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ABSTRACT

Case studies of six successful college-school collaborations designed to prepare high school students for college are presented. The programs studied were: (1) "Early Identification Program" at George Mason University in Fairfax, Virginia; (2) "College Now" at Kingsborough Community College in Brooklyn, New York; (3) "Biomedical Sciences Preparation Program" at the University of Alabama at Tuscaloosa; (4) "Early Outreach Program" at the University of Illinois at Chicago; (5) "Step-to-College" and "Mission-to-College" at San Francisco State University in California; and (6) "Student/Teacher Educational Partnership" at the University of California-Irvine. The case studies revealed that key factors in the formative years of the programs were leadership and institutional support, a foundation of collegiality and trust, the flexibility to change and improve, and maintaining an information base. Factors that helped the programs to mature were a stable resource base, attention to details that strengthen relationships, continuing to go extra miles, and belief in the student. Directors also pointed to clear spillover effects in the schools affected by these programs including a general rise in standards. Each case study provides names and contact information for further communication. (JB)

REACHING FOR COLLEGE

Volume 2: Case Studies of College-School Partnerships

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REACHING FOR COLLEGE

Volume 2: Case Studies of College-School Partnerships

Human Services Group
Westat, Inc.

December 1992

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The staff members who visited the sites and authored the summaries were: Ellen Tenenbaum and Kim Standing for the Early Identification Program; Patty Flanagan and Adrienne von Glatz for College Now; Ellen Tenenbaum for the BioPrep Program; Susan Berkowitz and Kim Standing for the Step-to-College Program; Ellen Tenenbaum for the Early Outreach Program; and Patty Flanagan and Rich Wabnick for Project STEP.

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Of course, the most important acknowledgment goes to the participants and leaders of the programs with whom we visited. These individuals went many extra miles to carve out time from their busy schedules to meet with us, to provide us with written documents, and to make special arrangements for us to observe the programs in action and to meet with students and parents. We would like to express a special note of gratitude to those students and parents who went out of their way to meet with us and to share their views and experiences in these academic preparation programs.

EXECUTIVE SUMMARY

There are a number of lessons to be learned from the successful college-school collaborations contained in this volume. These lessons include some common elements for success, and common mistakes as well. Following a life-cycle model, those lessons are summarized as follows.

Key Factors in the Formative Years

Leadership and Institutional Support

There seems to be no getting around it: there must be an individual with a vision, a vision that transcends the university and the school as independent entities, one that looks several years down the road. In all the programs profiled, some individual worked hard to ensure both the institutional commitment and the commitment of a core group from both the college and the schools--faculty, administrators, parents--who would persevere during the early years.

A leader like this should, over time, achieve an established position, such that both university-based and school-based colleagues are assured that the collaboration will be recognized as a legitimate focus for their work.

The core group can plan on going many extra miles to build the foundation for a solid program. Often this may mean driving hundreds of miles to visit key school superintendents, principals, counselors, teachers, and other college-based staff. It means patiently requesting and planning meetings, attending them, keeping promises, and following up with care.

An issue that will inevitably arise concerns the transition in leadership: would the program survive without this individual at the helm? Although the issue has not been forced in any of the six programs in this volume, it is an important concern. One of the surest ways to anticipate a smooth transition is for the program to secure a stable administrative and funding base within the university and the schools. All of the programs highlighted here have made a sustained effort to do so, and have largely accomplished that goal. Beyond that, a core of dedicated program leaders seems to be an absolute necessity to ensuring that the program has a stable future.

A Foundation of Collegiality and Trust

The hours spent in meetings discussing ideas, clarifying common objectives, and planning details simply have to be invested. The founders of these six programs made sure that a foundation of trust was built. Mutual professional regard and equality among university and school personnel was established over many interactions. For example, participating school teachers were not asked to prepare to teach special classes without financial and other support--they were paid to attend summer workshops. Teachers were sometimes appointed as adjunct college faculty. College and school faculty were teamed together to make

presentations to university and school-district administrators. Meetings were held when and where convenient for school faculty and staff. In selective programs, selection committees were formed that had strong representation from the participating schools.

In short, the college did not foist the program on the schools; rather, the time was taken to really join with schools, accommodating their work patterns and other needs. People's incentives to collaborate were always considered to gain mutual cooperation. The university leadership learned not to go to the schools with a "fait accompli," but to forge a collaboration together step by step.

One issue that must be faced is that, at many colleges, college-school collaboration is considered a kind of field work. Such work is considered volunteerism, and doesn't contribute to a professor's career unless the experience can lead to publications. Another issue one can expect to face is that collaborations are often understood in a theoretical way by the university originators--who are often not the people who will have to implement practical decisions. This can lead to tension. Taking the time to show awareness of these tensions, and to build relationships that can withstand them, will strengthen the formative partnership--and will help it to be flexible when the unexpected happens.

The Flexibility to Change and Improve

The early years of these academic preparation programs were punctuated with constant surprises--unintended consequences of decisions, well-considered judgements that proved to be disappointing in practice. Over perhaps the first four years of operation, the directors of these programs exhibited the flexibility to change a course of action, to strike out a rule that did not work, to respond within a day to a student, parent or faculty problem. For example, when Chicago's Early Outreach program was suffering from chronic low levels of parental involvement, the director's decision to *mandate* parental involvement the next school year immediately resulted in an active and devoted parent organization.

Similarly, the staff of these programs recognized and seized upon opportunities that arose unexpectedly. For example, after meeting with a person with special talents who wished to work with the program, an entire academic course or leadership position in the program could be created. The director of George Mason University's Early Identification Program found that her network of professional acquaintances was so wide that she could implement "Job Shadowing Day," a day each summer that high school students in the program spend on the job with a professional.

Maintaining an Information Base

Data about program operations and students will eventually be needed. Too often, amidst the immense activity of starting a program, data collection falls by the wayside, only to prove difficult to pick up at a later point. Moreover, data collection may be required by a particular funding source; but when the funding stops, the data collection activity often stops too. Another pitfall is that evaluation systems, if built at all, often focus only on program participants. To scientifically measure the effects of a particular program on students, the evaluation plan should include a control group comprised of students

who are not program participants but who are similar in most other respects. However, even if a program is unable to construct this kind of evaluation, before-program and after-program data can provide a good idea of the program's impact on students who participate.

By building data collection in from day one of the program, staff can readily prepare a proposal for funding, write an evaluation report to assist in its future direction, or effectively consider a student's or staff member's individual situation. While some programs, such as Alabama's BioPrep, built detailed data collection systems, a program's information gathering activity can start by maintaining files on individual students, coupled with thorough financial and management documentation. Future evaluations can be based on this information.

Key Factors as the Program Matures

Securing a Stable Resource Base

Once the programs we studied had been in operation for four to five years, they reached a point where their viability had been demonstrated well enough--on the strength of their data, publicity, leadership, and staff--to merit a more permanent funding and administrative base within the university. Usually this has meant that the program became a line item in the university's budget, or that the program director received a promotion to a high-level position within the administrative hierarchy.

When the program has matured, the program director can see that the program receives more resources and has access to further sources of support. For example, Project STEP at the University of California at Irvine is well-established within the office of the Vice Chancellor for Academic Affairs, who co-directs the program with the Superintendent of the Santa Ana Unified School District. After having earned substantial funding from state and foundation sources, the university now donates offices, services, and facilities. After years of living on volunteered effort, Early Outreach at the University of Illinois now receives state funding on the same annual basis as do all academic departments.

Attention to Details that Strengthen Relationships

The thank-you letters, the phone calls home if a student is absent, the comments in the margins of students' papers, the birthday cards, the personal interviews with parents of program applicants, the prompt dissemination of meeting minutes--these are the little things that meant a great deal to the success of these six programs. It is not only the director but individual staff members themselves who must take nothing for granted. What sometimes appears to be a mere gesture may signify the care these programs show for the students, parents, faculty and staff who participate in them.

Continuing to Go Extra Miles

Once the programs described here became well-established, the staff continued to go many extra miles--not so much for the program itself, but for the students and their parents. Tutors and graduate curriculum assistants in several of these programs routinely go out of their way to take young program

participants to events on campus, to share curriculum materials with teachers, to provide extra tutoring after hours, to drive someone home across town, to accompany a student to a social service agency, to write letters of recommendation, to help parents with financial aid forms--whatever is needed to better a student's chances for academic success and self-confidence.

Belief in the Student

Program staff hold students to high standards of performance and expect significant participation on the part of their parents as well. There have been very few documented cases of students' dropping out of a demanding academic preparation program because they were not able to do the work or maintain the required grades. On the contrary, it seems that a virtual formula for success combines high standards of academic performance and conduct--clearly stated to both the student and the parents--with a high level of personal confidence and caring.

The ability to know each student in the program and to manage each individual case emerged as vital to these programs. While the demand for these programs is much higher than the programs can accommodate, directors tend to be reluctant to see the programs grow much beyond their current size--even if sufficient funds were available for expansion. There is a fear of losing the personal quality held to be absolutely vital to the academic success and confidence of their students, and vital to the spirit of the program.

Spillover Effects

The directors point to a clear spillover effect in the schools affected by these programs. Teachers participating in the program testify that they now hold their non-program students to the same kinds of higher standards expected of students in the program. As teachers share ideas from program workshops with other teachers in the school, these programs have a positive academic impact that reaches well beyond the program itself.

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INTRODUCTION

Hundreds of recently established college-based programs aim to strengthen the academic preparation of students for college. Such programs range widely in the services they provide. Collaborations have offered a strengthened college preparatory curriculum, specialized continuing education for teachers, tutoring, mentoring, relevant jobs and career exploration, help with college applications and financial aid forms, follow-up support for several years, parental involvement, and assistance in obtaining financial aid.

Collaborative academic preparation programs may target their services to the normal school day, or they may feature after-school, Saturday, or summer components. They may be structured as one college/one school partnerships, one college/several schools or districts, or a consortium of postsecondary institutions providing services to students in schools area-wide. They may adhere to a pipeline model--moving a group of students together for several years toward college--or to a broad infusion model affecting restructuring or teaching practices at all schools within a district. Some offer college courses to high school students. Funding sources of course vary as well, from direct State appropriations to private foundation support.

This two-volume report shows that colleges and universities of all kinds have successfully collaborated with local school districts to strengthen young students' academic preparation for college. The companion volume to this report, *Volume 1: Directory of College-School Partnerships*, describes 48 innovative programs that exemplify the wide variety of collaborations in the field. This volume provides an in-depth description of six programs, including lessons learned about important factors contributing to program success.

Selecting the Six Programs

From among the programs included in *Volume 1*, six programs were selected for case studies, affording an in-depth look at their formation, services, administration, and factors for success. Case study sites were selected for the following characteristics:

Organizational capabilities

- **The achievement of relative financial stability**, to the extent possible through non-federal funding sources. It was thought to be especially instructive to highlight programs that have become largely self-sustaining through local, corporate and/or foundation support.

- **Systematic maintenance of data** and documentation that would allow observations and conclusions to be drawn regarding the effects of the program.

- An **active effort to follow the students** through several years, to ascertain improvements in academic preparation and performance, and to give students further assistance along the way.

Students served

The programs selected were to serve one or more of the following groups of students:

- **Elementary school students.** The college becomes involved at this level with the conviction that academic preparation, strong study habits, and self-confidence should begin in the early years of schooling.

- **Middle school students.** The middle-school years are thought to be a critical period affecting the long-term path of young people. Active involvement beginning in these years can place students on a stronger course of study and commitment toward college.

- **Historically underrepresented or disadvantaged students** who, given extra attention and help, may decide to reach for college, enter college much better prepared, and succeed in college.

- **Moderate achievers**, who often do not benefit from special programs targeted to disadvantaged or gifted/talented students. College-based academic preparation programs for moderate achievers may provide the extra incentive to reach their higher potential and prepare more thoroughly for demanding college work.

Program services provided

In addition to a basic academic component, programs considered for case studies were to provide multiple services. Among the variety of services that may be provided, the following were thought to be especially desirable, and programs were selected that emphasized one or more of these services:

- **Structural Change.** This involves every aspect of the school's organization and instruction, with a primary aim to provide a more rigorous academic and confidence-building program for all students in the school.

- **Direct Strengthening of Core Curriculum.** By making each college-preparatory course more rigorous and holding the students to higher standards in the course, better academic preparation for college should be a direct result.

- **Parental Involvement.** In light of consistent evidence showing that parents are a child's first and most important teacher, some college-based programs actively encourage parental support to motivate the student to aspire to college and persist in preparing for it.

- **Professional Development for Teachers.** College-based academic preparation programs often include a teacher education component, helping teachers strengthen the academic content of the curriculum to better meet the expectations of colleges and universities.

- **Tutoring.** This is important since there is no substitute for intensive, one-on-one assistance provided by a caring individual, in motivating a young person to do better academically and build confidence.

- **A Summer Component.** Programs with a summer component that aims to avoid summer loss of learning hold much promise in sustaining a young person's readiness for demanding coursework in the fall.

- **Special Emphasis on Mathematics and Science.** Some college-based programs concentrate on strengthening the math and science skills of students who are capable but may need extra confidence or motivation to excel in these subjects. Colleges and universities also cite a need for better-prepared students to enter the science, technology, health, and engineering professions.

Finally, we sought geographic and other forms of diversity among the student populations served.

