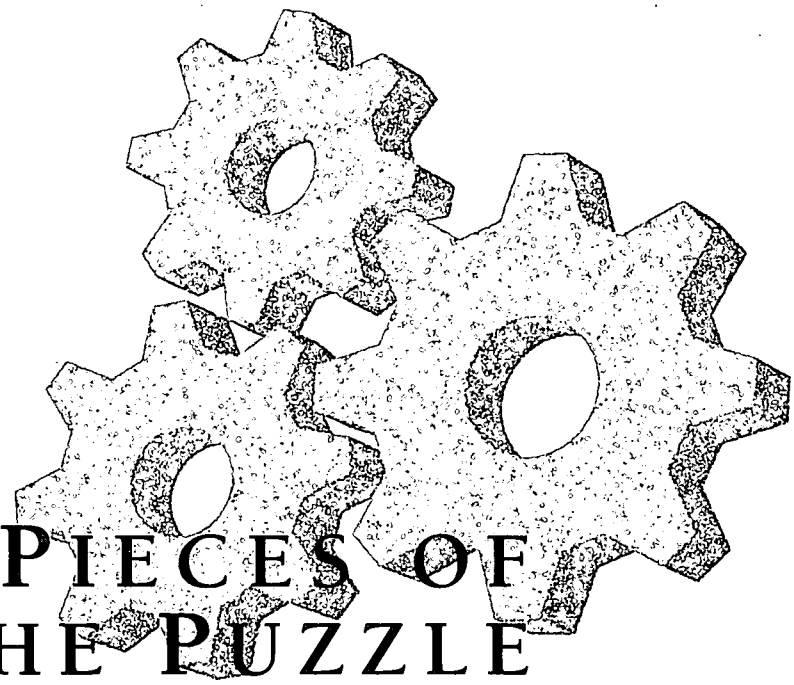
transition from an agricultural to a manufacturing economy. As a result, the public—and even some educators—remain unclear about the role of community colleges and what they have to offer.

Community colleges offer increasingly sophisticated and rigorous technical education, with a wide offering of associate degrees. In the best colleges, technical degree programs are linked to the employment needs of business. In addition, most community colleges allow for transfer to public and private four-year colleges and universities. Some, because of a strong emphasis on high-quality teaching, attract academically-accomplished students interested in strong teaching and personal attention in their first two years of college.

Accessibility—through institutional commitment to an "open door" policy—is another strong attribute of community colleges. Most community colleges will accept any student, ensuring access to the college curricula through remedial education if necessary. In most states community colleges are widespread and accessible to rural as well as urban students. For a student from a low-income family who needs to continue living at home, this kind of accessibility is critical.

Despite their accessibility—as with post-secondary education generally—community colleges have not attracted and retained poor and minority students in the proportions required to make an impact on poverty and structural unemployment. As MDC notes in *Greater Expectations,* "the usual phrases by which community colleges define themselves—'open door', 'easy access', and 'equal opportunity'—are inadequate and too passive as descriptors to meet the challenges of the Twenty-First Century... [Community colleges must become] institutions that will aggressively recruit, assess, counsel, educate and place in jobs or further education those for whom college has been an alien idea and a forbidding institution."

Because community colleges are dispersed widely throughout Southern states and tend to serve relatively small, single- or multi-county regions, they are in a unique position to build ties with middle and high schools. Through articulation agreements, tech prep programs, dual enrollment programs, summer programs, and countless other means, community colleges can both encourage young people to continue their education and make it possible for them to do so.



III. PIECES OF THE PUZZLE

If we accept our moral and economic responsibilities to help all children achieve academic success, then our first, most basic step is to ensure that educational and, ultimately, career options are kept open for all children. This process begins before birth, and we can not underestimate the importance of health and strong early and elementary education. Our focus, however, begins with the academic experience of students in middle school—the last best chance for many children to move toward success and the academic launching pad for higher education.

LAYING AN ACADEMIC FOUNDATION

Much of the research on middle grades education points to the need for two fundamental components in schools: high expectations and high content, both of which are equally relevant to high school. These components have meaning, however, only to the extent that they rest on a set of values or core beliefs held by the educators that espouse them.

As educators, it is our responsibility to examine our own personal values—to see how they influence our attitudes toward children and their success. Lorraine Monroe, principal of New York's Frederick Douglass Academy, suggests four questions as a way into that examination:

1. What did my school do to help me succeed, go to college, be skillful?
2. What didn't my school do that it should have?
3. What do the best public and private schools do?
4. What do I want for my child?

Grappling with these questions and our experience as educators enables us to consider our values and, ultimately, the extent to which we fully embrace the notions of high expectations and high content.

High Expectations

High expectations—embodied in everything from teachers and administrators' expectations for students, to school policies on tracking, to how decisions are made about curriculum and resources—help set the stage for students about the importance of academic success and about their own chances of achieving such success. While there is no blueprint for providing a climate of high expectations, common elements have been identified. For instance, in a school with high expectations, all students:

- have access to challenging courses, content, and materials;
- are consistently encouraged and supported to perform at higher levels than they think are possible for them to achieve;
- have opportunities for academic interaction with high achieving students; and
- are consistently provided with information, encouragement, and support that result in

THE ALGEBRA PROJECT

The Algebra Project addresses head-on the issue of inner-city students' access to advanced math courses. It offers a math curriculum to help sixth graders make the transition from arithmetic to algebra, as well as curriculum materials to supplement seventh and eighth grade algebra textbooks. In addition, the Algebra Project changes attitudes in the school and the community. It raises awareness of the importance of mathematical literacy for all students and promotes high expectations for student achievement. It is currently being used in eight cities and will be tested soon in the rural Mississippi Delta.

The Algebra Project began in 1982 when Bob Moses, a former teacher and community organizer, was asked by his daughter's teacher at Martin Luther King Middle School in Cambridge, Massachusetts to help several students with algebra. He assessed the difficulties these students were having in moving from arithmetic to algebra and began developing a unique curriculum to help bridge the conceptual gap.

The curriculum uses concrete experiences to help students move toward abstract mathematical concepts. It begins with a ride on the subway or bus as the basis for understanding a number line with positive and negative numbers. Students then develop increasingly abstract representations of the experience, beginning by drawing pictures, moving to discussions and writing, and finally using symbolic mathematical language to describe the experience. The results of the program at Martin Luther King Middle School have been impressive: all participants have entered college prep math classes in ninth grade, and many have gone directly into honors algebra or geometry.

The program's results are due in part to its success in raising expectations of teachers, parents, and students. This success in turn grows out of strong parent involvement and solid teacher training. At Michele Clark Middle School in Chicago, a group of parents meets weekly to learn the same lessons as their sixth grade children; the parents then volunteer in the classroom. Teachers meet weekly to share their experiences with the curriculum, and once a month they have a special session with a resource person from the Algebra Project.

exploration of challenging curricular, extracurricular, and post-secondary education and career opportunities.

Access to Curriculum

A National Education Study of American eighth graders found that well over half planned on completing college, but only 25 percent planned on taking college preparatory courses.

Access to challenging courses is not only important for allowing a student to achieve more than he or she imagined possible. Some of these courses are, in fact, prerequisites for post-secondary education. Completion of "gatekeeper" courses—in particular algebra, geometry, and laboratory science—has been correlated with increased college attendance, regardless of a student's racial or ethnic group.

Geometry seems to be the most persistent indicator of college attendance. A recent College Board study showed that of those students taking geometry, over 80 percent attended college, compared to about 40 percent of students not taking geometry. Notably, these attendance rates are roughly the same across racial or ethnic lines; taking geometry also reduces, although it does not erase, the gap in college attendance between poor and wealthy students. Algebra is a prerequisite for geometry, and students taking algebra are two to three-and- one-half times more likely to attend college than are those who never progress beyond general math.

This same study also points to laboratory science and two or more years of foreign language study as gatekeeper courses, although their connection to college attendance is not as strong as the geometry connection. Particularly striking is the impact on poor students of taking a foreign language. Among the poorest students (those with family incomes below $15,000) the overall college attendance rate is 39 percent; for those students taking two years of foreign language, the college attendance rate increases to 75 percent. Among students from wealthier families (family income $25,000 or more), two years of a foreign language increases the college attendance rate from 60 to 90 percent.

Curricular offerings play a central role in determining students' access to gatekeeper courses. If a school does not offer advanced courses in mathematics and science, no amount of high teacher or parent expectations will enable students to acquire the knowledge and skills such classes would impart. The school's ability to offer such courses requires money, in addition to will, and presents a fiscal challenge to small rural schools as well as inner-city schools, which usually have high minority

student populations. In analyzing the National Science Foundation's 1985-86 National Survey of Science and Mathematics Education, Jeannie Oakes compared the availability of eighth grade algebra and ninth grade geometry in junior high schools nationwide and found that students attending all-white or higher-income schools have far greater opportunities to take gatekeeper courses than do students in low-income and predominantly minority schools.

The challenge for middle schools is to prepare students for these more rigorous high school courses. Through courses in mathematics and science, in particular, middle-schools must provide the background skills and knowledge needed for enrollment in high school algebra, geometry, and laboratory science. And these courses need to be "high-content"—building solid thinking and problem-solving skills.

The Tough Issue of Tracking

Teacher and counselor expectations give students important signals about what they can achieve. These expectations result in both concrete policies—school tracking chief among them—as well as more subtle policies such as the type of course-taking advice students receive from school guidance counselors. Since the 1920s, conventional wisdom held that tracking made sense. It is becoming clear, however, that tracking is conceptually incompatible with the notion that every child can learn and that every child is capable of a rich and challenging curriculum.

Anne Wheelock writes in *Crossing the Tracks*, "Young adolescents harbor aspirations no less ambitious than those of the generations that preceded them. But finding themselves in tracked schools, many of these students begin to suspect that the opportunities offered them hold little promise for realizing these ambitions. Over time, their dreams narrow and may disappear."

Students in the lowest and the middle ability groups experience clear disadvantages, becoming bored and distanced from their own learning, often due to watered-down instruction. For instance, as UCLA Professor Jeannie Oakes notes, in mathematics classes students may spend the bulk of their time completing worksheets which stress computation, rather than engaging in higher-order thinking and analysis. Instruction in low-track classes has been described as oversimplified and repetitive. In addition, the use of worksheets to break down and simplify topics may result in fragmented instruction. Assignments in low-track classes require more rote memorization and less critical thinking than do high-track class assignments, which usually emphasize open-ended questions, higher-order cognitive tasks, and student control over their work.

Indeed, recent research by Robert Slavin and Jomills Henry Braddocks that compares achievement levels of tracked and untracked groups shows that low-achieving eighth graders placed in the low track went on to perform significantly less well than their low-achieving counterparts placed in untracked groups.

Tracking is also problematic, because it affects students differently based on race, ethnicity and socioeconomic status. For example, a National Science Board study of eighth graders found that blacks, Hispanics and Native Americans, as well as poor students, were twice as likely as white students to be in remedial mathematics classes.

Proponents of tracking suggest that students learn more effectively if they are grouped with others of similar ability levels, but this position is not supported by research findings. High-ability students, who many cite as the chief beneficiaries of tracking, have been shown to

MARK TWAIN MIDDLE SCHOOL

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An example of how to operationalize a culture of high expectations can be seen at the Mark Twain Middle School in San Antonio, Texas. The school's "Frog Pond" program—comprised of those students considered to be most at risk of dropping out —begins with the clearly stated expectation that each of the participating students can succeed in an on-grade curriculum. Teachers in the program use a variety of instructional strategies, including interdisciplinary, hands-on teaching; cooperative and integrated learning; as well as a range of instructional resources, mentoring, and personal support.

At the end of the program's first year, not only had ten percent of the participating students been inducted into the Junior Honor Society, but their test scores showed the most improvement of any group in the school other than the gifted. The students' attendance records showed overall improvement, and most students enjoyed belonging to a group focused on academic achievement. In reflecting on the implications of Frog Pond for the school as a whole, Mark Twain's principal has noted that, "Almost all of us are trying to come to a feeling that all children are worth us giving everything we've got." Frog Pond will be phased out as the entire school moves toward team teaching and untracked classes.

ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID)

Project AVID was established by two English teachers at Clairemont High School in San Diego in response to an influx of disadvantaged students who were either not preparing for or not achieving at levels that would allow them entry into four-year colleges or universities. The program places students in college prep courses and in an elective course designed to support their success in those challenging courses. Other program components include:

- *tutoring by students from area colleges and universities;*
- *mini-lessons by college faculty to provide students with a realistic introduction to college work;*
- *seminars in note-taking, study skills, test-taking, time management, college entrance exam preparation, and library research skills;*
- *guest speakers from educational institutions and the business community;*
- *summer internships;*
- *a summer bridge program at the local California State University campus, where in junior and senior years, AVID high school students earn college credits and they and their parents are introduced to college life; and*
- *quarterly meetings with parents.*

Three fundamental teaching elements undergird the program:

- Collaborative, subject-specific learning groups. *Students learn in small groups in a collaborative way—taking more responsibility for their own learning. In small groups they ask and explore questions; they become better listeners, thinkers, and speakers; they discover ideas because they are actively involved with them. And the teacher becomes a coach, guiding students in their learning;*
- Inquiry method of instruction. *The teacher uses a process of questioning to help students uncover learnings for themselves; and*
- Writing as a tool of learning. *Students learn good note-taking skills, use "learning logs" or journals to reflect on learnings from lessons, and develop the skill of writing essays.*

Results are impressive. Of 500 participants in the program in San Diego County in 1991-92, ten percent went on to attend schools in the University of California system, 34 percent went on to attend schools in the California State University system, 37 percent enrolled in a community college, and 18 percent enrolled in private or out-of-state colleges—much higher college attendance rates than for the county as a whole. Only two percent did not attend college.

learn equally well or better in heterogeneous groups—a finding confirmed by Slavin and Braddocks. According to Wheelock, schools also report heterogeneous grouping improves school climate, teacher morale, and discipline, all of which have a positive impact on all students.

Vocational Education

Eliminating tracking in schools is not easy, but it has rapidly growing support. At the middle school levels it is essential to keep options open for all students, and the benefits of untracked schools are well documented. At the high school level, however, the situation is more complex.

High school students nationwide fall equally into three tracks: general education, college preparatory, and vocational education. There is a growing movement to eliminate general education, increasingly recognized as a track that fails to prepare students for either college or the workplace. The academic, or college prep track is clearly needed; in fact it should be accessible to many more students. But what is the role of vocational education in a school that strives to help each student live up to his or her full potential?

Students who plan to seek a job immediately after graduation need marketable, job-related skills along with a solid academic base that will enable them to adapt to changing job demands and perhaps to return to school in the future. Students who aim for a two-year technical degree can benefit from the head start that rigorous vocational courses can provide. But vocational education as it currently exists in many high schools fails to meet these needs. In fact, a recent report by the National Center for Research in Vocational Education (NCRVE) argues that typically vocational education is no better than the general education track in preparing students for the future. In *The Cunning Hand, The Cultured Mind,* NCRVE notes, "The term 'dumping ground' is harsh, but that is the word our respondents used over and over again to explain an important function of vocational classes at their schools."

The solution advocated by NCRVE, the Southern Regional Education Board (SREB), and other leaders in the field, is to substantially upgrade the vocational curriculum, by more fully

HIGH SCHOOLS THAT WORK

Since 1987, the Southern Regional Education Board (SREB)-State Vocational Education Consortium has worked with a network of high schools seeking to dramatically improve vocational education. The High Schools That Work network today has 100 members, of which about half are comprehensive high schools and half are area vocational schools. These schools are committed to changing four basic aspects of their program: what students are taught; how they are taught; what schools expect of students; and how academic and vocational teachers relate to each other and to their students.

SREB assessed the progress of the eight original network members in its recent book, Making High Schools Work Through Integration of Academic and Vocational Education. *These schools have emphasized different aspects of vocational education reform and have made varying degrees of progress. All of the schools have adapted or developed applied courses in math and science that rely heavily on lab work, small group projects, and other active forms of learning to lead students through college prep-level algebra, geometry, trigonometry, statistics, biology, chemistry, and physics.*

Some schools have also developed applied communications courses. At Swansea High School in South Carolina, for instance, vocational students use the same literature book as college prep students, but their assignments are geared toward preparation for the workplace. For instance, students write a letter from Macbeth *applying for the job of king or develop a list of Benjamin Franklin's time management techniques, or prepare a job resume for Hester Prynne of* The Scarlet Letter. *Sandra Jowers, an applied communications teacher at Swansea, says, "If you stood them side by side with college prep students, these students would do as well or even better. Through the applied method... vocational students become active participants in learning. If they have a problem to solve, they jump in and try to figure it out."*

The program of study that SREB urges High Schools That Work members to adopt for vocational students includes: the college prep language arts curriculum (either applied communications or untracked college prep English); at least three math courses, of which at least two are equivalent to college prep math courses; and at least three science courses, of which at least two are equivalent to college prep science.

As member schools move toward this ideal of high expectations and a rigorous vocational curriculum, they have already shown success. Between 1988 and 1990, the number of vocational students completing at least three years of math, including two high-level courses, rose from 25 percent to 37 percent; the number completing the equivalent in science rose from 15 percent to 23 percent. Gains have been measured in the National Assessment of Educational Progress reading, math, and science scores. Students spend more time on homework, and they receive more individual help in reading and math as well as more help from counselors in developing a four-year course of study.

integrating academic education with vocational education—to offer challenging courses that impart strong communication, math, and science skills in order to prepare students for community college or the workplace. SREB calls this upgraded curriculum Tech Prep. (In a later section of this report, the term "tech prep" is used in a slightly different way, to describe high school programs that include both upgraded vocational curriculum and articulation agreements with a community college.)

The ideal advocated by SREB and others is to eliminate the general education track and offer students two parallel paths: college prep for those planning to attend four-year college and Tech Prep for those planning to get a two-year technical degree or enter the workforce upon graduation. Both paths include the *same basic curriculum* of demanding courses; the difference is in teaching style. Tech Prep courses emphasize "applied learning", which actively engages students and requires them to apply their knowledge to real-world situations. Schools that use applied learning have documented several interrelated benefits: students are more highly motivated and show higher achievement; students enroll in more math and science courses; and graduates are better prepared for community college or the workplace.

SREB argues that, "All students should receive the essentials of college preparatory curriculum; the difference should be in *how* a course is taught, not *what* is taught." In adopting this ideal, schools necessarily set high expectations for all students. SREB believes a realistic goal is for 90 percent of all students to complete a college prep level curriculum of English, math, and

science, either through the college prep or Tech Prep program. Based on the experience of the schools it has studied, SREB believes that any school can achieve this goal in five to seven years if faculty and administrators are committed.

In addition to higher level academic courses, vocational students need more challenging vocational classes that develop the mind as well as the hands. This means transforming vocational classes to emphasize "reading to learn", a skill essential in the workplace and for lifelong learning. It also means presenting complex problems in the lab or shop that challenge students to apply the math and science concepts they are learning.

Schools that are successful in setting high expectations for all vocational students also offer extra support. This includes guidance to help students set and update a four-year course of study, as well as extra academic help to enable all students to succeed in challenging courses. The schools actively involve teachers in revising academic and vocational courses to meet the dual ideal of injecting applied learning into academic classes and injecting academics into vocational classes.

High Content

High expectations help motivate students to achieve academically. A high content curriculum provides them with academic experiences which engage their active interest, as well as with the skills necessary for success in high school and post-secondary studies. By implication, high content efforts assume access to high-level courses—the "gatekeeper" courses previously mentioned and others.

The Center for Early Adolescence uses six basic questions to gauge whether a curriculum reflects high content. They ask, does it:

- introduce young people to new concepts, ideas, information, and knowledge?
- provide opportunities for young adolescents to explore new subject matter through a variety of methods and materials, such as experiential learning or computers?
- promote critical, reflective thinking among all students as part of this exploration?
- encourage young people to share their learning in creative and thoughtful ways?
- integrate basic skills instruction with the learning of new concepts?
- meet the developmental

HOTS

One example of a challenging curriculum is Higher Order Thinking Skills (HOTS), developed by the University of Arizona's Stanley Pogrow for Chapter I (compensatory education) students in grades four through seven. First developed in the early 1980s, HOTS is now used in 1500 schools in 47 states.

HOTS is based on the premise that what at-risk students need is not more drill on facts; rather, they need to learn how to think. This kind of learning takes place through solving difficult problems and through Socratic-type conversation with an adult, where the student is repeatedly challenged to articulate his or her reasoning.

HOTS is structured as a pull-out program which students attend 35 minutes a day for two years. It uses computer-assisted learning to present complex, often ambiguous problems and enable students to test solutions. For example, one computer simulation asks students to figure out the dynamics of flying a hot air balloon, taking into account fuel, wind, terrain, and other factors. Students think through the problem, test alternative strategies, and discuss their conclusions with the teacher. Teachers are trained to guide students without simplifying problems, reducing ambiguity, or telling students what to do.

The program results in dramatic changes—not just improved test scores, but also a tremendous eagerness to learn. At one school, 36 percent of the Chapter I students made the honor roll; at another, ten percent were reclassified as gifted after a year in HOTS. Furthermore, classroom teachers report that HOTS students are more willing than most to take on challenging assignments. Stanley Pogrow has written in an article for Phi Delta Kappan, *"In almost all cases, when at-risk students were challenged with extremely difficult concepts, were given enough time to work on their ideas, and were given the responsibility for generating those ideas (i.e., no teachers telling them what to do), they amazed us with the quality of their thinking and of their solutions... Instead of 'dumbing down' the curriculum, we should be spending more time figuring out how to make parts of it far more sophisticated and challenging."*

HOTS is now administered by Education Innovations, but remains in Tucson. Stanely Pogrow is still the director.

needs of young adolescents, including structure and clear limits, diversity, competence and achievement, physical activity, social interaction with peers and adults, meaningful participation in schools and community, and self-exploration?

In *Making the Best of Schools: A Handbook for Parents, Teachers, and Policymakers,* Jeannie Oakes and Martin Lipton wrote: "A rich and balanced curriculum runs counter to rigid standardization. It weaves together large units of knowledge rather than stringing along bits and pieces of facts; it mixes abstraction with concrete experiences and children's informal knowledge of the world. The teacher offers a variety of ways for students to learn complex ideas. Teachers who respond to the richness of their own experience and knowledge as well as to the diversity of their students will not all be on the same page at the same time."

Instructional Strategies

A high content curriculum can not be delivered without creative experiential approaches to teaching. Experiential teaching and learning helps students connect the curriculum to their own experiences, giving them an immediate reason to learn and helping them actively construct their own meaning. Ideally, teachers should assume new roles for themselves, as a coach or facilitator of learning. As Anne Wheelock notes, "Teachers should no longer be positioned as the sole source of facts, information and ideas... Teachers... are less purveyors of answers and more directors of learning—coaching students to formulate questions, tolerate ambiguities, interpret meaning, and generalize to develop new hypotheses based on their observations."

This approach to teaching is eloquently described by a middle school teacher in Holmes County, Mississippi and reported by Anne Wheelock. Here, a teacher reflects on the process his students went through to design and undertake an oral history project, which culminated in the production of a magazine entitled "Bloodlines". "It is absolutely crucial that the students be firmly ensconced in the driver's seat throughout this whole process. Having the students work through and democratically resolve questions and problems as they come up can be tedious and time-consuming, but there is no substitute... [The] creation of a final product is a means to motivate and educate the students. The extent to which I lay my hands on that product and supply those skills necessary for its creation is the extent to which I diminish not only the project's power to motivate, but also its ability to educate and excite anyone but me."

Interdisciplinary teaching, often accomplished through team teaching, also helps students make connections between the disciplines and see the practical use of what they are learning. For instance, for a lesson on water pollution, students may draw and analyze samples of water from a local river, discover and map the

FOXFIRE

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The oral history project in Holmes County, Mississippi discussed below was, in fact, developed using the Foxfire approach. A group of middle school students set out to learn about the history of the civil rights movement in their county. They developed interview guides, practiced interviewing techniques, and generated a list of community members to interview. After doing the interviews, the students transcribed and edited the tapes and produced a magazine which was later published as a book, Minds Stayed on Freedom.

The Foxfire approach is based on eleven "core practices" which emphasize an active role for students in planning projects; the teacher serves as a team leader and guide rather than "boss". The approach relies heavily on teamwork and peer teaching. It seeks an audience for student work beyond the teacher, helping students to make clear connections between their schoolwork and the real world outside the classroom.

While Foxfire is best known to the public for its oral history projects, the Foxfire approach has been applied in many different ways in classrooms around the country. For instance, in one high school English class, the students plan their course of study and develop a contract with the teacher to read a certain number of short stories, participate in class discussions, keep a journal, and write an essay and a short story; they also agree on how their work will be evaluated. In another class, students studying Egypt do research, visit a museum, and produce a video for the school library. In yet another class, students turn creative writing assignments into theater productions.

What ties these classrooms together is a network of teachers committed to the Foxfire principles. Foxfire offers graduate level courses for teachers at fifteen colleges and universities. Technical assistance and training are also provided by coordinators of 11 regional networks.

origin of that river, develop local policy recommendations on water pollution, and make a presentation of their findings at a city council meeting.

Teacher Qualifications

Teachers' qualifications and the level of opportunity for staff development have an obvious and significant impact on the quality of classroom instruction available to students. Many teachers were never trained in educational approaches now proved effective and necessary such as teaching experientially, team teaching, or teaching untracked heterogeneous classes. Futhermore, the vast majority of middle school teachers are not trained in teaching early adolescents; most are certified in elementary or senior high school education.

Not surprisingly, students in lower track classes often have less access to experienced and highly qualified teachers. This phenomenon leaves many poor and minority students facing a "double whammy". Because they tend to be overrepresented in low-track classes, these students, who would particularly benefit from experienced, well trained teachers and innovative instructional strategies, may instead be taught by inexperienced teachers using methods and materials which do not support the development of higher-order thinking skills.