After much consideration and review, the following college-based academic preparation programs were selected for case studies:

- **Early Identification Program (EIP)**, George Mason University in Fairfax, Virginia. Developed in 1987, EIP is a collaboration between George Mason University and three neighboring school districts. Disadvantaged minority students with academic ability but at risk of dropping out are identified in 8th grade, admitted in 9th grade and provided intensive services to help them gain admission (with financial aid) to George Mason. EIP currently serves 220 students. The core of the program is a three-week summer school, supplemented with tutoring, Saturday enrichment, and a parental involvement program throughout the year.

- **College Now**, Kingsborough Community College in Brooklyn, New York. Established in the 1984-85 academic year, this program is designed to reach moderately achieving high school seniors in 17 local high schools and allow them the opportunity to earn

college credit and improve their overall preparedness for postsecondary education. More than 2,500 students are currently served in their senior year, with follow-through monitoring as they enter college.

- **Biomedical Sciences Preparation Program (BioPrep)**, University of Alabama at Tuscaloosa. This program, introduced in 1982, prepares historically underrepresented rural high school students to pursue a university education to become health care professionals who would consider serving rural areas of the country. Nearly 2,000 students are served in 34 schools spanning 12 rural counties in western Alabama.

- **Early Outreach Program**, the University of Illinois at Chicago. Begun in 1980, the central goal is to help minority students, starting at grade 7, to select and follow through with a college preparatory course of study, to succeed in college and to make informed career choices. Some 800 students are assisted through their transition to college, with a strong parental involvement component and relevant job experience offered as students explore possible careers.

- **Step-to-College (STC) and Mission-to-College (MTC)**, San Francisco State University in California. Established in 1985, Step-to-College serves some 700 Hispanic, Asian, and Black high school students, selected in their junior year and assisted through their years of education at San Francisco State. Over 500 younger students are served in Mission-to-College.

- **Student/Teacher Educational Partnership (STEP)**, launched in 1981 and located at the University of California-Irvine. Partner institutions in this program also include California State University-Fullerton, Chapman University, Rancho Santiago Community College, and the Santa Ana Unified School District. Several programs operate under this umbrella organization. They include projects that aim to strengthen the core curriculum, provide professional development for teachers, provide tutoring and extra counseling to students, and institute parental involvement. STEP acts as an administrative framework that secures funding for programs, adopts new academic preparation programs, and encourages faculty dialogues.

Programs in this report were investigated during the spring of 1992.

Organization of the Report

The six case study reports are followed by a list of program directors who may be contacted for further information.

EARLY IDENTIFICATION PROGRAM
George Mason University
Fairfax, Virginia

"Through EIP I have learned to respect myself and to respect others because of all the different cultures that are a part of the program. I now feel prepared for college and the future."

-- From an Early Identification Program student's college application essay

PROGRAM HIGHLIGHTS

Students Served: Academically able 9th-12th grade students who have uneven academic records and are at risk of not successfully completing school; to facilitate their successful application and admission to college.

Services Provided: Summer academic core program each year, reinforced through school-year tutoring, Saturday enrichment, SAT preparation, help with forms, and parent involvement, with continuing assistance in college.

Students Served Annually: 220 in 1991-92.

High Schools Involved: High schools in three neighboring school districts.

Administration: Hortensia Cadenas, Director; EIP is administered within the university's Office of Academic Initiatives and External Affairs.

Year Begun: 1987

Evaluations Completed: A brief annual evaluation for the Office of Academic Initiatives and External Affairs.

WHAT MAKES THIS PROGRAM SUCCEED

Several factors and deliberate decisions have contributed to the success of this multifaceted collaborative program:

Strong leadership in its formative years marked George Mason University's commitment to motivating capable, disadvantaged minority students to pursue a college education. A visionary Special Assistant to the Vice President for Academic Affairs worked for two years to initiate and strengthen the contacts with the Fairfax County Public Schools that created a long-term partnership. When the current director was hired to lead the new program in 1989, EIP was serving its second cohort of entering 9th graders and had just established itself as a strong unit within the university's administration.

EIP's director goes extra miles to ensure the program's viability. Working all day and evening hours as necessary, she makes herself accessible to all participants and attends nearly every workshop, meeting and tutoring session. With full university support, she has energetically applied for grants, publicized program events and secured organizational and financial stability. Her enthusiasm motivates teachers, tutors, students, and parents. As the vice provost asserted: "She is the glue that holds the dream together."

Collegial trust was developed from the start. In the formative years, the university administrators were sensitive to the concerns of Fairfax County school personnel who would be affected by the program. Working together, the area superintendent and the university special assistant set up frequent meetings with school faculty and staff, with the university offering a large share of support to the program, including paying teachers to teach the summer program. This ability to provide essential support, and the tenet that the schools and university act in concert as equals, gained the support of the schools.

A particularly strong move that bonded the schools and university was the formation of a Screening Committee, a multi-constituency group that deliberates on student selection for the EIP. In forming this group, the representatives of the schools had a central, controlling role in determining who would be in the program. This empowered them and established their status as full partners with the university.

EIP demonstrates flexibility to respond and change. The director's tenet is that any problem, large or small, should be communicated and resolved immediately. Whether the problems are brought up by coordinators, teachers, tutors, students, or parents, they are treated with the same seriousness. For example, a student had trouble in one of his courses during the school year. Apprised of the problem, the director arranged for him to take a lower-level summer course in place of the programmed summer course that prepares students for next year's content. By quickly making this adjustment, he received needed remediation and reinforcement. Additional tutoring then got him "on track" by the next fall semester. Another student's parents transferred her from a Fairfax County public school to a private school in the middle of her high school career. The director quickly decided that she would be welcome to stay in EIP through the 12th grade and into college.

Attention is devoted to details that strengthen relationships in the program. In many small ways, attention is paid to personal details that build personal commitment to the mission of EIP:

- There is the requirement, after job shadowing day, that every student write a thank-you letter to the host.
- The director writes acceptance or rejection letters to the parents as well as the students, making sure that Spanish-speaking parents receive their letters in Spanish.
- If a student in after-school tutoring has a particularly difficult problem in a subject, a tutor will walk with him to his classroom and discuss it with the subject teacher.
- If a student is absent any day during summer session, a tutor calls the student's parent.
- Parents' work schedules are accommodated, enabling them to get help with application or financial aid forms any time convenient for them, regardless of official office hours.

Data collection was built in from the start. For each student there is a file, easily located and kept up to date, with data entered into the computer regularly. In this way, the program can measurably demonstrate its effectiveness and readily prepare strong applications for grants.

EIP transcends racial lines. EIP's activities deliberately group Black and Hispanic students together. Whether they are doing team-building exercises at the overnight retreat ("Outward Bound style"), solving math problems in teacher-assigned groups, or eating lunch with the tutors, the students intermix comfortably. The faculty and tutors themselves are culturally diverse, and their congenial interactions form a natural model for students. The director, who is Hispanic, and the vice provost, who is black, firmly set the tone from the beginning. At the welcoming reception for new students, they stand together as each one addresses the assembly and reads the code of conduct, clause by clause, in Spanish and English.

Parents are full partners. Early in the selection process, parents know they not only must participate but will be vital partners in the program. They get frequent notices and newsletters, chaperon field trips, and plan the entire end-of-year banquet. Siblings are welcomed, so no babysitting is needed. In turn, parents work to keep students in the program and do well in school.

Parents are given respect and recognition from the beginning of their involvement with EIP. At the February reception welcoming 63 newly-selected 8th grade students and their families, the program director praised their parents' dedication to this long-term effort, and asked the parents to stand up for recognition. They shifted uncertainly, then remained seated. The director smiled and patiently held out, until the students gently pushed and pulled their parents to a standing position, to a long round of applause.

EIP cares about each student. Activities foster a feeling of "family" that includes all participants. The weekend retreat, the ice cream socials every Friday of the summer program, Saturday enrichment activities, evening tutoring at GMU, long office hours daily that welcome all students and tutors to a friendly office, the February reception and the spring family banquet all reinforce the feeling that it is important for everyone to know and care about each other.

EIP staff go extra miles to help students concentrate on their studies. The director takes telephone calls at home, dealing with family crises that jeopardize students' continuing in the program. She helped one student, who had a baby and was kicked out of her house, to find someone to stay with. An EIP tutor then took her to social service agencies to find longer-term housing. The director also spends time in court when necessary, to testify on behalf of EIP students who have had difficulties, and she has visited students at a juvenile detention home. Tutors also go extra miles for the students. For example, the head of after-school tutoring at one of the high schools arrives early to work with an EIP student who must go right home after school to babysit younger siblings.

EIP's effects spill over into people's lives. For example, tutors often treat EIP students to special events on campus. And tutors' performance in college improves by being involved with EIP. As one tutor put it: "When I tell my student to study hard and get that grade, I'm telling myself to do the same thing!"

The program's ability to individually manage each student's academic progress through the high school years and beyond is one of its strongest features. Quarterly grades are examined; attendance at tutoring is noted and followed up; college applications are thoroughly checked; SAT preparation and test-taking are monitored; each student is advised as to the best courses to take each succeeding quarter and whether to retake the SAT.

It is felt that the small size of the program makes this personal management possible. If the program were to expand, great pains would have to be taken to continue ensuring the ability to know and monitor each student as an individual.

EIP holds high expectations of students. Finally, there is an abiding belief in each young person's ability to succeed. Supporting this belief is a foundation of structure and discipline considered absolutely essential to the program's successful functioning. The student-parent contract and the strict behavioral and attendance codes are regarded as absolute prerequisites to any academic progress. They are presented in writing, clarified, enforced, and reviewed frequently.

EIP's blend of personal trust and high expectations minimizes problems of control and attitude that public school teachers commonly face. As a science teacher summed it up: "I love these kids. I love seeing them grow and mature each year in the program. I feel blessed to be there."

A CLOSER LOOK AT THE PROGRAM

The Early Identification Program (EIP) at George Mason University (GMU) in Fairfax, Virginia is a multiyear program whose goals are:

- to identify academically able 8th grade students who have uneven academic records and are at risk of not successfully completing school;
- to encourage these students to pursue a college-preparatory curriculum in high school; and
- to facilitate their successful application and admission to college.

Through an intensive summer school program, tutoring throughout the school year, Saturday workshops during the school year, and active parent involvement, EIP aims to motivate these students--mostly minorities from single-parent families in which neither parent went to college--to pursue a university education.

At-risk students are identified in 8th grade and participate in EIP throughout high school and into college as well. Those who enter GMU can get continuing counseling and can serve as paid EIP tutors. The core of the program is an annual 3-week academic summer component, with tutoring, counseling, SAT preparation, course reviews, parent involvement, and Saturday enrichment during the school year. Each new group of students accepted into EIP participates in an overnight retreat to get acquainted and to learn team-building skills. EIP was begun in 1987 with a 1-year state demonstration grant to serve 52 students. In 1991-92, the program served 220 students.

The summer program, Saturday programs during the school year, and evening tutoring take place on the GMU campus. GMU is a four-year public institution in Fairfax, Virginia, a suburb of Washington, D.C, with an enrollment of 20,000 and in-state tuition of about $3,300 per year. About 15 percent of GMU's students are minority. The university requires a 2.0 grade point average for admission, although 50 percent of incoming freshmen in 1991 had a 3.0 or higher. GMU is mostly a commuting school, but a number of dormitories provide on-campus housing. The university is also known for its part-time

graduate programs in numerous fields and for providing an accessible education to students in the entire region.

EIP collaborates with three local public school districts to identify and work with the students. Each district has a designated coordinator who communicates with the school counselors in both the intermediate and high schools, helps select the high school teachers who teach the summer courses and school-year course reviews, and arranges bus service and meals. The largest of the school districts, Fairfax County Public Schools, consists of four Areas, each with its own superintendent. It is Area II that coordinates with EIP because it has the highest minority proportion of the four Areas (19 percent Asian, 13 percent Hispanic, 8 percent Black), and it is located close to GMU geographically.

PROGRAM HISTORY

Ideas for collaborative academic preparation programs were generated in the mid-1980s by the former Fairfax County Area II superintendent, who had a vision of school-college collaboration and had helped to establish a handful of partnerships between area colleges and individual schools. At the same time, an equally visionary administrator at George Mason University, five miles down the road, contacted the area superintendent to explore creating a collaborative program for disadvantaged minority students.

The GMU administrator, who served as Special Assistant to the Academic Vice President, felt that 8th grade was an ideal time to motivate able, at-risk students for college, for they were ready to begin 4 years of high school; she thought that starting such students at a later point might be too late. As she stated:

> If 3,000 colleges and universities adopted an early identification program, think where we'd be.
>
> This is the long-road approach, but we think that in the end it will be good for the university, the community and the students.
>
> We want to catch them right before they start high school. If we wait until 11th or 12th grade, it's too late. We find the students haven't taken the right classes, especially in first-generation families.[1]

The plan for EIP was carefully laid. The two officials proposed and won a 1-year demonstration grant from the Virginia State Council on Higher Education. The Special Assistant then contacted area corporations and foundations to solicit additional funding. IBM in nearby Manassas, Virginia, lent a company official to help administer and teach in the program. The first 3-week summer session of the Early Identification Program began in summer of 1988, with 52 students who had completed 8th grade that spring.

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[1] "Arlington and Fairfax Eighth-Graders Sign on with College Early ID Program." Northern Virginia Sun, February 15, 1990.