Differences in teacher qualifications and experience have been noted between classes of different ability levels. These differentials are also evident between schools serving different student populations. For instance, according to Jeannie Oakes, mathematics and science teachers in schools serving predominantly poor and minority students "are less likely to be certified to teach science or mathematics or to hold bachelor's and/or master's degrees in these fields. They are also less likely to meet the standards of the National Science Teachers' Association or the National Council of Teachers of Mathematics."

GATEWAYS PROJECT

Growing out of an informal alliance between school teachers and faculty at the University of California, Santa Cruz, the Gateways Project worked to increase the numbers of students who prepare for and go on to post-secondary education. The project focused on improving the gatekeeper courses at Watsonville High School, which serves mainly low-income Hispanic students, and on preparing eighth graders for those courses before they arrived at Watsonville High. While the project has technically ended, the collaboration and monitoring of results continue.

The effort has succeeded by linking the University's strength of having faculty with expertise in content areas with a specific need on the part of teachers for improvement in their subject area knowledge. The university hosted a summer institute for teachers to upgrade teachers' knowledge and skills in their subject area and to introduce some of the newer ideas in math curriculum and instructional strategies.

In order to prepare eighth graders for gatekeeper courses, students attend math and science workshops on the college campus. Not only is their learning boosted, but for most students these visits were their first to a college campus. School guidance counselors at the middle school have been influenced by the project. While they formerly referred many children into general math, putting them immediately off-track in terms of higher education, students are now automatically referred to introductory algebra in high school. The project has seen long-term results, with a greater proportion of students attending two- and four-year colleges.

Gateways is no longer in operation, but its former director remains at UC-Santa Cruz and is available to discuss the project.

CONNECTING SCHOOL TO CHILDREN'S FUTURES

Schools that are rooted in high expectations and high content are effectively putting children on a path toward higher education. Still, it is important for schools and the wider community to teach students explicitly about the link between school and the world of work and the educational implications of that link.

Simply put, if middle school students are to be able to make considered decisions about high school and are to succeed in a high content curriculum, they have to know why it matters. They must be exposed to the world of work and understand the link between education and career options. The type of information that should be introduced in middle school and built upon systematically in high school includes:

- broad information about occupational fields and lifestyle issues, including level of pay associated with those fields;
- the variety of careers available, especially those in high demand, and the education levels required by them;
- the significance of nontraditional careers for girls who want to earn a good living;
- the connection between courses taken in school and career options;
- the rapidly changing economy and its implications for jobs of the future; and
- the accessibility of community colleges and information on financial aid possibilities to two-year and four-year colleges.

It is important to note that middle grades students do not need to choose a career during these years, nor do they need to know the nuts and bolts of how to get a job. Rather, they need to understand why what they do now matters in the long run. More focused guiding of students into specific careers should be left to the high schools and colleges. (Such approaches are discussed in later sections.)

Career Awareness

Career awareness in the middle grades is nothing new. Yet most approaches to career awareness do not go far enough in making the issues and ideas come alive for students. As the Center for Human Resources notes in *Future Options Education,* career awareness curricula that rely on textbooks or other paper-based teaching methods are too passive. And too much of the career information available to middle grades youth is poorly tailored high school material.

Ultimately, career awareness activities should help students begin to understand that they have some special talents and interests and that they, as individuals, have the potential to play a special role in the world as they apply those talents and interests. Activities should push students to think beyond their or their families' current expectations of themselves.

Ideally, a developmentally appropriate sequence of career-related activities should be infused into an already integrated academic curriculum including language arts, social studies, mathematics, and science. These activities should also allow students to test and further their own decision-making and analytical or problem-solving skills. As students are encouraged to consider challenging careers and the levels of education associated with them, adults who offer guidance to students must help them "connect the dots" by ensuring that students take the courses that are prerequisites for those careers.

While middle schools must do the hard work of integrating career awareness into their own curriculum, partnerships with high schools, post-secondary institutions, and the broader community can play an important role in career awareness efforts. At a minimum, high school counselors might visit middle schools to share information with students about course choices in

CAREER LINKING PROGRAM

Five years ago, at Kosciuszko Middle School in Milwaukee, Wisconsin, Val Wiebeck realized that after teaching for 15 years, she needed a new approach to her work. She and her colleagues have created the Career Linking Program that is similar in many ways to the career awareness efforts at Albert G. Prodell Middle School (see page 21). However, Wiebeck works with eighth, rather than seventh, graders and puts a special emphasis on breaking all race and gender stereotypes about occupations, recruiting, for example, female engineers and male nurses to speak to classes. Another difference is that Kosciuszko's program is not staffed. Wiebeck is a full-time teacher, serves as the lead science teacher for the school, and coordinates the Career Linking Program.

She has been frustrated at the lack of linkage between the middle and high schools in building on the learnings from Career Linking. This year, as part of Career Linking, eighth graders will shadow high school students for a day. Wiebeck hopes this provides a foot in the door for her in the high school. Despite these frustrations, students see results. They are beginning to choose high schools in Milwaukee's magnet system based on their career interests and are selecting more difficult math courses than they would have otherwise. As Wiebeck notes, "Kids will believe outside people about what it takes to succeed in the real world a lot more than they'll believe their own teachers."

KING FAMILY CONFERENCE CAREER GUIDANCE AND COUNSELING PROGRAM

At the Martin Luther King, Jr. Academic Middle School in San Francisco, most students are from disadvantaged families and enter middle school already behind. The school, however, sets a climate of high expectations with the assumption that each child will have a successful career and must be prepared to meet the complex demands of a changing workplace. According to James Taylor, the school's principal, "We assume all our students will enter an occupational field and that the only limitations they will face will come from themselves." Through the King Family Conference Career Guidance and Counseling Program, the school integrates career awareness and exploration into the curriculum for both seventh and eighth graders.

The program begins with an all-day Saturday workshop, for all seventh and eighth grade students and their families, during which the reality of the demands of the future workforce are brought home. Two all-day Career Days are held over the course of the year, during which 25-30 speakers come to the school to talk about various careers. For eighth grade students, this core exposure is augmented with field trips, which are integrated into the school's interdisciplinary team instruction.

Local colleges and universities come to the school to talk with students about how to prepare for college in high school and the availability of financial assistance. High school representatives come to the middle school to meet with eighth graders about course selection for ninth grade. They are fortunate to be able to use a booklet called, Futures: Making High School Count, *prepared by a statewide consortium of community colleges, state colleges and universities, and the state department of education, which provides clear information to students about what is required in high school if they want to go to college.*

the high school. This need not wait until the end of eighth grade. In fact, students would do well to visit with high school staff on a regular basis, beginning early in middle school.

Colleges and universities can visit middle schools and host tours of their own institutions, to inform students about their programs and to encourage students to prepare for attending college. This type of effort is widespread. More creative and aggressive efforts have been focused primarily in working with middle and high school students interested in math and science careers. (These efforts are discussed in the next section.)

Service Learning

While not devoted primarily to career awareness, service learning—supervised activity helping others in the school or community—has an indirect

PATHWAYS TO SUCCESS: INDIVIDUALIZED EDUCATIONAL AND CAREER PLAN

Developed by several guidance counselors, "Pathways to Success" is a career awareness and guidance process in place at Crete-Monee Junior High School in Crete, Illinois. The process begins with a nine-week unit for eighth grade students, during which students begin to identify their own strengths, values, and interests and explore various careers. Instructors emphasize the importance to students of keeping their options open and pushing themselves toward higher education.

By the end of the unit, students have developed an individual educational and career plan that they take with them to high school. Ron Allen, the program's designer, notes that, "As a result of the course, students are more turned on to learning, now understanding that school is actually linked to something "real"—it is a great motivational tool."

With this plan in place, students enter high school fully prepared to work with guidance counselors on course selection, and the decisions they make are well-informed. Students work with this plan throughout high school in individual meetings with their counselors. Over the eight years that Pathways for Success has been in place, the rate of enrollment in some kind of post-secondary education has risen from 50 percent to 85 percent.

Since the original publication of Walking the Talk, *Crete-Monee has changed from a junior high school to a middle school. As part of that transition, Pathways instructors have integrated the eighth grade instructional unit into the broader school curriculum.*

ALBERT G. PRODELL MIDDLE SCHOOL CAREER EXPLORATION

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Albert G. Prodell Middle School on Long Island, New York, formerly known as Shoreham-Wading, has been committed to exposing its students to careers and the educational requirements of those careers for almost two decades. Efforts began through the voluntary work of a handful of teachers and counselors, and despite the school's commitment to this work, no teachers have ever been required to build career awareness into their curricula. This bottom-up approach, which involves both specific career exploration and service learning, has worked well for the school and its students, and now all teaching teams embrace career awareness as a key component of their curricula.

Albert G. Prodell's instruction in general is organized around two-person teaching teams who collaborate throughout the year. This approach and the fact that the teaching teams have common planning time enables a thorough integration of career awareness into the curriculum. Career exploration centers around four to five occupational fields, which are chosen based on the students' interests identified through a series of psychological and vocational tests taken by seventh graders. Each teaching team will then lead a career unit, lasting four to six weeks, during which students will investigate a specific field. This investigation includes site visits, as well as hearing speakers in the classroom. For example, students researching medicine might visit a hospital, a veterinary clinic, a small pediatrics practice, and a dental school.

Emphasis during these visits is on having students actually observe people at their jobs and see the setting, equipment, and tasks performed. Winnifred Pardo, one of the pioneers of the career awareness efforts at Albert G. Prodell, notes that, "No amount of book learning can take the place of visits into the community." Interspersed with these site visits might be visits to the classroom by a parent who is a physical therapist, or other community people who work in other medical professions.

Before visiting specific workplaces, each group of students visits the high school career center where they gather information about various occupations within a field, including a description of the job, the current pay, and educational requirements. Students are then helped in learning about colleges that have training programs in those occupations. Before they go on site visits, they compose interview questions, and they write thank-you notes upon return. Later they give oral reports on their learnings to share their experiences with other students.

The school's career exploration efforts began from the "bottom" but have now been fully embraced from the "top", and funding is provided for a full-time community service teacher. This teacher also coordinates Albert G. Prodell service learning component. In ensuring that the learnings from the career awareness efforts of the middle school are not lost in the shuffle to high school, Albert G. Prodell relies on its advisor-advisee system. Each student's advisor helps the student in planning his or her ninth grade curriculum.

benefit of exposing students to specific careers and developing skills valued in the workforce such as working cooperatively, setting goals, and managing one's time.

In today's society, while children reach physical maturity younger than ever before, we consign them to roles as students and children until age eighteen. Young adolescents welcome opportunities to take on responsibility, to help others, to explore the adult work world. When they are given such opportunities, they are more likely to believe they have a place in society, set positive goals, and achieve in school.

Service learning programs are a way to provide these opportunities for middle and high school students. In addition to the indirect benefit of exposing students to specific careers and developing work-related skills, service learning teaches social and civic responsibility and motivates young people to learn by giving them real world problems to solve.

Documented outcomes of service learning include: heightened concern for others; the ability to work cooperatively; self-motivation to achieve; improved self-concept and confidence; and a sense of usefulness to the community.

MAKING A SPECIAL PUSH TOWARD TECHNICAL CAREERS

The now oft-cited Hudson Institute *Workforce 2000* report notes that, "If every child who reaches the age of 17 between now and the year 2000 could read sophisticated materials, write clearly, speak articulately, and solve complex problems requiring algebra and statistics, the American economy could easily approach or exceed... [a] boom scenario." This statement is debated some, but is still considered the reality. Implicit in it is the fact that many new higher paying jobs of the future will be based in technology and will require high levels of understanding of math and science, as well as problem-solving, critical thinking, and good communication skills.

MDC's *Greater Expectations* notes that, "National and regional projections show that rapid growth in high-skill professional and technical occupations will be paralleled by growth in low-skill retail trade and personal and health services. On the high end, the economy will require computer programmers and technical systems analysts, and registered nurses." The report goes on to note that even traditionally blue-collar and service jobs will require much greater levels of technical sophistication than they have in the past. For example, fast-food restaurants are eliminating the $5-per-hour jobs and creating $20-per-hour jobs for technicians to tend to laser cooking systems.

The challenge to the South and to the rest of the country in facing down these projections is to move toward high-skill, high-wage jobs. These jobs will be available to our children only if they are prepared for them. *Greater Expectations* notes the current underutilization, and, therefore, lower-wage status of women and minorities. By and large, our schools are doing little to break these stereotypical employment patterns.

Students need to be aware of a broad range of careers and of the related needs for post-secondary education. For those who are identified early as having a propensity for math and science, schools can work to build their talents and guide them—

VALUED YOUTH PARTNERSHIP PROGRAM

San Antonio's Valued Youth Partnership Program uses service learning as a vehicle to motivate at-risk students to stay in school. Before the program's inception, 45 percent of Hispanic youth were dropping out of school and half of those dropped out by ninth grade. The Valued Youth Partnership Program takes potential dropouts at five middle schools, trains them as tutors, and assigns each to a few students at an adjacent elementary school.