Establishing a collegial professional relationship between the university and the schools was of utmost importance in building this program. To gain the cooperation of the intermediate and high schools, which were wary of the university's coming in with such high expectations for minority and ESL students' education, these steps were taken:

- A series of meetings was held at the Fairfax County schools that were slated to be involved in the EIP. Both the superintendent and the GMU administrator attended them.
- As an inducement to participation, the program offered well-paid summer teaching positions to public school teachers.
- The university and the area superintendent's office offered to administer the program, which would minimize costs to the schools.
- Meetings involving school personnel and parents would be arranged at school sites for the convenience of teachers, students and parents.
- The idea was always strongly conveyed that the schools and the university would be acting as equals in partnership.
- The student selection process would be handled by a "Blue Ribbon" Screening Committee composed of both school and university representatives, including teachers and counselors.
- Finally, the motivational power of a strong area superintendent had a positive effect.

On the strength of these beginnings, the university then took clear steps to support the EIP. The university's actions involved funding, publicity, personnel, and office space:

- **Funding**: After the first year, George Mason University agreed to fund the program on a long-term basis as long as the program continued to develop toward meeting its goals. This was an unusual pledge, given widespread university budget cuts in the late 1980s. But the vice provost and the president shared a vision of helping young people at risk to pursue the dream of a university education.
- **Publicity**: Press releases written by EIP were prominently distributed, and GMU newsletters carried news items about EIP. As a result, word of the new program was publicized on the front pages of local newspapers.
- **Personnel**: The university created positions for a full-time director and subsequently an administrative assistant, paid by the university's general administrative budget.
- **Office space**: The university provided ample, furnished office space conveniently accessible to both high school and college students.

The newly appointed director immediately set out to secure a stronger funding base that would help extend the program beyond its first-year demonstration grant. In response to a series of letters from the director to corporations and foundations in the region, Mobil Corporation offered to help support the program, contributing about $10,000 each year. In 1990, the contribution was used to add more students to the program. In 1991, the funds were used to expand the offerings of the summer program. EIP has recently received from Mobil a supplemental grant earmarked to institute a seminar series for parents in the fall of 1992.

Within two years, EIP had demonstrated its viability: In 1989, the Arlington County Public Schools approached EIP to join the program, and in 1990 Prince William County did the same. Thus, since 1990 the program has served students from three school systems. It was decided that the number of students from each system would be roughly proportional to the contribution of time, personnel, money and services provided by the school system. Fairfax County from the beginning supplied the majority of EIP's students. It was estimated that Prince William could begin with 10 slots; yet at the informational meeting held at a Prince William County high school, some 250 people showed up on a rainy night in hopes of enrolling their children in the program. The program held to its recommended representation formula.

EIP's summer academy grew from 52 students in summer 1988 to 141 students in summer 1991. The vision of the Fairfax County area superintendent and the highest-level administrative leadership at George Mason University was backed up by a stable funding commitment; ongoing support from Mobil; a full-time program director given an office suite and official status as a full-time university administrator; and continuous collegial interaction between school district and university educators.

PROGRAM TARGETING AND SERVICES

Targeting

As of 1991-92, there were 220 students in some phase of the program. Virtually all the EIP students will be the first in their families to attend college once they complete the program. EIP is targeted toward minority students but not exclusively so. Sixty percent of the 63 8th grade students selected in 1992 are black, and 38 percent are Hispanic. Sixty-one percent of the new students live in single-parent households, and 81 percent will be the first in their families to attend college. The group is about half male and half female. The program in 1992-93 will serve a total of 197 students in grades 9-12 and an additional 23 at the college level.

June 1992 marked the commencement of EIP's first "graduating class": 25 high school seniors have been in the program since its inception, when they were accepted as 8th graders. Twenty-three of them have been accepted at George Mason (one of whom accelerated her studies and completed her freshman year), and two did not qualify for admission but instead will go to a local community college. The program staff will continue to assist them, first by referring them to one particular counselor at the community college who will help plan their academic program, and then by following up regularly with them and the counselor. A central tenet of EIP is: "We don't want to lose anyone!"

Student Selection and Initiation

Eighth grade students are identified and selected for the EIP through a five-stage process which, over its five-month course between September and January, narrows the applicant field from some 300 who requested applications to the 60 to 70 who receive formal acceptance letters in January. The stages are as follows:

1. At the beginning of the school year, the program coordinators visit the middle schools whose districts participate in the program. They meet with the guidance counselors to review the program and encourage them to have the classroom teachers identify 8th grade students who could benefit from this program--those with uneven academic records who are not working up to their potential, for a variety of reasons that may have to do with their home situations. The EIP coordinators give the counselors a supply of initial interest forms to complete and send to the program. The coordinators ask the counselors to "please narrow it down!" The counselors send completed interest forms to the program.

2. EIP staff at George Mason then mail separate letters to the students and the parents, stating that the student has been nominated for this program and explaining the program. Hispanic parents' letters are in Spanish. The letters invite students and their parents to an informational meeting, scheduled at their own high school one evening.

3. Almost 100 percent of the families attend the informational meetings. The program director and the district coordinator explain the program and give each family an eight-page application packet to fill out that requires considerable time, thought and commitment on the part of both student and parent. The student must include two short essays: (1) "Why is it important to you to become a member of the Early Identification Program?" and (2) "Write about an activity or an interest which you enjoy. Briefly describe why you like it and what have you learned from your involvement or participation in this activity." Students understand they will have to sign a contract pledging long-term commitment to the program if accepted.

   The student fills out the names of two adults as recommendations to be contacted during the application process. Then separately, the last two pages of the application packet are given to those individuals, who are to write letters of recommendation and return them to the EIP-designated guidance counselor at the child's school.

4. About 80 percent of the students complete applications. The EIP Screening Committee then meets to examine the applications (for grades, recommendations, answers to essay questions on the application, and family circumstances), noting on specially prepared forms the perceived strengths and weaknesses of each applicant, and whether torecommend the student for acceptance. Applications are then divided into groups of those recommended for acceptance, those considered not qualified for this program, and those applications to be considered further.

5. The program director then reviews the recommendations of the Screening Committee, goes through the applications that were to be considered further, and arrives at the final list of those 8th graders who will receive acceptance letters.

In many cases, an applicant's grades are too high to qualify for this specially-targeted program, a situation that the program director finds distressing. She is helping to form a new program, under the auspices of the Hispanic Committee of Virginia, to meet the needs of high achievers whose home lives place them at risk of sacrificing their education. The EIP nonetheless does accept a small number of students with high grades, to serve as models for the other students.

In January, acceptance letters are sent both to each student and to the parents. They are invited to a February welcoming reception featuring the university president as keynote speaker. During this reception the new students and their parents formally sign the all-important contract. The program's graduating seniors dress formally and serve as hosts, and fine food and live music round out the evening.

Students who are not accepted into the EIP also receive a letter, with a separate letter to the parents. High-achieving students are encouraged to continue doing well in school and then apply to the George Mason Excel Program. The Excel Program is for high-achieving students who have completed 11th grade and want to experience college courses and residential living at George Mason for four weeks in the summer.

There are many more qualified applicants than the program can accept. However, there are occasional instances in which a younger sibling of an EIP high school student wants very much to be in the program and even attends the tutoring sessions and Saturday workshops; in such cases, they are not excluded from these activities. Furthermore, if an EIP student later moves to a non-participating district or to a private school, as occasionally happens, the student stays in EIP. The overriding goal is to help all EIP students complete high school and succeed in a college or university setting.

The requirements and responsibilities of students in the program are specified in written form at the outset:

- The Contract for Participants and Parents requires students to:

  1. attend the 3-week summer academic program,
  2. attend all four Saturday workshops during the academic year,
  3. maintain a C average or better in each course,
  4. seek extra help from classroom teachers when needed, and
  5. utilize the tutoring services of the program.

  Parents are required to see that their children meet the above responsibilities, participate in parent meetings, and communicate regularly with school counselors and teachers.

- Two additional sheets list the academic requirements of the program from grade 9 through 12, listing the specific college preparatory courses recommended each year. One sheet further states that the minimum grade point average for 9th grade must be at least 1.9; for 10th and 11th grade, 2.0, and for 12th grade, 2.5. It is made clear to new students that records will be kept, quarter by quarter, showing course grades, GPAs, and SAT scores.

Every February, EIP hosts an evening reception honoring the selected 8th graders. The reception enjoys strong attendance. Families dress for it, and the seniors who act as hosts wear semi-formal evening dress. The university president welcomes the incoming class, the EIP teachers are formally recognized, and the director and vice provost read the all important contract in Spanish and English. After the signing of contracts, music by the GMU jazz ensemble and an excellent buffet round out the evening.

Once accepted into the program in January, 8th grade students may then attend tutoring any time during the remainder of the school year, though few student do so at this stage. The first official EIP event they attend is an overnight retreat in May for all new program students, tutors and staff at Hemlock Overlook, a wooded campground not far from the university. There the new students become acquainted. Many activities force new students to work together building mutual trust. Among them are rope climbing and the exercise of falling back into teammates' arms.

Services Provided

The Summer Academic Component. The core of the program is the Summer Academic Academy conducted on the George Mason University campus. This 3-week non-residential program is taught by high school teachers selected as having outstanding reputations, and all EIP students are required to attend every summer. Summer school operates 5 days a week for 6 hours a day, with bus transportation and lunches provided by the participating school districts. Academic classes are held each morning, with various enrichment activities or workshops following lunch.

Students are divided into small classes by grade level. The academic classes are actually intensive previews of the classes students will take in the fall; the intention is to prepare them well to meet any challenges of the fall course content. Classes are taught by the selected high school teachers, with each teacher working with a GMU tutor in the classroom. The summer 1992 session will be the first year in which calculus will be taught to entering seniors. EIP students who will be entering college in fall 1992 are invited to attend this calculus class, although they will have to arrange their own transportation home after the class.

There is no formal grading system for these summer courses, but students work intensively to master the concepts through a combination of lecture, small-group work, lively competitions in the classroom, and individual tutoring. End-of-course feedback consists of the teacher's written personal opinion as to the student's readiness for a specific college-preparatory course in the fall. These recommendations are entered into the students' files and used by their high school EIP counselors to help them in appropriate classes.

The summer component is intended to give the EIP participants at every level a feeling of belonging, trust and mission. Lunch is a time for the EIP students to mingle not only with other EIP students, tutors and faculty, but with regular GMU summer students as well. The students are free at lunchtime, and while the school districts bring in the normal school lunch trays, students may forgo this choice and purchase their own items from the student union cafeteria. The lunch hour is seen as a valuable time for freedom and integration with college life. Students are then strictly held to appear on time at their designated afternoon classrooms.

Afternoons are devoted to workshops on academic, counseling, or career-related topics given by the summer teachers or staff, or occasionally by GMU faculty or guest speakers invited by the EIP director. These afternoon activities vary by class and by day. Writing college applications and intensive SAT preparation are examples of the sorts of things covered. A communications workshop given by the Fairfax County program coordinator emphasizes effective communications skills with adults--parents and teachers, particularly. One summer teacher brought computers from his high school to the GMU campus, and computer workshops can take place as one of the afternoon activities. Visits to museums or to a nearby high school to use special math or science equipment round out the afternoons. Tutors are always present in the afternoons, to help out with workshops, to give additional tutoring, and to serve as role models to the students. Friday afternoons feature a brief recognition ceremony attended by all program students, tutors and staff. Awards are given for attendance, effort and achievement, and ice cream is brought in.

One summer activity for entering high school seniors is a job shadowing day; each student spends a full day on the job with a professional. A great deal of planning goes into making this day a success. The program director surveys the juniors to ask about their specific interests and the kind of career they would like to observe in action. At the same time, the director personally identifies friends, acquaintances and other contacts to ask if they would be willing to host a student for a day in the summer. After this initial contract, she writes to each host, and times and locations are confirmed, as well as lunch plans. Individual transportation arrangements also must be made in advance by the program staff. Following the job shadowing day, every student is required to write a thank you letter to the host.

On the last Friday of the summer session, a lunch is held for everyone involved in the program. In addition, everyone receives a written evaluation form to complete. The program director later studies these written evaluations and uses them to consider changes for the next summer.

EIP students are held to a strict code of behavior for the summer school with standards comparable to those expected of university students, and they are required to report to all classes on time. Attendance is constantly monitored, with immediate followup if a student is late to even one class. Similarly, classroom behavior is subject to strict discipline rules that focus on talking in turn, showing consideration for others' views, and being civil and decent to one another. This underlying structure across the board is seen as an absolute prerequisite to the program's success. Students with discipline problems are immediately taken to the director for a conference.

Teachers of EIP's summer component are also expected to serve in the program two of the Saturdays during the school year, and to attend meetings and recognition events. For their commitment, they are given a stipend of $3,100 to $3,200. There has been virtually no attrition of teachers to date; as the program has expanded, individual teachers--usually referred by word of mouth--are interviewed and appointed by the program director.

The EIP co-director, who is coordinator for the Fairfax County Schools' participation, will teach algebra in the summer 1992 session and will receive the teacher's stipend. During summers in which her role was administrative, she received half the stipend. Tutors in the summer session are paid $5 to $8 per hour and usually are paid for 30 hours a week.

The summer component takes a great deal of spring planning on the part of the GMU and Fairfax co-directors. They meet two or three times a week to arrange for the use of university classrooms, schedule the teachers' and tutors' time, plan for the afternoon activities (which are different each day and tailored to each of the four classes of students), and arrange for buses and meals. Three formal meetings involving the 14 summer teachers are held for scheduling and curriculum coordination purposes. In addition, subgroups of teachers meet separately as needed. Then, during the summer session, the program director is full-time principal/counselor/disciplinarian.