Cross-age tutoring programs typically find that the tutors make even greater gains in achievement than those they tutor, and this program is no exception. Virtually all tutors have remained in school, despite the fact that all had been held back two or more grades. Disciplinary problems have become less severe, grades have improved, and the attendance rate for tutors is high. In addition to tutoring, students have the opportunity to meet community leaders who grew up in their neighborhood, and they receive community recognition and status for their work.

H. U. G. S. S.

H.U.G.S.S. (Helping Us Grow Through Service and Smiles) is a service learning program thoroughly integrated into the curriculum of Challenger Middle School in Colorado Springs, Colorado. Each of the school's nine academic teams adopts a community agency or project for the school year and plans opportunities for student involvement. Service projects provide a vehicle for interdisciplinary study. For example, if a team is working with the elderly, students might learn about demographic statistics, medical technology, social programs, and the problems of the elderly.

Students have the opportunity for exposure to a wide variety of service agencies, from Head Start to nursing homes, or the Colorado Wildlife Association to the State School for the Deaf and Blind. As part of the learning process, students are required to reflect on their experience by contributing to a team journal and to discussions with the community participants. An important benefit of the service program has been to set a tone of caring at the school by placing value on helping others.

particularly girls and minorities, who are underrepresented in technical fields—toward post-secondary technical training. This serves students' long-term economic interests by increasing their personal earning power. In addition, the region's economy will be strengthened by a more highly skilled workforce. Both community colleges and four-year institutions can play a role in pulling middle and high school students into technical fields.

Tech Prep

A leading response to the challenge outlined above is "tech prep" or "2+2" programs (two years in high school, two years in college). In a tech prep program, one or more high schools and community colleges enter into an articulation agreement under which students complete a series of coursework leading to a certificate or associate degree in a technical field. Under this arrangement, the high school adds "applied academics" to its offerings, replacing the general education and/or vocational track with more challenging applied math and science courses that teach critical thinking skills.

Variations on the 2+2 approach include 2+2+2 efforts, in which students move from the community college to a four-year college or university. A current barrier to these efforts in some places is the inability to transfer credit from some applied-learning courses in high school and community college to four-year institutions, although this barrier is expected to disappear gradually as systemwide agreements are worked out state by state. Also, some tech prep programs are structured as 4+2 programs, so that ninth grade students are on the technical education path in high school from the beginning.

At its best, tech prep expands opportunities for students who otherwise would not have gone to college. It offers them challenging, stimulating classes in high school and provides a direct route to community college. It prepares them for high-paying technical jobs and leaves the door open if they want to pursue a four-year degree.

The results of strong tech prep programs are impressive. In Richmond County, North Carolina, the site of a leading tech prep program, the dropout rate has declined from 29 percent to 12 percent, and the proportion of graduates enrolling at Richmond Community College as well as other two- or four-year institutions has grown from 50 percent to 70 percent overall.

However, not all programs are so strong. The tech prep model is being implemented rapidly in communities across the

TRIDENT AREA CONSORTIUM FOR THE TECHNOLOGIES

The Trident Area Consortium for the Technologies near Charleston, South Carolina, is a three-county collaborative effort between Trident Technical college, five major area businesses, and four school districts. Aimed at institutionalizing a 2+2 tech prep system, the Consortium was launched two years ago with federal funds allocated through the Carl Perkins Act. The goal of the Consortium is to develop an alternative "track" for all of the area's students who are not on the college prep course of study, thereby putting more students on a path toward good jobs or post-secondary education.

As part of Consortium efforts, schools have eliminated the general track and are in the process of consolidating vocational education into tech prep. Rather than concentrating in a narrow vocational field, students will "major" in a career cluster (e.g., business, industrial engineering, health care), drawing from a variety of vocational and applied academics courses. And students will graduate well prepared to attend Trident Technical College. Bob Carter, director of the consortium, notes that given their belief that "all children can learn", any student not on the college prep track ought to be guided towards higher education through tech prep.

School systems in the three counties test all eighth graders to begin identifying student interest and abilities. Test results are used to help students choose the tech prep or college prep track in ninth grade. Backers of this effort are committed to ensuring that tech prep students can elect to switch to the college prep track up until the eleventh grade. After that point, students will have selected a career cluster and are likely to have gone too far in that area to easily transfer to college prep. At the same time, Trident Technical College is working to ensure that students working toward a degree under the tech prep program will be able to use those credits towards a four-year degree, if they should choose to continue their education.

As a multi-institutional partnership, the Consortium is guided by a governing board, composed of district superintendents, the community college president, and business leaders. Day to day work is overseen by a steering committee composed of vocational and academic teachers, as well as guidance counselors.

MID TECH AT CATAWBA VALLEY COMMUNITY COLLEGE

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When he landed at a middle school after years as a high school teacher, Lester Moats quickly saw where the "problem students" at the high school were coming from. He realized that if the great abilities of many middle school students were not properly tapped, their chances for real academic success at high school would be lost. The result of discussions about the dilemma with colleagues led to the establishment of Mid Tech, an alternative middle school located on the campus of Catawba Valley Community College, in Hickory, North Carolina.

Mid Tech is a school for about 32 seventh and eighth grade students (30 percent of whom are girls) who are not living up to their academic potential. The emphasis at Mid Tech is on the applied, with career awareness an integral part of the schooling. The vocational education teacher, Diane Morrison, introduces students to six careers each year. Given the school's location on a community college campus, she is able to learn directly about a wide array of occupational fields herself and is able to bring her students to laboratories where they can see and work with technical equipment. Students also visit local businesses to see careers in action.

Whereas students once questioned the value of learning, Morrison notes, "The one question we never hear from our students is 'why do we have to learn this?'" She adds that a major benefit of the school is that kids are taken out of an atmosphere where they have become used to being on the bottom and are put in a setting where they realize that the only person they have to compete with is themselves. Over time, students become more clear about their career interests, and staff and the guidance counselor (who visits from another school each Friday) work with students to clarify the educational requirements of those fields. Most of the Mid Tech students will attend a high school in which tech prep is in place, in effect, creating a 2+4+2 program.

The community college role in this partnership has been one primarily of support. It provides space for the school and an "open door" policy towards Morrison and the students as they learn about various occupations. The college believes that this effort is in its best interest if it wants to enroll students who are well-educated and determined to finish with a degree.

Mid-Tech is no longer operational at Catawba, and Lester Moats and Diane Morrison no longer work at the college.

country, and observers fear that in some schools it narrows rather than expands opportunity for the "neglected majority" of students. Phyllis Hart, of California's Achievement Council, has found many high schools that have implemented tech prep in name but have not made substantial curriculum changes. Students are not learning the critical thinking skills needed to prepare them for technical careers or to change careers later in life. She fears that unless school attitudes toward students' capabilities change, tech prep may become just another form of tracking, steering many bright low-income and minority students away from a college preparatory curriculum.

Some of the keys to a positive tech prep program are: a challenging curriculum in high school; quality curricula at the community college level; a strong relationship and good communication between the high school and community college; and a school philosophy that encourages each student to achieve his or her fullest potential. The latter also means building in flexibility, so a student who chooses tech prep at age 14 or 15 has the option of changing his or her mind and going on for a bachelor's degree.

Youth Apprenticeship

At the same time the tech prep model has been spreading like wildfire across the country, another approach to helping young people enter technical careers has sparked interest among educators and employers. Youth apprenticeship, a popular route to shepherd young people from high school to the workplace in Europe, is being tested in selected sites in the U.S. The model is similar to tech prep in that it straddles at least two years of high school and two years of post-secondary learning; it differs from tech prep in its emphasis on on-the-job learning. Because of this, it has advantages for students who are inclined toward entering a technical occupation but do not thrive in a classroom setting.

Jobs for the Future is currently spearheading a national research and demonstration program to bring the European model to the U.S. While the individual programs may differ, basic elements include engaging students during eleventh and twelfth grade and for two years post-high school and linking employers, high schools, and community colleges to combine

classroom and on-the-job learning. Graduates receive both academic and occupational credentials, including a high school diploma, up to two years of college credit, and certification of technical competency in their particular fields.

A Focus on Girls and Minorities

MDC's *Greater Expectations* noted for the South what others have found nationally: that education and training programs tend to reinforce traditional sex and race bias in the labor market. As noted earlier, minorities have higher high school dropout rates than whites, and women and minorities are underrepresented in the college preparatory courses. Women typically prepare themselves for clerical or service jobs, while men train for high-wage skills trades. Similarly, disproportionate numbers of black students are steered into general education tracks, resulting in dead-end jobs.

A number of programs exist to move girls and minorities into math and science-based fields, opening the way to the higher-wage jobs of the future.

ARKANSAS YOUTH APPRENTICESHIP

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With the enactment of legislation in 1991, Arkansas became the first Southern state to embrace youth apprenticeship, and in 1992-93, programs will be up and running in six sites. The programs will enroll students at the end of tenth grade for three to four years of education and structured on-the-job training (OJT), leading to either an associate degree or U.S. Bureau of Apprenticeship-recognized certification. All six sites involve consortia of high schools, post-secondary schools, employers, and (if relevant) labor unions.

Most sites are offering programs in allied health, leading to certification as an LPN, radiological technician, respiratory therapist, or other technician. Other occupations for which training is offered at one or more sites include industrial maintenance, retail management, and machine tool technology.

The machine tool program is a particularly interesting one because it involves a manufacturing network of 63 metalworking firms located in rural south central Arkansas. These firms became interested in Youth Apprenticeship as a solution to the problem of poorly qualified entry level workers in the region. During the junior and senior year of high school, the last two periods each day are replaced with paid OJT. After graduation, students choose between: (1) a 40-hour week that includes four days of OJT and one day of classroom instruction and leads to certification as a journeyman after four years; or (2) a work-study program at a two-year or four-year college which includes a few hours of OJT each day and results in an associate degree. The program began in the summer of 1992 with 35 students enrolled.

PICKENS COUNTY YOUTH APPRENTICESHIP

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The Pickens County School District in South Carolina is developing a youth apprenticeship program in conjunction with local employers and Tri-County Community College (which also has a strong tech prep program). The program is starting small, enrolling just six students in computer electronics in 1992-93, and planning to expand in 1993-94 to include three more fields: machine tool technology, health, and business.

The program begins with job shadowing in eleventh grade; in twelfth grade the students move into a half-day of school plus 20 hours of on-the-job training per week. After graduation, students enroll in a degree program at the community college while continuing 20 hours of OJT each week.

Pickens County has several foreign manufacturing companies which have been enthusiastic about Youth Apprenticeship from the start. Other employers have been somewhat slower to get involved, although support is growing. As in many areas of the South, the term "apprenticeship" is linked to "union" and tends to alienate nonunion employers. In Pickens County the program has dealt with this by often referring to the program as "workplace experience".

▶ GUIDING STUDENTS ALONG THE WAY

We have talked up until now about the need for career awareness and the value of directing some students toward technology-based careers. Regardless of a student's specific career interests, however, the

WOMEN IN TECHNOLOGY PROJECT

Recognizing that girls were losing interest in math and science in middle grades years and that they were unaware of its relevance to their career options, administrators at Vermont Technical College established the Women in Technology Project. The project is three-pronged, including:

- *a statewide speakers bureau of 90 women working in math and science careers who visit schools to talk about technological fields in general and their careers in particular;*
- *shadow days at Vermont Technical College and at workplaces for area high school girls interested in exploring technical careers and for young women who have been accepted to Vermont Technical College; and*
- *a Summer Technology Camp for girls entering seventh and eighth grades at which women engineers, technicians, and scientists serve as instructors for a curriculum that emphasizes hands-on learning activities, including field trips to nearby industry. A Math and Science Institute is offered as a follow-up camp for alumni of the Summer Technology Camp.*

Future plans include involving teachers at the summer programs so that they will have a greater impact in the classroom. The project staff are also considering ways to expand the program into the high school level.

MEDICAL SCHOOL FOR KIDS

A joint partnership between Dade County Public Schools and Miami Dade Community College Medical Center Campus, Medical School for Kids is designed to introduce disadvantaged minority seventh and eighth graders to career opportunities in the health care industry and to reinforce the idea that they can achieve in secondary and higher education. The program involves an intensive ten-week summer school program on the Medical Center Campus and includes an orientation to Nursing and Allied Health programs, science instruction and experiments, CPR training, and field trips to hospitals and Epcot Center.

The Medical School for Kids was initially envisioned as linking with a planned magnet medical high school. Plans for the high school are currently on hold, but the program continues to operate, believing that children can be turned on to math and science in new ways.

MATHEMATICS, ENGINEERING, SCIENCE ACHIEVEMENT (MESA)

Begun in 1970 at Oakland Technical High School in Oakland, California, MESA is a school-based academic support program designed to increase the number of low and middle-income minority youth who graduate from four-year universities with a degree in engineering, computer science, or other math-based fields. The program has spread nationwide; in California alone there are MESA programs in 240 schools.

Program components include:

- *a requirement that participants take four years of math, English, and a foreign language in high school;*
- *special MESA courses in math and science to strengthen skills;*
- *tutoring services and tutoring of others;*
- *use of alumni as role models for participants;*
- *training in test-taking skills;*
- *field trips;*
- *a summer program focused on academic instruction and exposure to high school and college life;*
- *voluntary teacher training for math and science teachers, to increase their knowledge of subject matter, increase their ability to use hands-on curricula, and sensitize them to needs of minority students; and*
- *assistance with college admission.*

Stretching the educational continuum in both directions, the statewide MESA has established Junior MESA to funnel middle grades students into high schools offering the program; also, 20 colleges and universities sponsor the allied MESA Engineering Program—a support system for undergraduates.

prerequisite is staying on a learning path and completing high school and post-secondary education with the necessary knowledge and skills required to move on. This requires high support on top of high expectations and high content.

Middle and High School Years

Keeping disadvantaged children and young adults in school and turned on to learning is no easy task. Middle school-age children are undergoing dramatic physical and emotional changes which can interrupt academic progress and lead them into trouble. The 1988 Survey of American Teens undertaken by the American Home Economic Association found that among juniors and seniors in high school:

- six in ten said they have a friend who has considered suicide;
- five in ten had friends taking drugs;
- only 47 percent seek parental guidance; and
- one in six said they had no one to turn to for advice.

For some students the pressure to fail is much greater than the pressure to succeed. For this reason, schools, families, and the broader community must go beyond teaching an academically rigorous curriculum or offering exposure to careers. What is required is a two-fold effort that increases attention to academics outside of the classroom and provides the guidance and support necessary for countering other pressures.

Schools can create a high support environment in a variety of ways, including dividing students into smaller groups—often called "families" or "homes"; assigning the same team of teachers to work with each student group for more than one year through advisor-advisee models; providing students with an opportunity to relate one-on-one with an adult through mentoring; ensuring consistent messages about success and expectations between the school, family, and broader community; and ensuring access to services for students and their families.

High support is inextricably linked to high expectations. Any approach to guidance and counseling needs to ensure that middle school students pursue the right sequence of courses for high school and post-secondary studies. In high school, students need continuing advice on course selection, as well as assistance with career and post-secondary options. Teachers and guidance counselors can play an important role in helping students think

PHINAES BANNING HIGH SCHOOL

At Phinaes Banning High School in Los Angeles, guidance of students toward college came about through the efforts of two guidance counselors and a teacher, unrelenting in their commitment to academic achievement for all students. Their approach points to how the efforts of guidance counselors, with the support of other faculty, can turn around a school.

When Phyllis Hart arrived at Banning as a counselor, she was faced with three realities. First, only five percent of school graduates were going on to college, and the majority of faculty and administration believed that this was all who were capable of college prep work. Second, even those who went to college reported major difficulties keeping up with college peers. Lastly, incoming junior high students had high career aspirations and no understanding of how they needed to prepare for those goals in high school.

With this knowledge in mind, Hart and fellow counselor Helen Monahan introduced a three-part college core curriculum that would be open to any interested student at Banning. Participation in the curriculum required entering into a three-way contract between students, parents, and teachers. Students pledged to study daily, attend classes, keep a "C" average, and make academic achievement a top priority. Parents committed to reviewing progress reports, providing a study area at home, and communicating frequently with teachers and counselors at the school. The school pledged to deliver the new curriculum in a way that students would be successful in their courses.

Hart actively recruited students from the feeder junior high school into the college core curriculum through visits to each class of eighth graders. During these visits, she made very clear to students the link between student career aspirations and educational attainment.

Over the years, school faculty have developed a more challenging curriculum, and parents have partnered with the school to establish an academic booster club and raise money for tutoring. The club gives academic achievement awards to students and academic parenting awards to parents.

One-third of all students sign up now for the college core curriculum, and 65 percent of the school's students go on to college—including local community colleges as well as Ivy League schools.

MARTIN LUTHER KING, JR. ACADEMIC MIDDLE SCHOOL

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Martin Luther King, Jr. Academic Middle School, whose King Family Guidance and Counseling Program was described earlier, exemplifies a whole-school philosophy of caring and support—both academic and personal—for students. The school sets out its commitment to this support in its official statement of philosophy: to "provide a nurturing environment designed to develop the full learning potential of each individual. Responsibility for insuring academic excellence is shared by the student, the school, and the home."

School guidance is organized around an advisor-advisee program, through which counselors follow the same group of children from the sixth through the eighth grades. Counselors work with the children on the social issues that may be barriers to their learning, including drugs, race, and class issues. They are a constant in the child's life at the middle school. As James Taylor, the principal says, "We go to weddings, funerals, family reunions... It's part of the way that we live *as counselors." Teachers are also involved in the school's advisory model in that three of five homeroom class meetings are devoted to guidance-related discussions and activities.*

While the school does not track by ability during the school year, it offers a voluntary summer program on area college campuses, with three "tiers", for students at the end of eighth grade. The purpose of the summer program is to boost academic learning and/or ensure that ground is not lost over the summer.

For the most advanced students, rigorous instruction is offered with an aim toward the total enhancement of all subject areas that students will take in high school, with classes taught by high school and college faculty. For students with a mid-range of current achievement, instruction is geared to strengthening key skills areas and helping students become aware of areas they'll need to focus on in high school. Students who require remedial instruction review what they should have already learned, with the goal of providing enough fortification so that they will not lose ground over the summer.

systematically about their future and about how their aspirations relate to their curricular decisions.

The traditional model of providing guidance to students gives a small number of school counselors sole responsibility for a range of guidance and counseling activities, including mental health services, course placement, and career and college counseling. Considerable experimentation is underway to find new models in which the total school faculty is involved in guidance, with the counselors working with faculty to facilitate the guidance process.

Phyllis Hart, in her book *From Gatekeeper to Advocate,* suggests that there are four fundamental changes required of counselors in order for the system of school guidance to improve. These include:

- Guidance counselors must embrace a belief in the capacity of all students to learn and then provide emotional support and encouragement. This means providing tangible support to help students acquire needed skills and information (e.g., through study groups, tutoring referrals)

ACCESS TO SUCCESS

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A partnership between the University of Missouri at St. Louis and area schools, Access to Success works with several hundred disadvantaged students in grades six through eight. The program has several components, including:

- *science-math-computer clubs, which meet weekly or biweekly after school and are led by classroom teachers; and*
- *Saturday Academies, eight-week fall and spring programs offering science and math activities, recreational activities, and academic counseling on the college campus, led by university students.*

There is no direct follow-up of children participating in this program as they enter high school, but they are invited to participate in the University's Bridge Program, which is a four-year program for high school students. This Program serves students with an interest in math and science and in going to college, through Saturday and summer academic workshops.

Since the Access to Success program is only five years old, results—in terms of increased college attendance—are difficult to measure, but program staff note that students' test scores are improving and that they are "turned on to learning".

and serving as advocates for students within the school and the community.

□ Counselors must become a force for school reform and education improvement, advocating their philosophy and helping other faculty understand how they can help students maximize their potential. Hart notes that in this regard, counselors are in a unique position due to the breadth of their perspective within a school.

□ Counselors should serve as coordinators of existing resources

MIDDLE COLLEGE HIGH SCHOOL AT LAGUARDIA COMMUNITY COLLEGE

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Established in 1974, Middle College High School is one of five alternative high schools in New York City jointly administered by the City University of New York system and the New York City Board of Education. Middle College's mission statement aptly describes its emphasis:

"to serve students who have experienced limited success, motivation or support by providing a small personalized environment on a college campus with concrete connecting experiences to the next stages of their academic, social, and vocational lives. We seek to increase students' knowledge, self-esteem, expectations, performance, and respect for all."

Early in its inception, LaGuardia Community College was attracted to the idea of the school as a way to increase enrollments and to reduce the need for remedial education of their future students. Now the College sees the benefits as more far-reaching. College faculty collaborate with high school faculty about curriculum questions, which raises their own creativity in their classrooms. Faculty also get a good look at their future students and, therefore, have a better idea of who they will be teaching.

According to Don Freeman, the school's assistant principal for guidance, three factors make the school different: the college campus setting, the career education component, and the approach to guidance. All high school teachers are "adjunct professors" at the college, and many of them do teach at the college. This relationship ups the intellectual rigor among high school faculty. Also, the school is able to use all of the facilities of the college, including the library and science labs. About one-third of high school students take courses for college credit, after passing the College's Freshman Skills Assessment Test.

The program has an intensive six-part career education component that alternates classroom study with internships. Classroom activities help students discover their interests, understand their role in society, and make decisions about college. This, combined with a series of internships, gives students excellent work experience and thorough knowledge about the post-secondary requirements for their areas of interest and about how to pursue and pay for that education. During internships, students meet once a week with each other to share experiences, successes, failures, and future goals.

The third component that makes Middle College what Freeman calls a "humanistic school" is good guidance. The school is organized into "houses"—small groups of students who meet with a teacher each week—focusing on issues of self-esteem and other barriers to learning inside or outside of school. The school has a staff of eight counselors and paraprofessionals, each of whom has responsibility for a "family" of students.

After years of blaming parents for the problems of their students, in recent years the school has made a concerted effort to involve parents in the guidance process. Parent support groups are offered, a theater workshop has been used for students and their parents to work on family issues, and parents have been invited to use the facilities of the campus for their own resume writing. Staff know they have a long way to go until they are satisfied with the level of parental involvement. They have discussed allowing parents to attend the college at a lower cost, but funding is not available for this yet.

Middle College has seen success in moving students to two-year and four-year colleges. About 85 percent of the students go on to college. Another stated goal is to reduce the amount of remedial education required by students when they enter college; staff acknowledge they have been less successful at this. Given the success of Middle College, the Ford Foundation has invested in replicating the school in nine other states. In the South, a Middle College High School was established at Shelby State Community College in Memphis, in 1987. It, too, has a high graduation rate of 80 percent.

CAREER BEGINNINGS

Career Beginnings is a national initiative to establish collaborative efforts between high schools, colleges, and businesses with the aim of increasing the number of high school students from low-income families who complete high school and enter college, technical training, or the workplace. Begun in 1986, the initiative is managed by the Center for Corporate and Education Initiatives at Brandeis University and is currently in place at 100 sites across the country. At each site, the program is based at a college campus—either a community college or a four-year institution—and is administered by a paid staff person.

Career Beginnings is based on the premise that there are young people in the middle 60 percent of their class in achievement who are disadvantaged economically, socially, and educationally, but who with careful attention can enter college or start working in an entry-level job with career potential. The average participant is poor, black or Hispanic, and from a single-parent family. The program designers acknowledge that the students are at risk, but they are not the most at risk. The focus here is on average students who have the potential to improve their performance within a short period of time without massive intervention.

The program begins with the identification of 100 students at the start of their junior year. For the next two years, they are provided with:

- *an adult mentor from the business community, with whom the students meet at least monthly to discuss career and college planning;*
- *ongoing advising, advocacy, and counseling during the school year and summer by "student advisors" who are counselors or high school or college teachers, each of whom serves 15 students;*
- *case-management at the high school that allows for "early warning" if the student requires intervention;*
- *entry-level, private-sector jobs during the summer, so they begin to understand the demands of the workplace and earn needed money;*
- *weekly "enrichments" classes during the summer, that include academic review and tutoring, as well as seminars on career awareness, college preparation, applying for college, and decision-making; and*
- *remedial training in basic skills, where needed.*

While the program is coordinated on the college campus by paid staff, its success hinges on a strong partnership with the business community and high schools. Since its inception, more than 70 percent of its high school graduates have entered college, and most of them are seeing it through.

The Center for Corporate and Education Initiatives has changed its name to School & Main, and is now located at New England Medical Center. Career Beginnings remains one of its program offerings.

by training all school staff to participate in the guidance function and by tapping community resources, such as social service agencies, to help meet students' needs.

- Counselors and other school personnel must be held accountable for students' achievement levels.

Given what we know about the potential for children to tune out during middle school and actually drop out in high school, a variety of programs have been established to offer necessary academic and personal support from inside and outside of the school. The array of programmatic models is rich, and the possibilities of linking middle schools, high schools, and post-secondary institutions are endless.

The Special Role of Families

At the middle and high school level, it is essential that parents understand what it takes for their children to succeed academically. Many parents assume their children will go on to college without realizing what prerequisites colleges require. They must understand the implications of tracking, and what they can do to insure their children take the right courses in middle and high school. Other low-income parents with no tradition of college-going assume that college is not for "their" kids and that even if it were an option, the family cannot afford it. They need to know about the long-term earning differences of high school graduates or dropouts compared to those with post-secondary education, as well as financial aid opportunities that can make college a reality for their children.

Unfortunately, family involvement in the schools drops off substantially after the elementary years. Yet, when families are involved in the school, everyone benefits. Research has confirmed that children whose parents are involved have better attendance, a lower dropout rate, less delinquency and teen pregnancy, and higher achievement. This is true across all racial and cultural groups and income levels. Parents themselves also benefit: they often feel a greater sense of self-worth, and are more likely to resume their own education. Teachers benefit from having more highly motivated students.