Saturday workshops. During the school year, students are required to take part in full-day Saturday workshops held once every 8 weeks. These may consist of academically- or career-oriented workshops on the GMU campus tailored to the students' level in school, or a cultural event or field trip. EIP teachers, tutors, and families are encouraged to participate in these Saturday sessions. The school districts provide bus transportation.

Following special weekend field trips, students are asked to write an essay about what they learned. Typical essays on visiting the National Gallery of Art's exhibit "Circa 1492: Art in the Age of Exploration" ended with the following comments:

> "We got to see what makes art so wonderful. I enjoyed almost all of the exhibits. It showed that each culture has a different aspect of art."

> "I benefited greatly from this experience and in the process enhanced my learning I would jump at the chance to visit another museum."

> "I would have never come to this museum. I'm glad I did."

Tutoring during the school year. One of the central features of the program is the year-long series of after-school and evening tutoring sessions. Tutoring is held at each participating high school one day a week after school for about 1-1/2 hours, in a designated high school classroom. After tutoring, students take the normal "late bus" home. Tutoring also takes place at the EIP office on the GMU campus one evening a week, for 2 hours. For this, students must arrange their own transportation.

Tutors and students are not individually matched on a long-term basis; a student may work with different tutors. This is not seen as a problem, since the students and tutors in the program have gotten to know each other through the retreat, summer and Saturday programs, and a family feeling pervades. Academic tutoring is totally assignment-driven; whatever the homework assignment is, or whatever particular problems or upcoming tests the student is facing, directs the individual tutoring session.

EIP tutors are assigned either to a high school or to the GMU office; a tutor may choose to work at both locations, receiving the program's hourly wage for any tutoring provided. Tutors are also paid for their preparation time, though not usually for commuting time.

At each high school a head tutor is designated. This person keeps attendance for both tutors and students, and submits the data to the program office. Any student who is on probation--that is, who got below a "C" in any course the previous quarter--must either attend EIP tutoring sessions at least once a week, or stay after school with the regular classroom teacher, who will sign a form noting this. If a student on probation does not show up, the head tutor calls the parent that evening. The head tutor checks attendance and teachers' forms each week. Although there is no extra pay for these extra duties, someone is always willing to serve as head tutor.

EIP tutors rarely quit their jobs. To become a tutor, they undergo an intensive interview with the director. Once hired, they meet as a group with the director once a month. Students and implementation details are discussed in detail. Tutors are encouraged to call the director with other problems in the interim, even at home. The feeling is one of almost family commitment.

Several tutors stressed that the principles of hard work and commitment that they teach their students keep them focused on their own studies. As one tutor summed it up:

> "Sometimes I think I get more out of it than the students. And by tutoring, I re-learn my subjects."

Course reviews. At the beginning of every quarter, EIP teachers hold a Math Review or a Science Review. The review takes place on a Saturday morning, with concurrent review sessions for every class level, held in separate classrooms at GMU. Here they go over the math or science concepts that will be covered in the upcoming quarter. Tutors are present at these reviews as well. Any problems from the last quarter that students did not fully grasp are also reviewed during this session. Attendance at these reviews is voluntary, and transportation must be arranged by the student's family.

Parent involvement. Parents are expected to be involved in the EIP throughout the year, and they play a key partnership role. Parent involvement begins with the February reception that marks the acceptance of their 8th grader into the program. Then there are Parent Council meetings in the evenings, held periodically either at GMU or more conveniently at their high schools. Topics range from financial aid information to planning the spring banquet. During the spring an intensive workshop is held for new parents, reviewing the components of the program and the responsibilities of their children and themselves to the mission of the program. Spring is also the time of the annual family banquet. The Parent Council organizes the entire event, including designing the invitations and arranging for home-cooked dishes and entertainment. Parents willingly chaperon summer and Saturday events. At every step, Spanish-speaking parents are informed in Spanish. Newsletters and other correspondence are either in Spanish or English; Spanish-speaking families receive materials in Spanish. At meetings, much of the news is conveyed in both languages. Someone will always sit beside any parent who needs help, translating the discussion into Spanish.

Help with applications. Program staff and tutors are available at the EIP office to help students with college applications, in particular by working through the materials and insisting on high standards of editing and proofreading. Parents receive assistance with financial aid applications, in both English and Spanish, and during whatever day or evening hours they can come.

Recognition and Motivation

Recognition is built into every service provided. Personal appreciation is continuously expressed by the program director, including an arm around the shoulder. The walls of the program office are lined with candid photos of students, tutors and teachers at special EIP events. When a student's or tutor's birthday is near, all EIP staff who happen to be in the office--including tutors--sign a special greeting card, which is mailed to the individual. After each quarter's grades are in, students who showed improvement or consistent good grades get a personal letter that begins, "Congratulations on your grades!"

The February reception, the annual spring banquet, the overnight retreat in May, each Friday-afternoon get-together during the summer program, and the series of Saturday programs during the school year--all these occasions prominently feature formal recognition of students and tutors for attendance, academic achievement, test scores, improvement in grades, news of any honors or other accomplishments, and news of college acceptances and scholarships.

When asked about what motivates them to devote their efforts to EIP, each person interviewed said that seeing the results of the personal effort devoted to the program's mission constituted all the motivation they needed. Tutors in particular emphasized how their own academic motivation has strengthened through helping the high school students. As one tutor put it: "When I tell my student to study hard and get that grade, inside I'm telling myself to do the same thing!"

PROGRAM ORGANIZATION

Current Partners

The Early Identification Program's partners are:

- George Mason University
- Fairfax County Public Schools, Area II
- Arlington County Public Schools
- Prince William County Public Schools
- Northern Virginia Community College
- Mobil Oil Corporation
- Virginia State Council on Higher Education

George Mason University centrally administers and provides most of the funding for this program as a whole. The program director and administrative assistance are employed by the university. The university also lends publicity and much informal support. Faculty participate by giving workshops, lectures or tours on Saturdays.

The EIP director oversees the student selection process, plans and coordinates the summer and weekend components, hires the teachers and tutors, and maintains all records. The program office, on the GMU campus, houses all EIP records and serves tutors, students and parents in the program. GMU also provides collegial support in the form of professors who volunteer to lead summer and Saturday workshops and give EIP students an inside look at the science labs and special exhibits on campus.

The school districts administer the initial student nomination and parent information aspects of the selection process, distribute EIP application forms, appoint and communicate with those counselors at their intermediate schools who will voluntarily handle all EIP administrative matters, arrange school district bus transportation and meals for all EIP functions, and arrange for the EIP meetings, after-school tutoring sessions and banquets that are held at district high schools. The district coordinators visit high school tutoring sessions, give presentations about EIP at faculty meetings, handle correspondence, and help identify teachers and guest speakers for the summer and Saturday components.

Northern Virginia Community College has one of its counselors give ongoing guidance to those EIP students who did not qualify for GMU but instead enroll at the community college with the aim of transferring to GMU.

Mobil Corporation has provided funding since 1990 for the program to serve more students and to enhance the summer component. Another grant was recently approved to strengthen the parent involvement component through a series of seminars to begin in the fall of 1992.

The **Virginia State Council on Higher Education** has granted EIP $15,000 to enable it to admit 25 additional students.

Staffing Pattern

The EIP office, located on the first floor of an administration building on campus, is open during normal business hours as well as two evenings a week for tutoring, counseling, and help with college applications.

University staff include the full-time program director, a full-time administrative assistant, GMU tutors, and the vice provost. Hortensia Cadenas, program director not only administers the program; she also drives to the high schools 3 afternoons a week to participate in after-school tutoring sessions, and she is in the office two evenings a week for tutoring sessions at GMU. Since parents, students, and tutors are encouraged to phone her about problems, she also receives calls in the evenings and occasionally on weekends. The administrative assistant manages the EIP office, including correspondence and recordkeeping.

On any given day or evening, two or three of the dozen GMU tutors may be found doing administrative work--recording students' grades, writing the newsletter, or putting together a mailing. To become tutors, they are interviewed intensively by the program director. They are selected on the basis of their academic record and their ability to be a strong role model to young students at risk. Most but not all are black or Hispanic. The tutors work from about 8 to 15 hours per week during the regular school year. Work-Study students earn $8 per hour, and others earn $5 per hour. Tutors are paid not only for their tutoring time but for extra administrative work and for participating in the summer and Saturday components of the EIP. Tutors in the summer program are paid for 6 hours a day, 5 days a week over the 3-week period.

The Vice Provost for Academic Initiatives and External Affairs devotes on average one day a week to EIP business. This involves meeting with the program director, who reports to him; they plan on-campus events, arrange for classrooms and speakers, plan their contacts with corporations, arrange for meetings to be held at high schools, review the budget, and evaluate the program's operations. The vice provost is contacting the Fairfax Chamber of Commerce to collaborate in finding summer jobs for graduating EIP seniors who will enter college in the fall.

School district staff include teachers and district coordinators. Fourteen public school teachers are employed by the program to teach summer courses and the school-year math and science course reviews. They also attend at least two of the Saturday programs, the annual overnight retreat to the woods, the February reception for new students, the May banquet for all EIP families, and other meetings. Each teacher also supervises a tutor during the summer and during course reviews. Teachers receive a stipend of $3,100 - $3,200 per year.

The Fairfax Area II coordinator serves as a staff member, working continuously with the program director both during the regular year and particularly during the summer program; she is essentially a co-director of the EIP who devotes on average one day a week to the EIP. Duties include all implementation details related to the schools--arranging tutoring space, bus and meal service, and correspondence, and keeping track of student and family moves. She meets with the director at the EIP office twice a month, with frequent phone calls in between, as well as other meetings throughout the year. The school district funds her salary. The other EIP school district coordinators are also paid by their school districts.

Volunteered effort. Several GMU students respond to periodic notices in the student newspaper asking for volunteers:

> Big Siblings
>
> Students are matched one on one with young people in need of companionship and a role model in the Early Identification Program. Applications are available in room 238 of SUB I.

Those who volunteer do tutoring and some administrative work. And one adult volunteer works in the office calling local businesses and restaurants to ask for in-kind donations, such as meal coupons from fast food restaurants, which are given to students for unusually impressive achievements.

Most of the EIP paid tutors volunteer extra time and effort for which they do not charge the program. For example, head tutors appointed to coordinate tutoring at each high school and take attendance do not receive supplemental pay, and they do not charge for most of the extra time required. Nor is commuting time charged. Most impressive is the personal time they devote to the high school students, inviting them to festivals on campus and taking time to meet their parents.

The intermediate school counselors who volunteer to identify potential EIP students and manage their paperwork perform this function in addition to their other responsibilities, as do the high school counselors designated as EIP counselors.

Program Budget

The total 1991-92 budget of $70,000 is derived largely from George Mason University, supplemented by several thousand dollars from the participating school districts (with Fairfax Area II providing the largest share) and about $20,000 from Mobil.

The program director and administrative assistant are not paid from program funds, but as university employees. Bus transportation, meals, and the coordinators' time are paid for by the school districts. The $70,000 EIP budget is used to pay the teachers (about 45 percent of the total) and tutors (about 25 percent), and for supplies, equipment, staff travel, photocopying and mailing costs.

Enterprising staff and volunteers have been able to obtain much appreciated donations, including computers lent by high schools; free entrance tickets to field trip sites (such as to the Chesapeake Bay Foundation, the Naval Research Laboratory, and even King's Dominion, an amusement park near Richmond, Virginia); a teacher "on loan" from Princeton Review who teaches SAT preparation to the EIP students (donated by the Princeton Review); and fast-food discounts. And a number of area professionals volunteer to host individual EIP students at their companies and agencies for a "job shadowing" day during the summer.

Recordkeeping

Two computerized recordkeeping systems are maintained at the EIP office: one on participants (students; tutors; teachers) and one on expenditures. The student records are based on individual file folders maintained on each student. Copies of school records, including each quarter's grades; standardized test scores; SAT scores; school attendance; attendance at tutoring and EIP summer sessions; college application forms; financial aid forms; and evidence of awards are maintained in these folders. The program secretary and tutors keep the folders up to date, contacting the schools as necessary to obtain copies of records. The program director and secretary maintain the financial records.

EVALUATION

As a relatively new program, there have been no external evaluations of EIP. The program director is required to submit an annual evaluation report to the vice provost.

The chief indicators of EIP's impact or effectiveness are each student's course grades monitored quarter by quarter, cumulative grade point averages, test scores, retention in the program, and acceptance to GMU or another 4-year institution. Furthermore, the graduating students' files will not be closed after their senior year; the program plans to continue monitoring their progress throughout the college years, particularly the majority who attend GMU.

Currently, all these data are maintained in each student's file in the EIP office. They have not been analyzed either for the program as a whole, or for a given class, as funding sources have not called for aggregated evaluation results. But it is important to note that the data elements are straightforward, up-to-date, and amenable to evaluation.

The program reports a retention rate of 74 percent. This figure, derived from 1991 program records, reflects the number of students across all classes who have remained in good standing in the program since their acceptance into it. (Students who moved out of the Northern Virginia area are not included in the total EIP population from which the percentage is derived). Conversely, it can be said that only 26 percent of the students selected for EIP have discontinued their involvement in it; most of them have been terminated by EIP because of failure to adhere to the contract's requirements.