In the past, parent involve-

ment typically was seen as an end in itself, and parents' participation was confined to helping in nonacademic affairs, such as chaperoning dances, holding bake sales, or attending student performances. Today schools are at least paying lip service to and, in some cases, actively seeking broader parental involvement as a means to improve academic achievement.

Middle class and more highly educated parents are more likely than low-income parents to seek out opportunities for involvement in their child's school. In fact, schools often term poor and minority parents "hard to reach parents". However, from a parent's perspective the problem is more often "hard to reach schools".

Programs like Schools Reaching Out and TIPS actively reach out to low-income parents. Their experience has shown that schools can successfully involve low-income and minority families, and that, in fact, children from these families have the most to gain from parental involvement.

Middle schools that have good partnerships with parents have several common characteristics, according to Nancy Berla of the National Committee for Citizens in Education:

- ☐ The school has a clear, welcoming parent involvement policy.
- ☐ At least one teacher knows each child well.
- ☐ The school office is friendly; the school sponsors parent-to-parent events, and has a room where parents can gather.
- ☐ Parents and school staff have a good working relationship.
- ☐ A translator is available for parents who do not speak English.

Furthermore, successful parent involvement efforts have some common philosophical underpinnings. They are based on the belief that all children can learn and succeed in school. They stress the importance of serving the whole child, believing that emotional, physical, social, and academic growth are closely linked. And they see each child's development as the shared responsibility of family, school, and community institutions.

TEACHERS INVOLVE PARENTS IN SCHOOLWORK (TIPS)

■ ■ ■

Joyce Epstein and her colleagues at Johns Hopkins University have found that almost all parents want guidance about what they can do at home to promote their children's achievement at school. By the time students reach middle school, their schoolwork is sufficiently complex to discourage many parents from helping. This, combined with the impersonal nature of some middle schools and students' reluctance to seek their parents' help, means parents need guidance more than ever when their children reach the middle grades.

To meet this need, the TIPS program has developed the concept of "interactive homework". In collaboration with inner-city Baltimore elementary and middle schools, TIPS has produced and tested prototype homework assignments and a manual to help schools incorporate them into the curriculum. The prototypes have been adopted by many other schools around the country.

At the middle school level, TIPS homework projects cover science, health, and language arts. For example, a homework assignment on the human body might require the student to tell a family member what he has learned about how the lungs work, and then ask for suggestions on how to keep the lungs healthy. Language arts assignments might involve interviewing a parent about his or her childhood.

Initial evaluation of TIPS in Baltimore found that the program has been successfully implemented in inner city schools. Students enjoy these homework assignments, and as long as they are given several nights to complete an assignment (to accommodate parents' schedules), completion rates are high. TIPS is currently collecting data on outcomes in terms of skill enhancement.

Even without hard data on academic outcomes, the teachers using the TIPS system believe interactive homework has several benefits. The first is simply that it encourages students to discuss their schoolwork with their families. In addition, by involving family members in the homework assignment, interactive homework often helps young people gain respect for their parents, grandparents, older siblings, or others who interact with them. Finally, rather than assigning busy work, TIPS requires children to think—to apply something they have learned in school to a learning project at home.

College Years

Once students enter a post-secondary institution, the job is not over. At a time when college completion is increasingly important, too many students—particularly minority and low-income students—enter community colleges or four-year institutions but fail to complete a degree program. The barriers to success for young adults can be equally as intense as they are for children—even when they have been the recipients of special services in middle or high school. The task of adjustment and adaptation

PROJECT PRIME

Project Prime, based at Arizona State University, aims to increase the number of minority students who go on to college. It works with 30 high schools and 60 elementary and middle schools in predominantly Hispanic or Native American communities in Arizona. Project Prime has several academic components, including an accelerated math program for junior high and high school students and instruction in test-taking skills. It also uses three methods to reach out to parents: Parents as Partners, Family Math, *and* Financial Aid and Academic Planning Information.

Parents as Partners trains minority parents to be effective advocates for their children, to make sure they get the education they deserve. It begins with a series of Saturday morning workshops; the parents then form an ongoing group and elect officers. These groups help give parents confidence and a vehicle to help them become involved in their children's schooling. In some cases Parents as Partners groups have even organized public support for school funding.

Family Math is a seven-week program that brings parents and children (through seventh grade) together for math games. They use calculators, work with graphs, solve problems involving probability, measurement, geometry, and other aspects of math. Both parents and children enjoy and learn from these sessions.

Project Prime works hard to reach minority parents, especially when it comes to providing information on academic planning and financial aid to help guide children on to college. It conducts workshops on "How to Prepare and Pay for College" at schools, churches, private homes, and community centers to reach parents and students who are traditionally left out. In the past these workshops were targeted to parents of high school students, but now Project Prime includes families of younger children. By flooding parents with information early on, such as the importance of taking algebra as a high school freshman, the Project expects to have an impact by the time students make crucial decisions about high school courses.

MILWAUKEE EMPOWERMENT PROJECT

The Greater Milwaukee Education Trust began its Empowerment Project in two middle schools with an all-out effort to increase parent involvement in the schools. Each school hired a parent coordinator who contacted hundreds of parents and doubled the number of parents attending school meetings, parent-teacher conferences, and other functions. In one school with a predominantly black student body and white teaching staff, the project has deepened cultural awareness by bringing parents and teachers together.

The parent coordinators serve a variety of roles. They meet with parents of graduating middle school students to provide guidance on choices about high school. They organize school-community links including tutoring, mentoring, and job shadowing opportunities. And they train parents in basics like reading their children's report cards.

As the Empowerment Project developed, it turned its focus to student achievement. It initiated student-parent-teacher contracts to achieve specific improvements in grade point average, attendance, and the quality of the education program. Despite initial resistance from teachers, who thought the contracts would mean extra work for them, the contracts have had tremendous success, with half the students improving their grades and half having perfect attendance during the period covered by the contract. The contract system has also improved teacher and student morale.

SCHOOLS REACHING OUT

Schools Reaching Out (SRO) began in 1988 as a demonstration program in two urban elementary schools and has grown to a league of 70 elementary and middle schools in 23 states. Its goal is to raise student achievement by forging new relationships among schools, families, and communities. Only if all join forces, SRO believes, can the link between poverty and school failure be broken. Furthermore, SRO is committed to helping low-income parents become more involved in their children's education, recognizing that this entails a variety of nontraditional outreach methods.

While individual members in the league of Schools Reaching Out use different "brand name" projects to achieve their goals (including TIPS, described previously), they share a strong commitment to school-family-community collaboration and a set of common principles. The principles of SRO include:

- *involving not just parents, but other significant family and community members;*
- *reaching out to all parents, not labeling any "hard to reach";*
- *responding to the priorities of parents as well as the agendas of teachers and school administrators; and*
- *focusing on the strengths of families and how they can foster their children's social and intellectual growth, rather than dwelling on families' weaknesses.*

While each SRO school designs its own array of programs, SRO helps middle schools put several elements in place. These include parent centers, collaboration with the broader community, *and* parent-teacher research teams. *The parent center is a place at school where parents can come for support. It is staffed, often by parents. It may offer GED or English as a Second Language classes, host parent-teacher discussions, or provide referral to social service agencies.*

Community collaboration can take many forms; often at the middle school level it involves bringing mentors from the community into the school. Parent-teacher "action research" brings together teams of teachers and parents to study the effectiveness of programs like a parent center or mentoring project. It has the secondary benefit of building mutual respect and understanding between teachers and parents.

often is more than they can handle, and interventions are needed to help.

Richard Richardson has extensively researched best practices of public colleges and universities that have successfully retained minority students, who he aptly notes, "will represent half of the entering labor force sometime in the next century." Richardson believes, "It is clear from the experiences of the past decade that institutions with the will to improve participation and graduation rates for underrepresented groups can do so." The institutions work hard to reduce barriers to entrance and help students cope with college academic expectations. They also take steps to improve learning environments and institutionalize interventions. Richardson stresses the need for colleges to:

- help first-generation college students and their families cope with procedures and forms for requesting financial assistance;
- adopt comprehensive programs for identifying promising junior and high school students, strengthening academic preparation before matriculation, helping in the transition to college, and supporting academic achievement;
- provide first-generation college students with special orientation and other transition experiences, including class scheduling to encourage networking and mutual assistance;
- assign mentors to first-time college students;
- provide "intrusive" academic advising;
- improve the campus climate for student diversity by portraying cultural differences as a strength;
- provide free tutoring and mandatory instruction in basic skills to all who would not otherwise perform at levels required for success.

Community colleges and four-year institutions across the country are testing efforts to better retain disadvantaged students. Two notable efforts are Higher Ground and the approaches used by Bronx Community College.

HIGHER GROUND

Brandeis' Center for Corporate and Education Initiatives has launched a four-year, multi-site national demonstration called Higher Ground, aimed at increasing college retention among low-income minority students attending two- and four-year colleges. The program incorporates many of the suggestions promoted by Richardson.

Higher Ground is in place at six colleges that also house Brandeis' Career Beginnings program, so that it can build on the investment that Career Beginnings makes in nurturing the ambitions of minority high school juniors and seniors. The program is a collaborative effort, based at the college but involving the wider community. Each site is staffed by a full-time coordinator.

Several components work together to help students succeed, including:

- *pre-college orientation, during which students visit the campus, attend sample classes, explore the library, and meet other entering students;*
- *an intensive mentoring effort, with peer mentoring by upperclassmen for students before they begin college, faculty mentoring during the student's first year, and community mentoring in a students' third and fourth years, with someone in a profession related to the student's major;*
- *assistance in locating work-study jobs during the first two years and career-related internships in the third and fourth years; and*
- *extensive ongoing social support and academic skill development.*

The program is in its third year of a four-year demonstration, so results are only anecdotal, but so far the investment seems to be paying off.

Higher Ground, as with Career Beginnings, is now housed at New England Medical Center as part of School & Main.

BRONX COMMUNITY COLLEGE

Bronx Community College in New York City understands that its students, 95 percent of whom are black and 85 percent of whom are the first in their families to attend college, need plenty of support to make it through college. The College has determined what it takes for students to succeed in their course-work, and it then tests incoming students to see if they have those competencies. For those who do not, the College requires certain prerequisite courses.

In addition to testing students and placing them in necessary remedial education, the College has a Personal Academic Support Success Center, which offers academic assistance that responds to a variety of learning styles. College faculty are beginning to work with area high schools, particularly in the areas of writing and math, in order to smooth the curricular transition from high school to college.

Over time, college suspension rates have decreased, and the number of students on the dean's list has increased. Given the life situations of the College's students, Carl Polowczyk, dean of academic affairs, is careful not to measure success based on retention rates. Many of the College's students "stop out", due to economic pressures, so the College considers persistence rates more relevant. These have increased significantly over time.

IV. TYING IT ALL TOGETHER

"Let all divisions of knowledge be accepted rather for lines and veins, than for sections and separations, and the continuance and entireness of knowledge be preserved."

(Francis Bacon, *The Advancement of Learning.*)

All of the "pieces of the puzzle" discussed and profiled in this report are just that: small parts of an ideal. Our challenge is to take our best efforts, as well as the best thinking from the field, and to put together a whole whose impact is greater than the sum of its parts. The vision for what that "whole" looks like will come from each of us, as we respond to the needs of our children and our communities and match our institutional and human resources to them.

SUCCESSFUL COLLABORATION

Fortunately, lessons from the outside do not stop with the just the "pieces". There are a handful of communities that have begun to tackle this question of how to create a "seamless continuum" for students. Seventeen cities are part of the National Urban Partnership Program, which aims to help significant numbers of underserved urban students prepare for and attain post-secondary degrees. Another ten cities are participating in the Community Compact for Student Success, launched by the American Association of Higher Education. Like the Urban Partnership Program, the Compact uses partnerships to increase the number of poor and minority students entering and succeeding in post-secondary education.

The collaborative partnerships in these communities are broad, generally including a public school district, a community college, a university, business representatives, and sometimes local government or community organizations. The National Urban Partnership collaboratives have initiated a wide variety of programs. For instance, Phoenix's partnership, the Think Tank, has put in place a system to track and compare student performance; programs to increase parental involvement; and dual-enrollment efforts between high schools and community colleges. In Seattle, the Coalition for Educational Excellence has created a middle college high school (based on the LaGuardia model) and a Transfer Center, both at Seattle Central Community College.

Perhaps the most comprehensive model for collaboration is offered by Project STEP (Student and Teacher Educational Partnership) in Santa Ana, California. Established in 1983, Project STEP is a cooperative effort of the Santa Ana Unified School District, the University of California at Irvine, California State University

at Fullerton, and Rancho Santiago Community College. An Administrative Council composed of leaders from each of these institutions oversees the effort.

The goal of STEP is to raise the academic aspirations and achievement of students in the Santa Ana School District, 92 percent of whom are ethnic minorities. To this end, Project STEP has three broad areas of focus: (1) curriculum revision, both interdisciplinary and discipline-specific, especially in the areas of math, science, and language arts; (2) faculty development, particularly with regard to students in multicultural and multilingual classrooms; and (3) improved support and academic guidance for secondary school students. In addition, STEP has strived to increase parental involvement by providing parents with more information about their children's education and offering programs to help parents reinforce education in the home.

The program's success has been impressive. When STEP began in 1983, only 6 percent of the district's minority students were enrolled in college preparatory classes, and only 12 percent reported they planned to attend college. Annual progress reviews have shown an enormous increase in enrollments in college prep classes, and 65 percent of the district's high school graduates now go on to higher education.

The STEP partners stress that their accomplishments are not the result of one simple strategy or program. Equally important, for instance, are academic support programs for students, parental involvement, and opportunities for career planning and exploration. Gradually, over several years and with cooperation from many players, STEP has created a whole greater than the sum of its parts. In Appendix C is a description of some of the multitude of activities that STEP has initiated and which institution takes the lead on each. This rich array of activities provides an illustration of how schools can be transformed with energy and commitment from several institutions working together over a period of several years.

In addition to offering ideas on the wealth of *projects* a collaborative can undertake, the experience of STEP and other successful educational partnerships provide important lessons on the *process* of making collaboratives work. One excellent resource on this subject is a book that draws learnings from the STEP experience, *To Advance Learning: A Handbook on Developing K-12 Postsecondary Partnerships* (see reference list). Some basic suggestions are offered below, in the form of ten "tips" for successful collaboration:

1. *A Collaborative Culture.* The traditional academic "pecking order" must be overcome, and the governance of a collaborative should be shared, with equal participation. The ability to work in a truly collaborative way hinges on mutual trust and respect, which grows out of an understanding of the perspective and experience of each partner. It is important for partners to spend time on the front end to gain this mutual understanding.

When partners are working on the basis of trust and shared decision-making, the partnership is likely to develop its own unique culture—one very different from the typically hierarchical nature of partner institutions. This allows for greater sharing and creativity—and ultimately better ideas—than are possible when each separate institution acts on its own.

2. *Common Goals.* Each institution ought to examine its own institutional goals and needs and then identify those that it shares with other partners. These shared or common goals can be the foundation for a successful partnership.

3. *Manageable Goals That Can Be Monitored.* Partnership efforts need to be sharply focused —particularly in the earliest stages. Many aspects of education for young people need changing, but partnerships should begin with a small number of clear goals; no partnership can do everything at once. Progress toward achieving project goals should be monitored so that the partnering institutions know how they are doing, learn from successes and failures, and can share successes with the broader community.

4. *Involvement of Teachers.* Teachers and instructors have a critical perspective that should be brought to partnership efforts. Project STEP is managed by a high-level Administrative Council, but teacher involvement is gained through a Teacher Advisory Group that ensures a good flow of ideas and communication with other school faculty.

5. *Commitment from the Top.* Attention and involvement from top leadership in each partner institution underscores the importance of partnership efforts. Also, those in top leadership positions have the capacity to commit resources to the effort.

6. *Involvement of Families and the Broader Community.* The most successful efforts at work to promote achievement involve parents, business people, and other community resources. Schools can not go it alone and need to involve families and

other community representatives in the guidance of partnership efforts, as well as in the delivery of programs.

7. *Good Communication.* A high degree of communication among participants is key. Any staff to the project must have and use good communication skills—interpersonally, verbally, and written.

8. *Long-Term Commitment.* Significant educational changes—particularly those involving multi-institution collaboration—do not come about quickly. Partnership efforts ought to acknowledge this from the start, and partners should prepare for the long haul.

9. *Reward Participation.* Release time or visibility in the local paper are not enough reward to keep people going over time. Participation in a partnership effort should be rewarded with meaningful "perks", such as salary increases or time off to attend and participate in conferences.

10. *The Importance of Staff.* Most partnership efforts begin through the voluntary efforts of various institutional personnel. They manage to participate by squeezing more time from an already overburdened schedule. Eventually, significant partnership efforts must have people who staff the effort, either as new staff or existing staff with redirected responsibilities.

FROM THE SCHOOL OF HARD KNOCKS...

All the programs profiled in this report are impressive and offer good ideas for addressing the goals of the ALLIANCE FOR ACHIEVEMENT. It is important to note, however, that as we spoke with educators from around the country about programs that are working, many also spoke of the challenges that get in their way of complete success. We should not close without acknowledging some of these tough issues, which will undoubtedly face us as the ALLIANCE takes shape.

Changing Attitudes. Perhaps the toughest challenge faced by many of the programs profiled is gaining acceptance for the belief that all children can learn and succeed. This attitude change is a prerequisite to building a high-expectations, high-content curriculum, yet it runs counter to the beliefs of many teachers and administrators.

Phyllis Hart and Helen Monahan at Banning High School faced resistance from fellow teachers when advanced classes were opened to all takers. Faculty resented having to teach students from different cultural backgrounds and with poor basic skills and study skills. After time, however, faculty came to agree that it paid off to open options for all students.

Likewise, Gene Bottoms with the Southern Regional Education Board notes that the most difficult aspect of integrating curricula is changing educators' attitudes. "It's hard work for a high school faculty to move from the mindset of sorting people out into those who can do... and those who can't... to one where all students can master more advanced academics." Until there's "proof", teachers, counselors, and administrators can feel like they are fighting an uphill battle.

The Danger of Teacher Burn-Out. Where schools are living fully by the notion that all students can learn, the implication for school staff is that they have to push themselves much harder to "be there" for children. James Taylor, at Martin Luther King Junior Academic Middle School spoke of the fact that his staff have opted for coming in earlier and earlier in the morning to get their work done, without compensation. And he spoke emphatically about the toll this takes on good staff.

In cases in which a teacher assumes the leadership of a special programmatic effort, as in the case of Val Wiebeck in Milwaukee, teachers are stretched to the limit. Wiebeck manages the Career Linking program, maintains full teaching load, and serves as lead teacher in her discipline. She is fully committed to what she is doing, but she and her program could benefit from additional staffing.

Funding. Wiebeck's challenge raises the issue of funding, another challenge for school- and college-based efforts. Some—though certainly not all—of the most successful examples have obtained adequate funding from the school district, the state legislature, colleges and universities, or the private sector. For example, Middle College at LaGuardia Community College is able to implement an impressive approach to guidance in part because of adequate levels of staff.

Careful planning for institutionalization of programmatic efforts is critical. We found a

number of programs started with special grant funds that had to be discontinued when this funding ended. Others with only partial funding have had to proceed at a slow, frustrating pace in implementing new ideas while they also raise necessary dollars.

Sponsorship of Programs. The "housing" and sponsorship of a program can lead to key advantages or disadvantages. Programs on college campuses that are aimed at middle and high school students have the ability to expose students more directly to campus resources and life. Yet, if a program is led solely by staff on the campus, getting full cooperation from school teachers and counselors can be tough. Doris Trojcak, with St. Louis' Access to Success, noted that in their efforts to integrate special career awareness and academic activities with what students are learning in class, staff have run up against real apathy on the part of teachers. Others spoke of resistance from school staff to outsiders "meddling" in their work.

Other Institutional Cooperation Challenges. There are many efforts in place across the country that try to help students make the leap to the next level of education. Many high schools send counselors to middle schools to orient incoming students. Likewise, many community colleges visit high schools to expose students to the opportunities at the college. However, programs like the ALLIANCE that link all three levels, from middle schools through community college, are few and far between.

Few programs have systems in place to track students' progress through high school and college. Data collection is usually last on the list of priorities. Also, it is difficult to track students' progress consistently over a six-year period or longer.

Perhaps the most difficult challenge for individual schools who are committed to the notion of a seamless educational continuum for their students is convincing the other schools and colleges that make up parts of that continuum to cooperate in finding new ways to approach education.

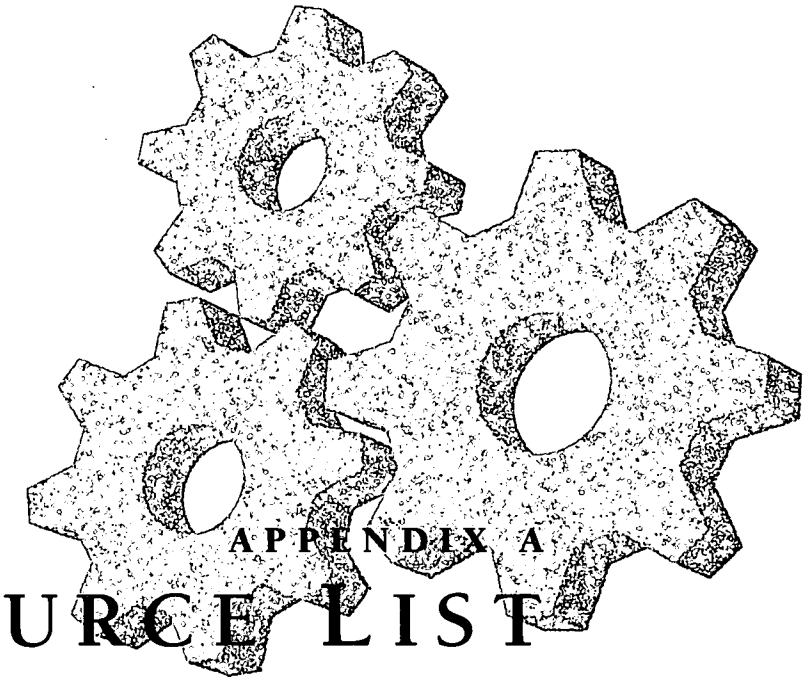
It is important to be cognizant of these challenges and to prepare to deal with them as plans for ALLIANCE efforts develop. The experience of the programs profiled in this report can provide some guidance, and we will undoubtedly help guide each other as our work unfolds.

THE TASK OF THE ALLIANCE FOR ACHIEVEMENT

Partnership efforts devoted to helping students—especially disadvantaged students—achieve academically in school and move into post-secondary education are relatively new. The ALLIANCE FOR ACHIEVEMENT is one of a handful of efforts testing approaches toward this end. And it is the only such effort with a focus on middle schools, high schools, and community colleges.

The programs profiled in this report and tips on collaboration offer a starting place as we move forward in the ALLIANCE. More important, however, will be our attention to our own experiences over time. The ALLIANCE aims to add to the learnings and the success stories. It is up to us to test new ideas and to write the next chapter...

APPENDICES



APPENDIX A

RESOURCE LIST

Access to Success
Doris Trojcak, *Director*
University of Missouri-St. Louis
8001 Natural Bridge Road
St. Louis, MO 63121
(314) 516-6741

Advancement Via Individual Determination (AVID)
Mary Catherine Swanson,
Project Director
6401 Linda Vista Road,
Room 623
San Diego, CA 92111-7399
(619) 292-3841

The Algebra Project
Ben Moynihan,
Administrative Assistant
99 Bishop Allen Drive
Cambridge, MA 02139
(617) 491-0200

Arkansas Youth Apprenticeship
Ronald Shertzer, *Program Manager*
Vocational and Technical
Education Division
Arkansas Department of Education
3 Capitol Mall
Little Rock, AR 72201-1083
(501) 682-1360

Bronx Community College Personal Academic Support Success Center
Jennifer Misick, *Director*
Sage Hall, Room 219
181 University Avenue
Bronx, NY 10453
(718) 289-5359

Career Beginnings
Betsy Baker, *Manager*
School & Main
750 Washington Street
NEMCH No. 328
Boston, MA 02111
(617) 636-9151

Career Linking
Kosciuszko Middle School
Val Wiebeck, *Science Teacher*
971 W. Winlake Avenue
Milwaukee, WI 53204
(414) 383-3750

The Foxfire Fund, Inc.
Bobbyann Starnes, *Director*
P.O. Box 541
Mountain City, GA 30562
(706) 746-5318

Gateways Project
Tom Karwin, *Assistant to the Associate Academic Vice Chancellor*
University of California
at Santa Cruz
Applied Sciences, Room 157B
Santa Cruz, CA 95064
(408) 459-2208
Note: project is completed but he is still available to talk to people about it

High Schools That Work
Gene Bottoms, *Director*
Southern Regional Education Board
592 Tenth Street, N.W.
Atlanta, GA 30318-5790
(404) 875-9211

Higher Ground
Dorothy Bowen, *Director*
School & Main
750 Washington Street
NEMCH No. 328
Boston, MA 02111
(617) 636-9151

HOTS
Stanley Pogrow, *Professor*
Education Innovations
2302 East Speedway, Suite 114
P.O. Box 42620
Tuscon, AZ 85719
(520) 795-2143

H.U.G.S.S.
Jerry Maddox
Challenger Middle School
10215 Lexington Drive
Colorado Springs, CO 80920
(719) 598-1057
Note: no longer in operation, but similar program continues

Mark Twain Middle School
Martin Berra, *Principal*
2411 San Pedro Avenue
San Antonio, TX 78212
(210) 732-4641

Martin Luther King, Jr. Academic Middle School
James Taylor, *Principal*
350 Girard Street
San Francisco, CA 94134
(415) 330-1500

Medical School for Kids
(now known as the **Coca Cola/ Miami-Dade Community College Health Career Academy**)
Carol DeLong Pyles, *Director*
Miami-Dade Community College, Medical Center Campus
950 Northwest 20th Street
Miami, FL 33127
(305) 237-4075