A more qualitative indicator of program impact or effectiveness is found in the essay portion of each senior's college application form, copies of which are maintained in each senior's file. A reading of these essays shows that without exception, they read coherently, all sentences are complete and grammatically correct, and there are no spelling or typing mistakes. The director reports that while she and tutors assist the students with the forms and the essays and insist upon thorough proofreading, the essays are their own compositions.

Process evaluation of the program takes place both formally and informally on a continuous basis. EIP teachers, tutors, and students complete written evaluation forms at the end of the summer program, as well as after some of the Saturday programs and course review sessions. The program director uses these to follow up with the respondents and to make changes.

At the end of the summer program a teacher-tutor luncheon takes place, a key purpose of which is for teachers and tutors to give their opinions about the implementation of the program and to suggest changes. The rationale is that in this setting, the coordinators can get a sense of where there is general consensus and where there are more specialized concerns. On reflection, the director wrote in her evaluation of the 1991 summer program that was submitted to the vice provost, that this luncheon "should not be used as a time for discussion of the program as we tried to do this year. Following the meal, perhaps we should go back to the office and sit in a circle that is more conducive to discussion."

The director's annual evaluation for the vice provost reportedly summarizes all the feedback received from participants' evaluations. As part of the 1991 evaluation report, 16 specific suggestions were advanced for making changes in the summer component. In addition to the comment above about the luncheon, other examples included:

- Tuesday and Thursday afternoons should be devoted more to meetings with teachers and less to recreation time.
- Consider eliminating morning break time; taking the break made the morning extend too long.
- Buses were not dependable. First period teachers had a hard time getting their class together when kids dribbled in as a result of the buses being late. In the future, prompt bus arrival will need to be ensured.
- There should be more emphasis on grammar and writing skills in the English classes.
- The seniors' job shadowing day was successful. But efforts should be made to begin earlier in the year to obtain student interest information. In addition, the survey (of students' job interests in anticipation of this day) will be reworked.

Both the district and the program leadership believe that the goals and expectations of the EIP are being met, despite the fact that a small number of students have been dropped from the program because they could not attend the mandatory summer program (usually because they had to babysit or get a job); even if they are dropped, they are reportedly followed up as much as possible and are encouraged to rejoin the program when their personal circumstances allow.

Problems Encountered in Implementing the Program

This program appears to have encountered few major problems since its inception, and now, with 5 years of experience, program personnel say they feel better able to respond quickly to most perceived implementation problems.

Perhaps the most serious problems concern the instability of its students' lives. It is not uncommon for a student to move frequently (usually still within the local area), jeopardizing the ability to attend EIP functions, let alone maintain a studying routine. Phone numbers change, telephones are disconnected, parents lose jobs, and the young students sometimes must take on major child care

responsibilities or get outside jobs themselves. Other problems occasionally involve student behavior or crime. The program director sometimes testifies in court on behalf of EIP students in trouble with the law. Sometimes program personnel must take time to help a student or family in crisis obtain benefits from social service agencies.

Some incidence of student attrition is inevitable. Looking at the original class of 52 students, the Class of 1992, reveals that 1 has been enrolled at George Mason University for a year, having graduated early from high school through an accelerated program; 22 have been accepted at GMU for fall 1992; and two will be attending Northern Virginia Community College with the goal of eventually transferring into GMU. Of the rest of the class, nine students moved from the area; two students were dropped from EIP because they did not attend the summer program; 1 student resigned from EIP because her career goals do not require a college degree; and 15 students were dropped because they did not maintain the required grade point average. Of the 15 who were dropped, 2 have moved from the area, 12 are still enrolled in high school (most of whom will graduate with their class in June 1992 and plan to attend a community college), and only one is no longer enrolled in school.

When students have been dropped from EIP, it has always been because the students have failed to meet the requirements of the contract they signed when they were accepted into the program. No student has ever been terminated for discipline problems.

One problem the EIP has had, as a program that intentionally calls for family involvement, is that siblings often very much want to join the program. By virtue of the program's small size, the director gets to know the parents and the situations they face. Sometimes there appears to be no other source of similar help for a younger or older sibling. These situations are handled on a case-by-case basis; the director knows other programs in the community that help young people in various ways, including Hispanic and church-related organizations. Occasionally a sibling is allowed to receive tutoring unofficially until another source of help is secured.

Problems also arise in assisting parents with their financial aid applications. Documentation of parents' employment status and income is often difficult. This limits the ability to qualify for financial aid and is a source of frustration for both the director and the parents.

These matters involving family situations take up much time and energy on the part of the program director, and if the program can be said to have a problem in this area, it may be potential overload for the director. As one tutor observed of the students: "They want her to solve every big problem."

FUTURE OUTLOOK

The near-term goals for the program do not necessarily include greatly expanding the size of the program in terms of numbers of students, though demand is clearly heavy. Rather, the program leaders foresee a period of stabilization and assurance of quality. Asked whether the program could serve more students if it had the resources, program personnel said that it could serve more students, but they are hesitant to pursue a much larger size for fear of losing the personal quality considered vital to the program. Significant program enlargement would increase the EIP's planning and coordination burdens,

taking away attention from the students as individuals. It is believed that the ability to know each student and meet his or her personal academic needs must remain inviolable.

Staff believe that an assistant program director is much needed. They would like to conduct an impact evaluation of the program using the student data that are maintained in the individual files. They wish to intensify the parent involvement component. Certain aspects of implementation need to be addressed, such as ensuring prompt bus service and strengthening the grammar and writing content of the English classes. Matters such as these will receive attention during the 1992-93 year.

Due in large part to the impetus provided by EIP's establishment, the Area II superintendent and GMU leadership helped to form the Fairfax County Public Schools College Partnership Program, an umbrella collaboration of 17 colleges and universities in the area that aims to increase the number of students, particularly minority students, who enroll in college. Students are recruited in the 8th grade, as for EIP, and a multitude of tutoring, counseling, job-shadowing, and enrichment activities are now reaching a reported 600 Fairfax County high school students.

COLLEGE NOW
Kingsborough Community College
Brooklyn, New York

"College Now was probably one of the best things that I ever involved myself in during my high school years. Not only did I earn college credits, but it made my transition period into college much easier and less frightening."

-former College Now student

PROGRAM HIGHLIGHTS

Students Served: A transition to college program for moderately achieving high school juniors and seniors.

Services Provided: CUNY placement test; college-level courses; remedial courses.

Students Served Annually: 2,562 in fall 1991 and 1,525 in spring 1992.

High Schools Involved: 17 high schools in three districts.

Formal Parental Involvement? No

Administration: Office of the Dean of Open Admissions and Special Programs, Kingsborough Community College.

Year Begun: 1984-85 academic year.

Formal Evaluations: Annual evaluations have been performed by program administrators and an independent firm.

WHAT MAKES THIS PROGRAM SUCCEED

College Now has proved to be an enduring and successful academic transition program that has established a secure niche in the school districts it serves as well as within Kingsborough Community College (KCC) itself. A few key factors account for much of this success and the program's ability to overcome obstacles over the years.

College Now is characterized by **strong institutional and staff commitment** that extends from the top down. At KCC this starts with the president who founded the program and remains active in his support. For example, every year he lobbies the state legislature to preserve the program's budget. In lean financial years when the state has eliminated their line item altogether, he has helped see it restored. KCC's commitment is also evident in the large in-kind contributions the college makes to the program.

College Now staff at KCC are all extremely **dedicated** and feel a strong sense of pride and ownership of the program. **They put in time and effort far above and beyond the call of duty.** Staff structure is not hierarchical and they work together closely. As one assistant director said: "It's our baby."

This enduring **commitment** to College Now is also evident at the high school level. It starts with the principal and extends to the teachers. Staff feel **a sense of ownership** in the program and see themselves as **equal partners** with KCC. When budget cuts forced KCC to stop paying for the copies of *Time* magazine that many of the remedial writing classes used, teachers in at least one school spent their own money to continue providing it to their students.

College Now is **well integrated** into KCC. The program was originally placed directly under the vice president, which helped establish it institutionally. Three of the College Now staff (the director and two associate directors) come directly from KCC, two from academic departments and one from the administration.

College Now has remained **flexible** enough to accommodate itself to a group of diverse high schools with differing needs. For example, the program was originally conceived as an after-school academic program; however, at some schools an after-school program was not feasible because of competition from other extracurricular activities and jobs. Each school is now able to choose the time--before school, after school, or in some cases, first period. College Now has also accommodated the curricular needs of individual schools, instituting a computer science course in a school that did not have any such courses.

Maintaining **collegial and professional relationships with high schools** has been key to keeping the high schools invested in the program. All high school staff are paid for the hours they work on the program. Teachers are given the status of KCC adjunct professors and consulted about course content. KCC and high school staff work together to solve problems. It is not a program that is rigidly imposed on the high schools from above.

KCC staff feel that it was important for the program to have **time to establish itself**. Initially the program had to overcome a great deal of mistrust. KCC faculty were skeptical about high school teachers, high school principals needed to be convinced that College Now was "their program," high school teachers were especially distrustful. This meant that in the beginning, high school staff were not forthcoming about problems with the program such as the difficulty with the after-school time slot. The director feels that it took 2 or 3 years to gain the trust of the high schools and about 5 years for the program to establish its position and become integrated into the high schools.

A CLOSER LOOK AT THE PROGRAM

College Now is a collaboration between Kingsborough Community College of the City University of New York (CUNY) and 17 high schools in its service area. The program enables students to assess whether they have the basic skills necessary to do college-level work, receive any necessary academic remediation to prepare better for college, and take college-level courses for credit if they are ready for that challenge. It targets moderate achievers, and its goals focus on presenting college as a real option to those who might not have considered it as well as easing their transition to college.

Briefly, the program gives juniors in participating high schools the opportunity to take the placement test that CUNY administers to all of its incoming students. Based on the test results, students can take developmental courses to improve their basic skills, or take college-level courses to earn college credit in their senior year. The program also offers college orientation courses. All services are free to the students. Students generally take College Now classes at their schools before or after school. In the fall of 1991, 2,502 students participated in College Now's fall courses and 1,525 students participated in its spring courses.

The College Now concept was conceived in 1983 by Leon Goldstein, president of Kingsborough Community College in the spirit of reform engendered by the publication of *A Nation at Risk*. The specific idea grew out of conversations the president had with KCC's deans. He saw the need in KCC's service area for a transition program that targeted middle-range students, or moderate achievers, a population he believed was underserved in high school. After securing the commitment of all relevant educators and administrators in his own college, CUNY, and the New York City Board of Education, he recruited staff from the college itself. The program started in 1984-85 with four high schools and has grown consistently since then.

Kingsborough Community College is located at the southern end of Brooklyn, where the Hudson River flows into the Altantic Ocean. As of 1991-92, it had a student body of approximately 15,000 (about 9,000 FTEs) and a 30 to 40 percent minority enrollment. Admissions are open and 90 percent of incoming students receive some form of financial aid. The college supports a number of remedial services for academically underprepared students as well as bridge programs for higher achievers. Kingsborough is no stranger to collaborative programs with area high schools, but most of these programs focus on at-risk or disadvantaged populations.

The 17 participating high schools are scattered throughout Brooklyn (Kingsborough's service area) with one school in Queens and one in Staten Island. They are characterized by diverse populations of students--large minority populations consisting of many different ethnic groups--and a broad socioeconomic range, with students from affluent neighborhoods as well as students from public housing projects.

PROGRAM TARGETING AND SERVICES

Targeting

College Now is aimed at "moderate achievers," those students whose high school averages fall between 65 and 85 percent (between a D and a B), students in the middle ground between the high achievers and those considered to be at risk. The program philosophy is that few special programs exist for these students. Furthermore, these students do not always see college as a real option. Many of these students will also need remediation in basic skills if and when they do go to college. Thus, the program attempts to:

- open up college as an option in the minds of high school juniors and seniors;
- give high school seniors a taste of a college experience free of charge;
- ease the transition to college by giving students the opportunity to improve basic skills or earn college credits; and
- ultimately improve retention in college.

School-level Targeting

In the early years of the program, KCC's president and the district superintendents of the two school districts neighboring KCC identified high schools they thought would benefit from and be receptive to the program. They then approached the principals and secured their cooperation. In the first year, they chose four high schools close to KCC that were very likely to be receptive to College Now. The intent was to get the program off to a good start with receptive schools before expanding to other schools. In its second year, College Now expanded to eight schools, then to 14 schools in its third year. The program added three more schools in the next few years and reached its current number of 17 participating schools in its sixth year.

As the program became established, it no longer had to approach high schools. High schools called KCC and asked to join the program. College Now has had to turn schools away. There are no immediate plans to expand any further because of financial constraints as well as concerns about losing the personal touch to the program and the ability to give each school individual attention.

Program staff are satisfied with the mix of high schools participating in College Now and see the trend toward schools asking to participate in the program as a measure of the program's success. A striking example of success is a school whose principal initially was skeptical about joining the program when asked. The high school is in a blue-collar neighborhood, and the principal stated flatly that none of the students were going to college. He was more interested in collaborations with businesses. After the school agreed to participate, the school's program coordinator, who was also the college advisor, reported that few students ever came to him for advice about college. College Now persevered, and the program's success is best illustrated by a dramatic increase in participation over time. In the program's first year, 1986, only 18 percent of the junior class took the FSA test. In 1992, 44 percent took the test, which is above the overall 37 percent test-taking rate for College Now schools.