MESA
Blas Guerrero, *Acting Director*
College of Engineering
312 McLaughlin Hall
University of California at Berkeley
Berkeley, CA 94720- 1702
(510) 642-2041

Mid Tech
No longer in operation, contacts no longer at the college

Middle College High School at LaGuardia Community College
Don Freeman,
Director of Guidance
31-30 Thompson Avenue
Long Island City, NY 11101
(718) 482-5440

Milwaukee Empowerment Project
Daisy Cubias, Shirley Owens,
Parent Organizers
Greater Milwaukee Education Trust
756 North Milwaukee Street
Milwaukee, WI 53202
(414) 287-4145

Pathways to Success
Ron Allen & Deb Hart,
Guidance Counselors
Crete-Monee Middle School
1500 Sangamon Street
Crete, IL 60417
(708) 672-2700

Phinaes Banning High School
Phyllis Hart
(now at) The Achievement Council
3460 Wilshire Boulevard, Suite 420
Los Angeles, CA 90010
(213) 487-3194

Pickens County Youth Apprenticeship
Mary Babb, *Coordinator of Secondary Instruction*
Pickens County School District
1348 Griffin Mill Road
Easley, SC 29640
(803) 855-8150 ext. 108

Project Prime
John Lincoln, *Executive Director*
Arizona State University
502 E. Monroe Street
Phoenix, AZ 85004-4437
(602) 965-8510

Project STEP
Robin Casselman, *Associate Director*
University of California, Irvine
160 Administration Building
Irvine, CA 92717
(714) 824-7481

Schools Reaching Out
Diana Nackley
Institute of Responsive Education
Northeastern University
50 Nightingale Hall
Boston, MA 02115
(617) 373-2595

Albert G. Prodell Middle School
(formerly **Shoreham-Wading Middle School**)
Joanne Urgese, *Community Service Coordinator*
Randall Road
Shoreham, NY 11786
(516) 821-8210

TIPS
Joyce Epstein
Center on Families, Communities, Schools and Children's Learning
Johns Hopkins University
3505 North Charles Street
Baltimore, MD 21218
(410) 516-8800

Trident Area Consortium
Bob Carter, *Director*
P.O. Box 608
Moncks Corner, SC 29461
(803) 899-5162

Valued Youth Partnership Program
Intercultural Development and Research Association
Josie Supik, *Director of Research and Evaluation*
5835 Callahan Road, Suite 350
San Antonio, TX 78228
(210) 684-8180

Women in Technology Project
Amy Emler-Shaffer, *Coordinator of Staff Development*
Eve Ermer, *Coordinator of Student Programs*
Vermont Technical College
Randolph, VT 05061
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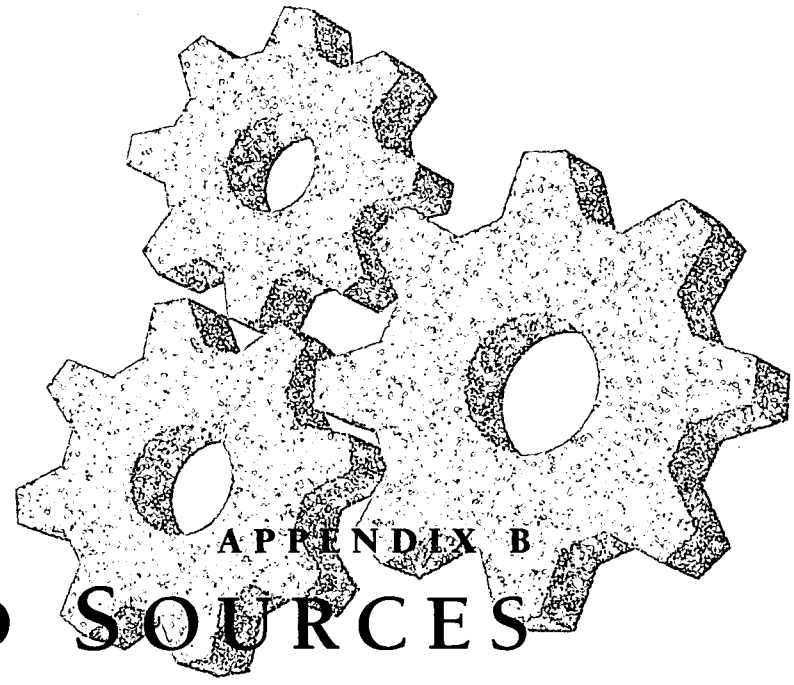

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APPENDIX C

PROJECT STEP OUTREACH SERVICES MODEL

STEP / Outreach Services - Elementary Grades

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
College Tours Grade 5	Fifth grade students from all elementary schools in Santa Ana are taken on tours of Rancho Santiago College.	Rancho Santiago College
La Escuelita	A community service project from UCI for tutoring in school. This project also can include community awareness field trips for students.	UC Irvine
Saturdays for Science Grades 4-6	Series of four one-hour introductory science programs.	UC Irvine
4-H Club Youth Program (University of California Cooperative Extension)	Develop leadership skills in students through projects and activities.	UC Irvine
Career Day	Professionals from various occupations speak to students and visit classrooms.	Rancho Santiago College Cal State, Fullerton UC Irvine
4-H Parent Training	Six-week leadership training program.	UC Irvine
Parent Institute	Symposium held at CSUF to educate parents on the various service programs available throughout the state. (Note: Available to all grades and levels.)	Cal State, Fullerton
Parent Education	Classes for parents in *Beginning ESL, Positive Parenting,* etc.	Rancho Santiago College

Continued

STEP / Outreach Services - Intermediate Grades

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
Eighth Grade Presentation	A college motivational presentation given to all eighth graders at a school site to inform them of their post-secondary educational options.	UC Irvine
Parent Conference (District-wide Activity) Grade 8	A one-day conference designed to provide parents with information on various topics not addressed at the parent workshops.	UC Irvine
Leadership Conference (District-wide Activity) Grade 8	A one-day Saturday leadership development conference designed to assist EAO participants to develop leadership skills.	UC Irvine
ACT Career Assessment Grade 8	A three-hour Career Assessment test for EAO participants. This activity includes a parent night to follow-up with results of test.	UC Irvine
UC Eligibility Plan Assistance (New Program 1989-90) Grade 8	Meet with EAO eighth graders to develop a one-year high school enrollment plan.	UC Irvine
Junior High Partnership Program	Academic club for students interested in preparing for post-secondary education.	UC Irvine
Future Teachers Club	Club for students interested in becoming teachers.	Santa Ana Unified School District
Peer Tutoring Program	High school and intermediate students are trained to tutor their peers.	Rancho Santiago College
Parents in Partnership	Continued workshops and informational meetings. Parent newsletter.	UC Irvine / Educational Opportunity Program

STEP / Outreach Services - Grades 9-12

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
UC Partners Program (Early Outreach)	A variety of activities are done, primarily with underclassmen. Group presentations and field trips enhance college awareness.	UC Irvine
STEP Club (Community Service)	Extracurricular program which strengthens critical thinking skills through the exploration of current social issues. Meetings are conducted seminar-style and utilize the media (*i.e.* newspaper/magazine articles, films) as its primary resource.	UC Irvine
Artist in Training	Music, dance, and drama presentations delivered by fine arts UCI students.	UC Irvine
Visiting Professors Program	Lectures given by professors. Students are given related reading assignments prior to the lecture.	UC Irvine Cal State, Fullerton Rancho Santiago College
Credit by Exam	High school students are given competency exams in designated subjects with the possibility of earning course credit.	Rancho Santiago College
Vocational Tours	Tours of vocational subject classrooms are given to high school Regional Occupational Program students.	Rancho Santiago College
Scholarship Foundation (New Program 1989-90) Grades 8-12	A parental effort to solicit community monies to enable the SAUSD to provide college scholarships to its students.	UC Irvine
MESA (Mathematics, Engineering, Science Achievement)	School clubs to bring together students and encourage interest in science/math careers, especially minority students.	Cal State, Fullerton UC Irvine
MESA Field Trips	Students tour local industries to stimulate interest in science- or mathematics-related careers.	Cal State, Fullerton

STEP / Outreach Services - Grade 10

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
College Walkabout	Students visit a college campus, but instead of doing the typical tour, students are paired up with college students. They spend the day with their college hosts, attending classes, having lunch, going to the bookstore, and so forth. There may be some group activities as well, but the real emphasis is on sampling college life with a "real-life" college student. (Note: This activity could include eleventh and twelfth grade students.)	Cal State, Long Beach UC Irvine UC Riverside
Early Outreach Counseling	Ninth and tenth grade students are given group presentations to increase their awareness of the various options open to them. This is frequently done in *High School Planning* classes.	Cal State, Fullerton UC Irvine Rancho Santiago College
College Major Fair Grades 10-11	A one-day Majors and Career Awareness forum involving teachers, counselors, and university students, designed to awaken students' knowledge of a particular major or career choice.	UC Irvine

STEP / Outreach Services - Grade 11

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
College Planning Week	Classes come to the Career Center for one week during the spring in order to prepare juniors for the college application. The schedule and topics are modified each year to meet the needs of the students and to take advantage of college presentations. The last day is a College Options Showcase.	UC Irvine Cal State, Fullerton Rancho Santiago College Chapman College
SAT Workshop	A Saturday SAT Prep Workshop, as well as summer workshops.	UC Irvine
Transcript Review	A systematic review of the transcripts of freshmen, sophomores, and juniors to assist them to achieve UC or Cal State eligibility.	UC Irvine Cal State, Fullerton
KSR Summer Program (Knowledge and Social Responsibility)	A ten-day honors summer residential program designed to academically, socially, and intellectually challenge high school juniors.	UC Irvine
PCATS (Peer Counseling & Academic Training Symposium)	One-week residential program designed to train high school students to assist other students with the college and financial aid application process.	UC Irvine
College Day	Junior students are invited to RSC for an orientation to the campus. Food, tours, and advisement are provided.	Rancho Santiago College
	Junior students spend a day at UCI and are oriented to class and campus life.	UC Irvine
UCI EAO Stay Over Program	A weekend program for top juniors designed to give them a realistic view of college life through direct interaction with university students.	UC Irvine

STEP / Outreach Services - Grade 12

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
On-site College Representative	A paid student or adult representative from the college maintains regular hours on the high school campus for the purpose of assisting with college applications or financial aid, doing class presentations to disseminate general information, or acting as a tutor.	Rancho Santiago College Cal State, Fullerton UC Irvine CAL-SOAP (California Student Opportunity & Access Program)
College Application Workshops	Group workshops held at individual school sites to assist large groups of students complete their college applications.	UC Irvine Cal State, Fullerton Rancho Santiago College Chapman College CAL-SOAP UC Riverside
Field Evaluation Program	Representatives from all UC undergraduate campuses meet with students individually.	UC Irvine
Placement Testing and Applications	All seniors who had indicated an interest in the community college are given the required placement test.	Rancho Santiago College
Financial Aid Workshops/ Students	Students are brought together for a two-day session on financial aid applications. Representatives from the community college, Cal State, UC, and private schools assist the seniors.	UC Irvine Cal State, Fullerton Rancho Santiago College Chapman College CAL-SOAP
Financial Aid Workshops/ Parents	Evening workshops are designed to provide parents and students with assistance in completing the SAAC forms.	UC Irvine
Career Beginnings	Mentors from the business community meet regularly with students to develop and motivate career interests and college entrance. Summer employment results for students as well as possible college scholarships.	Rancho Santiago College

STEP / Outreach Services - Post-Secondary

PROGRAM / ACTIVITY	DESCRIPTION	CONTACT / INSTITUTION
Articulation Conference in K-12 Language Arts Framework	Community College instructors attended inservice workshops by K-12 language arts instructors.	Rancho Santiago College
Bilingual Teaching Presentations for Teacher Education Faculty and Students	Bilingual teachers taught methodologies for the bilingual and multicultural classroom. Videotapes were made for teacher education faculty at other institutions.	UC Irvine
Visiting Scholar Program	A project jointly developed by UC Irvine, OCC and SAUSD to facilitate the formation of discipline-based academic alliances. A course for interinstitutional collaboration developed for national dissemination.	UC Irvine Orange Coast College Santa Ana Unified School District
Teacher Aide Conferences	Annual conferences for district instructional aides to help prepare them for teaching careers.	UC Irvine CSU Fullerton Rancho Santiago College
Teacher Aide Campus Visits and Counseling	Visits to individual campuses to meet with faculty, academic counselors, financial aid staff, and administrators and to plan individual courses of study.	UC Irvine CSU Fullerton Rancho Santiago College
Linguistic Minority Bilingual Laserdisc Research Project	A collaborative research and demonstration project testing bilingual videodiscs for teaching advanced science to limited English proficient students.	UC Irvine Santa Ana Unified School District
Kids Network (Global Common Classroom Project)	College faculty, student teachers, secondary principals and fourth through sixth grade teachers implemented a collaborative research and demonstration project establishing telecommunications between classrooms in Santa Ana and the Soviet Union.	UC Irvine Santa Ana Unified School District

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