Student-level Targeting

Although conceived with moderate achievers in mind, College Now is open to all students in participating high schools. The program offers juniors the option of taking the CUNY Freshman Skills Assessment (FSA) test whether or not they ultimately choose to participate in College Now. Thus, the program provides an unique service to any student interested in attending CUNY, since the FSA test is required of all incoming students. For students interested in attending other universities, the FSA test offers a taste of the kind of placement exam that many institutions require.

Targeting has remained focused on the middle range students over the life of the program and program data indicate that for the most part it achieves its target even though the program is open to all students. In the spring of 1989, 50.7 percent of College Now participants had high school averages between a D and a B- (65 and 80 percent), and 74.7 percent of participants had averages between a D and a B (65 and 85 percent). These percentages have fluctuated little over the years. Program staff do not deny access to College Now for high achievers; neither do they make great efforts to encourage their participation. The very lowest achievers (the most at-risk) are generally steered away from the program by counselors and referred to other remedial programs in their high schools.

High school juniors are recruited in the spring through mailings to their homes and high school visits by College Now staff. KCC program staff make 20-minute presentations to all junior English or Social Studies classes to describe the program. In these sessions, students receive detailed information about the FSA test, testing dates, College Now courses, and the practical and economic benefits of participating in College Now. High school College Now staff (program coordinator, representative, counselor, and teachers) also participate in recruitment through informal and formal advising and counseling and word-of-mouth publicity.

After the FSA tests are scored, counselors from KCC visit each high school and talk to students individually to assess their interest in College Now and advise them as to which courses are appropriate for them based on their test results. On-site counselors help with this course counseling.

Services Provided

The College Now program provides two principal services free of charge to high school students: the opportunity to take the Freshman Skills Assessment test and enrollment in college-level courses.

The Freshman Skills Assessment Test

Students interested in participating in the College Now program must first be tested to determine their ability to manage college-level coursework. In the spring of their junior year, students take the CUNY FSA test at participating high schools. Though College Now targets moderate achievers, all juniors, of all achievement levels, in participating College Now high schools may take the exam. The FSA is a three-hour, three-part exam that measures a student's basic skills in reading, writing, and mathematics.

There is no obligation to enter the College Now program after the student takes the FSA test. Students may decline to enroll in the college-level credit or developmental courses and may use their FSA scores as an indicator of how well prepared they are for college. Students who satisfactorily pass the FSA test, in all three areas examined, may take college-level credit-bearing courses during their senior year of high school. Students who do not meet minimum competency levels on the FSA test are encouraged to improve their basic skills in the developmental courses offered through College Now. All students who have taken the FSA test and later attend a CUNY school have eliminated the need to take the FSA test as entering freshmen; the scores obtained while in College Now will suffice.

During counseling sessions, students who decide to participate in the program may enroll in the college-level credit-bearing or developmental courses offered through College Now. Undecided students will be approached in the winter of their senior year to determine if they would like to take a College Now course in the spring. In the spring of 1989, approximately 30 percent of all the juniors in the 17 participating high schools took the FSA test. Approximately 79 percent of those test takers went on to register for a College Now course for the fall of their senior year.

The College Now Courses

College Now offers three types of courses to high school seniors who have taken the FSA test:

- **developmental courses** to improve basic skills;
- **college-level credit-bearing courses** to give students the opportunity to earn college credit while in high school; and
- **orientation courses** designed to familiarize students with "college life" and career possibilities.

The College Now courses were developed by a committee of College Now course coordinators at Kingsborough Community College and participating high school teachers in the winter of 1983. The courses were to provide high school students with a "college experience"--classes with less structure, more student independence, and interactive discussions--while maintaining the academic rigor of college-level study. College Now courses were not to duplicate freshman-level courses at KCC, rather they were created to be interdisciplinary in nature, offering students a unique course that would be interesting, challenging, and illustrative of college-level work.

As the program grew, modifications to existing courses and the establishment of additional courses became necessary. For example, between 1984 and 1988 there was an influx of immigrants to the community that diversified the student population in the high schools. This change in population required the creation of ESL sections of the remedial English courses. Another example was the elimination of a course after the first year of implementation. The English Basic Reading course was dropped because of poor attendance. However, elements of this course were incorporated into the remedial writing program.

Participants may enroll in one College Now course each semester of their senior year. Courses are offered at the high school before school, after school, and in a few high schools, during the first period of the school day. College Now courses are to be taken in addition to the regular high school curriculum required for graduation. Courses are taught by specially trained and selected high school teachers who serve as adjunct professors of KCC. Students enrolled in developmental courses will retake the appropriate section(s) of the FSA test at the end of the semester, and all students, whether in credit-bearing or developmental courses will take a two-hour in-class final exam developed by the instructor. Students successfully completing credit courses will earn three college credits per course.

Students participating in College Now receive a KCC I.D. card that entitles them the use of many KCC facilities including the college library, computer labs, College Center, and the cafeteria. In addition, all participants receive an official KCC transcript that reflects the courses attempted and completed, and grades and credits earned. This transcript can be forwarded, at the student's request, to a postsecondary institution upon high school graduation. Results from a College Now alumni survey indicate that most former participants were able to receive transfer credit of some form for their College Now courses at their postsecondary institution. Furthermore, many participating high schools allow students to earn elective credit for their participation in the program that can be used toward their graduation requirements.

Developmental courses. College Now offers two categories of developmental courses: remedial English and remedial mathematics. Students who fail or score marginally on the FSA test are encouraged to enroll in the developmental courses. Developmental courses are designed to improve students' skills in order to later pass the FSA retest and eliminate the need for costly remedial coursework in college. Participation in developmental courses does not yield any college credit, however, students who take a developmental course in the fall semester may take a credit course in the spring.

Remedial English is one of College Now's largest programs, particularly in the fall semester. In the fall of 1989, 31 of the 102 total course offerings, or 30 percent, were in remedial English. College Now offers the following remedial English courses:

- English Basic Writing: Foundations for College-Level Writing. This course focuses on developing basic writing and reading skills including composing coherent sentences and paragraphs, and critically examining texts.

- English W: Corrective Writing Skills. This course is a follow-up course for those students who failed their FSA retest after taking the Basic Writing course. It was added in the second year of the program's history when it was found that some students needed additional assistance beyond one semester of remedial English.

Since 1987, College Now has offered the two remedial English courses with separate sections for ESL students. The ESL classes follow the same curricula and textbooks as the non-ESL classes, however, they are taught more slowly with particular attention to grammar and other needs of ESL students.

Remedial mathematics has the smallest number of course offerings of the College Now program because most high schools offer similar courses in their regular high school program. The two College Now math courses are:

- Introductory Algebra and Mathematics. This course reviews basic mathematical concepts and emphasizes algebraic equations and methods. It presents the same material as the course that is offered to KCC students. Because of its low enrollment, students, in general, seeking assistance with their math skills will attend the mini course described below.

- Intensive Math Review Mini Course. As a two-week intensive review workshop, this course provides a summary of the formulas and methods typically found on the math assessment of the FSA test. This course is offered at the high schools and is supplemented by two 2-hour math review sessions at the college taught by the math course coordinator.

College Credit Courses. College Now offers five credit-bearing courses for students who have successfully passed all three assessments of the FSA test. The program also offers a unique year-long course that combines remedial instruction with a credit-bearing course.

- Business Administration 10: Introduction to Business. In this course, students are introduced to the business world and its organization. Management and marketing techniques are analyzed and practical applications for both small business and large corporations are discussed.

- Science I: Issues and Adventures in Science. This three-part course examines man's place in the universe, man's attempts at mastery of the universe, and man's exploration of himself. Topics relevant to each section will be discussed and lectures will be enhanced with laboratory work.

- Humanities I: Culture in the 20th Century. Using the disciplines of literature, drama, art, and music, this course attempts to place 20th-century developments into a historical context and illustrate the continuity of culture.

- Behavioral and Social Science I. The Individual and His/Her World. Drawing from the concepts and methodologies of sociology, psychology, economics, political science, and history, this course helps students understand issues of current significance. Topics covered include identity, authority, work, and violence/aggression.

- Developmental Language Skills/Behavioral and Social Science. This year-long credit-bearing course was developed to serve College Now's lowest achievers at risk of dropping out of College Now's regular remedial English courses. Developed in 1986, it was hoped that by combining a remedial English course with the Behavioral and Social Science course students would remain interested and gain the benefits of remedial instruction and the satisfaction of earning college credit. The course is team taught by an English teacher and a Behavioral and Social Science teacher. This course is currently offered at three College Now high schools.

Orientation Courses. College Now also offers students two orientation courses designed to assist students in making the transition from high school to college. The courses are taught on the KCC campus in the late afternoon, and are taught by counselors. Both courses meet for six two-hour sessions during the school year, and participants earn one college credit for each course. In most cases, students provide their own transportation to the college.

- Freshman Orientation. This course is designed to help students make a smooth transition from high school to college and the "real" world.

- Career Decision Making. This course offers students the opportunity to develop skills necessary to deal with career decision making. It is designed to encourage students to explore abilities and interests, broaden their scope of occupational information, and increase their awareness of occupations via inventories, lectures, videotapes, and panels of resource personnel.

PROGRAM ORGANIZATION

Budget

College Now started its first year of operation (1984-85) with a grant of $140,000 from the City University of New York and $90,000 from the New York City Board of Education. In 1985-86, KCC's president secured $600,000 from the State Legislature, and the program has been a line item in the state budget ever since. Program funding reached its peak from 1987-88 through 1990-91 at over $900,000 per year. In 1991-92, funding was cut to about $700,000 due to general budgetary constraints.

Generally, the majority of the budget is allocated to salaries of full and part-time staff, with the remainder spent on supplies and equipment, etc. KCC's in-kind contributions to the program (office space, supplies, donated time of staff not in the budget) are very important. The program director estimates that these contributions amount to about $300,000 or $400,000 per year.

Staffing

The College Now program was originally placed under the Vice President of KCC. It remained there until 1990 when it was placed under the Dean of Open Admissions and Special Programs in the Vice President's office. The KCC College Now staff is directed by Stuart Suss and two Associate Directors, along with two Assistant Directors. Two secretaries (one full-time, one half-time) and three part-time delivery persons round out the staff. In addition, several KCC faculty members serve as course coordinators for College Now courses. These faculty are not part of the College Now budget, but receive release time from their departments to work on the program. The director is also the Director of Special Programs at KCC and teaches one course per semester in the history department. One associate director also teaches in the physical education department and the other works on other special programs in the college. Although these three are technically full-time College Now staff, they do spend a small percentage of their time on their other duties. The other two assistant directors were hired as full-time College Now personnel.

The KCC College Now staff work together closely and informally to run the program. Although there is considerable overlap in responsibilities and "everybody does everything," each staff member does have official responsibilities. The director is responsible for the overall supervision of the program, maintaining relations with KCC and with the New York City Board of Education. One associate director is responsible for research and development as well as being the linchpin of program administration generally. The other is responsible for testing, equipment, supplies, and records and employment of the hourly staff. Another assistant director is responsible for maintaining the program database and student records. Another assistant director deals with faculty and other professional personnel in the high schools. Course coordinators are responsible for hiring, training, and supervising the high school College Now teachers.

The College Now high school staff consists of a program coordinator, a College Now representative, an on-site counselor, and teachers. The program coordinator (chosen by the high school principal) oversees the program at the high school level and is the official liaison between KCC, the high school administration, and all high school College Now staff and participants. The coordinator plays a

role in advertising for potential College Now teachers. The program coordinator is usually an assistant principal and devotes about 60 hours per semester to College Now. The representative (or rep) serves as the program secretary/administrative assistant in each school and keeps the program functioning smoothly. The rep usually works closely with the on-site counselor and has extensive contact with College Now students as well as with the KCC staff. The rep works 20 hours per week and maintains student records and handles all paperwork and materials distribution. The on-site counselor participates in the recruitment of new students into the program and counsels and advises students regarding courses and participation after they have taken the FSA test. The on-site counselor works about 3 or 4 hours a week on the program and is usually one of the regular high school counselors. In the past they were counselors from KCC who visited the high schools once a week. This was changed to further the integration of the counselor into the high school; however, a few schools elected to stay with the counselor from KCC.

College Now teachers are hired through specific KCC departments. Positions are posted in the participating high schools and applications are forwarded to KCC to be evaluated by the appropriate department. In practice, most of the selection happens at the high school level before teachers apply for a vacant position. Potential College Now teachers are recruited and encouraged to apply to the program by the school principal and program coordinator. Once hired, College Now faculty are considered KCC adjunct professors and are paid CUNY wages. They are trained at KCC in the spring and generally meet at KCC with their course coordinator twice a semester to discuss course content and teaching methods. Teachers are observed and evaluated by their course coordinators once a year. Turnover among high school College Now staff has been very low, with most staff staying with the program for a number of years.

Contacts between KCC and high school staff are frequent, informal, and collegial with considerable personal attention devoted to each school. High school staff feel that they are equal partners in the running of the program. Although courses were developed at KCC and are supervised by the college, individual teachers have a fair amount of latitude as to how they cover the syllabus. Similarly, all high school staff feel free to make suggestions and to tailor the program to fit their particular school.

Program Scheduling

While the College Now courses operate for two academic semesters, the operations necessary to administer the courses use most of the calendar year. For example, operations for administering the fall College Now courses begin in January of the preceding academic year.

	College Now Schedule
January through Early March	■ Initial mailing to juniors on fall College Now courses ■ Recruiting sessions conducted at each high school ■ FSA test administered at each high school
March through April	■ Scoring of FSA test ■ Training sessions for counselors ■ Counseling/registration sessions with test-takers
June	■ Orientation session for newly registered College Now participants ■ Faculty Development Program to train adjunct professors
July through August	■ Produce internal evaluation ■ Inventory books and equipment that were loaned to students and schools ■ Prepare class rosters for all fall classes ■ Mailing to students, parents, and faculty with information about start of classes
September	■ College Now courses begin at high schools
October	■ Identical recruitment, testing, and registration schedule begins for spring College Now courses
December	■ Fall College Now courses end with participants taking final exams, and participants in developmental courses retaking appropriate sections of the FSA test
On-going activities/ recordkeeping	■ Maintain database that includes courses attempted and completed, and grades earned ■ Produce a KCC transcript for each participant ■ Forward transcript to a postsecondary institution upon request ■ Transfer FSA scores to other CUNY institutions upon request

EVALUATION AND OUTCOMES

Since 1985, as mandated by the New York State Legislature, the College Now program has been formally evaluated by an independent firm on an annual basis. Results of these evaluations indicate that College Now has an immediate effect on participants as well as long term effects reaching into the college years. College Now has reportedly had a measurable impact on improving the basic skills of participants enrolled in remedial courses. Looking beyond high school, an examination of College Now alumni enrolled in the CUNY system indicates that former participants persisted in the system at a higher rate, earned fewer remedial credits, and earned more degree credits after one year of attendance than a comparison group. Furthermore, these outcomes continued into the second year of attendance.

In addition to student outcomes, an unanticipated outcome reported by College Now has been a revitalization of the high school teachers involved in the program. Involvement in College Now is said to have brought about a more professional feeling for the adjunct professors as well as a new interest in teaching.

Student Outcomes

Students enrolled in remedial courses are required to retake appropriate portions of the FSA test at the completion of their courses. Evaluations have indicated that these students greatly improve their scores on the FSA retests after one semester of College Now remediation. Program data from 1990-91 illustrate these results. Over 75 percent of students in developmental courses who took the math retest of the FSA reportedly improved their scores, while over one-half improved their scores on the reading retest. Close to 40 percent of students who took the writing retest improved their score. The College Now developmental courses appear to assist students in passing the retest. The number of students passing the math, reading, and writing retest increased dramatically from the original testing. For the math retest, the number of participants passing the retest increased sharply by 48 percent; reading and writing increased by 15 percent. Yet many participants continue to fail the retests. For example, 61 percent of students failed the reading retest and 29 percent failed the writing retest. The College Now English Course Coordinator identified the influx of many limited English proficient students into College Now's English Basic Writing course as the cause of this situation. The coordinator explained that such students usually require at least a year of remediation in writing and reading English to bring their basic skills up to a passing level, and these tests represent only a half year's work.

Results from the FSA Retest Taken by 1990-91 College Now Participants in Developmental Courses

	Failed		Marginal		Passed		Percent who Improved Score
	Original	Retest	Original	Retest	Original	Retest	
Math	99%	51%	--	--	1%	49%	77%
Reading	74%	61%	14%	12%	12%	27%	56%
Writing	38%	29%	58%	52%	4%	20%	37%

Source: Gregory and Strong, Center for Urban Ethnography, 1991, pp.15-16.

Starting in 1988, the scope of evaluation was expanded to determine whether the program had any effect on participants beyond high school. College Now alumni attending the CUNY system as first-time freshmen in the fall of 1987 were tracked to measure program impact. Four hundred and sixty-three, or 41.5 percent of the students participating in College Now during the 1986-87 academic year enrolled in the CUNY system in the fall of 1987. A comparison group of 463 first-time freshmen was created to determine the effect of College Now on several outcome measures, including retention from one academic year to the next, the number of credits earned in remedial courses, and the number of credits earned in degree courses.

College Now alumni reportedly persisted in college at a higher rate than did non-College Now students. At the end of the first academic year, 95 percent of the College Now participants remained enrolled in the CUNY system, compared to 81.6 percent of the comparison group. This higher rate of

retention was sustained through the second year, with 76.5 percent of College Now alumni enrolled in the system as compared to 58.1 percent of the comparison group.

Program data indicate that College Now alumni required less remediation in college than other first-time freshmen. After the first academic year, former participants took fewer credits in remedial courses than the comparison group--5.2 credits versus 7.1 credits, respectively. This result was sustained through the second year, during which alumni earned a total of 2.8 fewer remedial credits than the comparison group.

Finally, College Now alumni appear to have progressed faster toward a degree over the three years observed by earning considerably more degree credits than did the comparison group. College Now participants were reported to earn 6.4 more credits in the first year, 13.4 more credits in the second year, and a striking 19.5 more credits in the third year. The table below summarizes the data indicating the progress of College Now students through their college years, as compared with a comparison group of students who had not been in College Now.

Retention and Credit Accrual of College Now Alumni Attending A CUNY Institution in the Fall of 1987

	Retention		Remedial Credits Earned		Degree Credits Earned	
	Participants	Non-Participants	Participants	Non-Participants	Participants	Non-Participants
Spring 1988	95.0%	81.6%	5.2	7.1	18.6	12.2
Spring 1989	76.5%	58.1%	6.5	9.3	36.4	23.0
Spring 1990	NA	NA	NA	NA	50.7	31.2

Source: Crook, Office of Institutional Research and Analysis, 1989-1991.

Teacher Outcomes

College Now staff note that an unforeseen outcome of the program is the revitalization of the high school teachers teaching the College Now courses. This enthusiasm can be traced back to the beginning of the program when teachers were asked to provide input for course development and syllabi. For many teachers this was the first time they were asked to provide input on a course they would teach. One teacher noted: "I have more input [with the College Now program] than I ever did with the public school system."

The title and privileges of an adjunct professor at KCC have brought a sense of pride to the high school teachers. This pride is supported by the collegial attitude these teachers receive from the KCC course coordinators and College Now staff. A teacher responded that he enjoyed the program simply because he was "being treated as a professional."

Students willing to learn and put forth the extra effort necessary for College Now participation have delighted the adjunct professors. As a result, teachers say they spend less time on discipline and more time on teaching. Maintaining a "college atmosphere" has allowed teachers to break away from the traditional high school teaching methods and engage in more interactive teaching styles. The College Now courses have allowed teachers to explore their specific subject area and expand their own knowledge. One teacher, who usually teaches computer applications, felt that "College Now has enabled me to teach a course I would never have been able to teach." Finally, a teacher simply summarized his participation in the program this way: "I've died and gone to heaven!"

FUTURE OUTLOOK

College Now is well established within KCC and its participating high schools. Institutional and staff commitment remains strong. Student enthusiasm remains high. In fact, the program has a record number of students (close to 3,000) registered for fall 1992.

The only cloud on the horizon is funding. As mentioned earlier, the state cut program funds from $900,000 to $700,000 in 1991-92. Funding for the 1992-93 school year has been further cut by almost 50 percent. Although CUNY may make up some of the loss, the total budget is still uncertain. In the face of these cuts, the fall 1992 program will have larger classes and fewer supplies for students. Hours for part-time staff will be reduced. All this will put more pressure on program staff, especially at KCC, who are already stretched very thin. The fate of the 1992-93 spring program is uncertain, but with financial help from CUNY, staff hope to run one even if it is considerably pared down. In sum, the commitment exists to keep the program alive, but budget constraints may limit the size and intensity of services over the next few years.

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BIOMEDICAL SCIENCES PREPARATION PROGRAM
(BioPrep)
University of Alabama
Tuscaloosa, Alabama

University of Alabama senior Cedric Harris, a BioPrep student, struggled to decide whether to go to optometry school or medical school: "One day it's medical school, the next it's optometry." Coming from Forkland (population 425) in rural Greene County, he wouldn't be in this situation had it not been for the BioPrep program.

"There's such a big need for health care. There isn't an optometrist back there within the whole county. Being from a small town and being so attached to it is probably one of the reasons why I want to go back to a rural area to practice medicine when I finish school. I'm a country boy, and I go frequently to hunt and fish with my uncles."

PROGRAM HIGHLIGHTS

Students Served: Capable, disadvantaged rural 9th-12th grade students whose schools lack a rigorous college-preparatory curriculum.

Services Provided: Strengthened core curriculum; professional development for teachers; visits to University of Alabama campus; counseling; help with forms; parent involvement.

Students Served Annually: Nearly 2,000 in 1991-92.

High Schools Involved: 34 high schools in rural western Alabama.

Administration: Dr. Larry Rainey, Director; administratively located within the office of the Vice President for Student Affairs.

Year Begun: 1982.

Evaluations Completed: External evaluations through 1989-90.

WHAT MAKES THIS PROGRAM SUCCEED

BioPrep's long-term success stemmed significantly from the **intensive human effort invested** in it during its first four years. The groundwork was laid with the vision of its co-founders, who were deeply involved in the day-to-day planning of BioPrep. Supported prominently by the president of the university, the core team established by the founders worked overtime for months until an official staff took office. Favorable publicity helped to keep the team motivated.

The core team recognized the importance of close, **frequent personal contact in a spirit of collaboration as equals** in gaining the cooperation of the first group of schools. Genuine interest, patience and responsiveness were especially crucial qualities, since the university was proposing to go into rural schools that had their own traditional structures and curricula, and to set about changing them fundamentally. All the miles logged in and all the meetings personally attended proved to be an invaluable investment.

BioPrep's **responsiveness to participating teachers and students** has strengthened the program. For example, program staff came to realize that most of the teachers want to come to the university for professional development workshops. Although it would seem inconvenient to drive that distance, teachers in these rural areas welcome the chance to get out and come to a lively university setting (near a shopping mall, incidentally). BioPrep was responsive to summer camp students' love of competition, and built competitiveness into every aspect of the program possible.

The ability to be flexible--for example, in recognizing the need to expand the curriculum to include advanced English and the need to involve more experienced former teachers in curriculum development--was another factor in the program's success.

The determination to build data collection and evaluation into the program from the beginning helped prepare the program for evaluations that would take place. The ability to demonstrate outcomes based on data carefully collected over the life of the program has strengthened the program's proposals for additional funding.

BioPrep's **desire to become self-sustaining** and its working through CCET to achieve financial security are another factor in helping to ensure long-term success. Whether any given grant it applies for comes through, this program has demonstrated that it need not be dependent on outside funds. It has established itself firmly as an important part of the university. And BioPrep's decentralized model itself has successfully encouraged participating schools to incorporate BioPrep on a self-sustaining basis.

BioPrep has had a **spillover effect** in the high schools, as other students have caught on to the idea of college-going. Said a BioPrep science teacher at Eutaw High School:

> "Once we got the BioPrep students taking physics, other students are saying 'Hey, I could do that, and maybe I could go to college, too.' Everything reinforces everything else. When I come back from an inservice, I don't just use what I've learned in my BioPrep classes. I use it in all my classes and I share it with all the other teachers."

Finally, the principal at Paramount High School said:

> "The exposure they are getting is making their poverty less of a fault, less of a handicap.... They have new goals. They are talking about college. They get to go up to the university and they hear a biologist talk, and they wonder what it would be like to be a scientist. Before BioPrep, it wouldn't have occurred to them to even think about that."

A CLOSER LOOK AT THE PROGRAM

The Biomedical Sciences Preparation Program (BioPrep) was established in 1982 at the University of Alabama at Tuscaloosa to encourage capable, disadvantaged high school students from rural western Alabama to pursue an accelerated college-preparatory curriculum and a university education emphasizing medical and health sciences and to consider returning to rural areas to establish their professional careers. The goals BioPrep has set for its participating students are:

- to develop academic competencies in mathematics, science, and oral and written communication needed for successful admission to and matriculation in an undergraduate curriculum directed toward the biomedical sciences;
- to understand the nature and elements of the health care system and the professional roles that exist within it; and
- to appreciate rural living and the rural environment and recognize the important role of a health care provider in a rural setting.

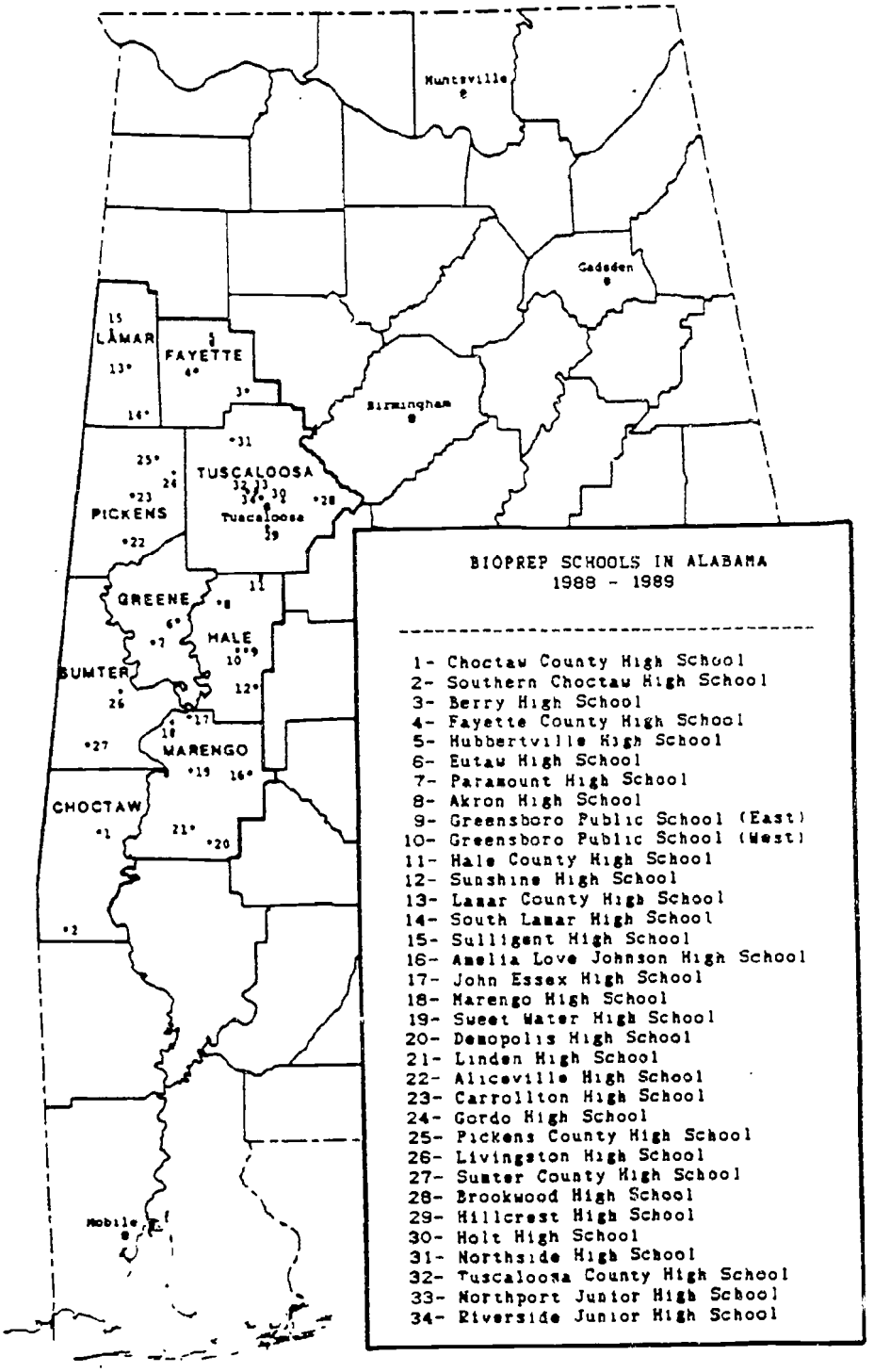
The high schools affiliated with BioPrep select students in the 8th grade on the basis of a strong academic record and recommendations. The selected students pursue an accelerated core curriculum, developed by BioPrep, from 9th through 12th grade within their school, culminating in enrollment in an undergraduate program in the sciences at a 4-year college or university. With summer and school-year programs at the university for both BioPrep students and high school teachers who have adopted the unique curriculum, the university is a lifeline to the schools of rural western Alabama. The program, which began with an initial cohort of 114 8th graders in five schools in 1982, has grown to serve some 2,000 students in 34 schools as of 1991-92. The map on the following page depicts these schools, which cover about 7,000 square miles.

BioPrep's summer and school-year programs take place at the University of Alabama at Tuscaloosa, a four-year public institution with an enrollment of about 19,000, 30 percent of whom live in campus housing. The university is located in the center of Tuscaloosa, a thriving college town of about 80,000. Most of the BioPrep high schools are more than an hour's drive away, where the economy is based on cotton, peanuts and timber.

PROGRAM HISTORY

The idea for an academic preparation program to meet the health needs of the rural poor in Alabama was conceived in the late 1970s by two faculty members in the College of Community Health Sciences, a clinical campus of the university's School of Medicine. Supervising medical students in rural assignments, they knew how inadequate health services were, and indeed the entire educational and economic base, in the poorer rural areas. Moreover, they were finding it very difficult to recruit medical students to the University of Alabama and were recruiting from other states and regions of the country. It was equally difficult to persuade medical students to serve in the poorer rural areas, let alone establish careers there.

Their strategy was first to prepare rural high school students for college. The curriculum had to be strengthened. In many schools a solid college-preparatory curriculum was virtually nonexistent. The strategy would be to help establish an appropriate high school curriculum to lead into a university course of study in the biomedical sciences. The appreciation of rural life and the skills needed to strengthen the rural economy would be woven into this school-college program, which students would take from 9th grade all the way through college. Other collaborative programs at the University of Alabama were largely one-time learning experiences; this program was to be a continuing one involving personal commitment over many years.



BIOPREP SCHOOLS IN ALABAMA
1988 - 1989

1- Choctaw County High School
2- Southern Choctaw High School
3- Berry High School
4- Fayette County High School
5- Hubbertville High School
6- Eutaw High School
7- Paramount High School
8- Akron High School
9- Greensboro Public School (East)
10- Greensboro Public School (West)
11- Hale County High School
12- Sunshine High School
13- Lamar County High School
14- South Lamar High School
15- Sulligent High School
16- Amelia Love Johnson High School
17- John Essex High School
18- Marengo High School
19- Sweet Water High School
20- Demopolis High School
21- Linden High School
22- Aliceville High School
23- Carrollton High School
24- Gordo High School
25- Pickens County High School
26- Livingston High School
27- Sumter County High School
28- Brookwood High School
29- Hillcrest High School
30- Holt High School
31- Northside High School
32- Tuscaloosa County High School
33- Northport Junior High School
34- Riverside Junior High School

To obtain initial funds, in 1979 a grant application was submitted to the U.S. Office of Education, which did not come through. At the same time, another colleague attended the annual meeting of the Association of American Medical Colleges and heard a presentation by a Macy Foundation official; the New York City-based foundation was embarking on a new precollege biomedical education program. Then in the planning stages, the Macy-sponsored high school programs would serve minority and disadvantaged high school students nationwide. When Macy was ready to accept formal proposals, the faculty members submitted their proposal for the Biomedical Sciences Preparation Program (BioPrep), as they called it. This time they were successful.

The Macy Foundation chose three sites for its new medical education program: two in New York City and five high schools in western rural Alabama which comprised the BioPrep program at the University of Alabama at Tuscaloosa. (Two more Macy schools were soon added, in New York and Connecticut.) None of the Macy schools selected had recent histories of academic achievement, few of their students were preparing for college, and fewer still were enrolling in competitive 4-year colleges. All selected sites were now to provide a rigorous academic honors program geared to capable or above-average students.

Thus, the University of Alabama's BioPrep program was established in 1982 with a 4-year Macy grant of $275,000 per year, to provide an accelerated college-preparatory curriculum in five high schools. BioPrep began with an initial cohort of 114 students selected in 1982 to begin BioPrep's 9th grade curriculum in 1982-83.

The program's development can be described in three phases:

1. The pilot phase from 1982-86, during which the curriculum was written and established in five schools, a total of about 100 8th grade students were admitted each year, and an in-depth evaluation of the first cohort of 114 students was conducted.

2. The expanded phase from 1986-90, in which Macy funding was renewed for those 4 years to expand BioPrep to 34 schools serving nearly 2,000 selected students, the curriculum was improved and broadened, distance learning through telecommunications was tried out for certain courses, and extensive data were collected on all participating students for evaluation purposes.

3. The technology phase from 1990 to the present, during which BioPrep is implemented at the schools as an ongoing, integral part of the schools' operations, BioPrep graduates are enrolled at colleges and universities, and through the university's Center for Communication and Educational Technology the curriculum is reaching both BioPrep and non-BioPrep schools throughout the rural south and other parts of the country.

The next three sections describe how the program evolved over time and came to transcend itself. The report concludes with problems encountered with BioPrep, lessons learned, and outlook for the program's continuation.

Phase 1: The Pilot Program, 1982-86

Development

Early publicity made the new program highly visible. When the groundbreaking Macy grant was approved, the founders of BioPrep held a news conference announcing the grant. It was arranged that the president of the university would speak at this event; he was intensely interested in revitalization of the university's role in community development. He was a strong supporter of the idea of BioPrep, and the faculty members who wrote the proposal had kept the president informed of its status. Soon after the grant established BioPrep, one of the faculty members, Dr. Harry Knopke, was appointed executive assistant to the president, and his move to the administration building gained more visibility for the BioPrep program, which he directed.

The founders of the program built rigorous evaluation into the program from the start. This reflected their own scientific training rather than any directive from Macy. In the interest of a representative evaluation, the five pilot schools selected were diverse in terms of size, structure, and racial composition. Greene County, in which two of the pilot schools were located, has as its economic base the local greyhound race track, some catfish farms and a few small cattle and timber operations. Median family income is about $10,000 per year, and only 40 percent of the adults over age 25 have high school diplomas. Such characteristics are not uncommon among the areas BioPrep was intended to reach.

To gain the cooperation of the schools, the program founders were prepared to invest heavily in personal interest, patience and cooperative spirit. The superintendents and school boards were first approached. Three school systems were involved. For each, a meeting took place with the superintendent, head of the school board, and the principals of the high schools and feeder schools that would be involved. The director of BioPrep and another university staff member always attended.

BioPrep leaders went into these meetings able to offer much of value to the schools. First, it was understood that a planning team consisting of school and university members together would plan the curriculum and the implementation of BioPrep; BioPrep would be a professional collaboration among equals. BioPrep would provide curriculum specialists directly to the schools to act as a resource to the teachers. BioPrep offered to clean and resupply the high schools' science labs. Macy was able to offer each school several Apple IIe computers. BioPrep was ready to host and conduct summer institutes for teachers to prepare jointly for the BioPrep curriculum; their expenses and lodging would be covered, and they would receive a nominal stipend as well. BioPrep also would host each school's participating students not only for an annual summer academic program, but for visits to the campus several times during the school year for academic and cultural activities. After the principals went back to their schools to share the idea with teachers, BioPrep held further meetings at the school level with principals and teachers, scheduled by the principals.

Bioprep staff at the university had already known some of the school personnel from previous supervision of medical students who had gone to the schools to give immunizations, or from previous other contacts. Having known each other in the context of prior service to the area by the College of Community Health Sciences helped establish trust in this endeavor.

During this period of intensive meetings with the schools, a small team of university officials committed to the mission of BioPrep began to meet several times a week for planning purposes. The team of volunteers was composed of both university and school personnel, and they met in the dean's office at the College of Community Health Sciences.

A key aim of the team was to convene a group of curriculum experts who would design each high school BioPrep course. It was desired that the individuals hired, either as consultants or as on-site resource persons, be experienced school teachers if possible. One University of Alabama graduate student pursuing a PhD in science education, Larry Rainey, had 10 years' experience as a secondary school science teacher. He was hired by the program as a graduate assistant focusing on the science curriculum. His talents and enthusiasm were such that he later became director of BioPrep. Much of the early curriculum staff consisted of graduate students; the rationale for this was to minimize costs and to benefit from their enthusiasm. Joining them were a few hand-picked consultants both from within the university and from other institutions, selected for their outstanding reputations.

Members of the team also made sure to attend every school-level meeting that concerned BioPrep, including participating in the first student selection process, doing initial curriculum planning in the spring of 1982 for the coming school year, and attending all parent information meetings that took place after the students were selected. In addition, three team members set up a controlled evaluation study, planning for data collection and on-site interviewing of the first cohort of students and their families. Finally, the team made arrangements in spring of 1982 for the first summer institute for 10 teachers to be held on campus--a math teacher and a science teacher from each of the five pilot schools.

In sum, the team was the critical organizational element of the program's first year. BioPrep leaders were prepared to attend numerous meetings at the schools personally and to involve the schools on an equal basis. The hiring of the program director, an individual uniquely qualified to head BioPrep, was pivotal to the successful development and implementation of the curriculum. Finally, the founders of BioPrep were determined that this program would be thoroughly evaluated from the beginning, and they put the steps in place to do so. The team evolved into a staff of about five full-time professionals working with consultants to implement and evaluate BioPrep over its first four years.

Program Targeting and Services

Profile of Students Served. The initial cohort of 114 students was divided about equally between black and white students, although the proportions differed by school according to the racial makeup of each school. These proportions remained about the same over the first four years of the program. As of the fourth year of the pilot, 25 students in the first group had left the program, usually because they could not meet the demands of the accelerated curriculum. As of 1986, some 400 students were in some stage of the program.

Student Selection Process. A composite method of selection was employed by the schools that included grade point averages, California Achievement Test (CAT) scores, and recommendations from teachers, counselors, parents and others who knew the students. Within these parameters, each school selected participants from among the 8th grade classes. Initial selection took place in the spring of 1982, followed by a letter to the parents of each selected student inviting the parents and students to an

informational meeting to be held at the school early in the summer. This pattern has been followed every year to the present.

Requirements of BioPrep Students. Each school was encouraged to present the program's academic requirements in written form to students and their parents. Specifically, BioPrep students were required to maintain a 75 average in 9th grade and at least an 80 (a "B" average) in 10th, 11th and 12th grades in order to stay in the program. This was the program's fundamental requirement; summer programs and field trips were not mandatory except for those in the first cohort, who were the focus of the controlled evaluation during the first phase. The core curriculum and retention requirements have been maintained to the present time.

Strengthened Core Curriculum. The primary component of BioPrep was its specially designed accelerated curriculum, which in the first phase emphasized strengthening the mathematics and science courses in the high schools. Interwoven within the four-year sequence of advanced math and science courses was substantive instruction in the workings of the health care system. For example, students worked with practicing physicians, health department personnel, and other key people in their rural areas to research the health status and health needs of their own communities. BioPrep science courses began with biology in grade 9, chemistry in grade 10, physics in grade 11, and a newly designed anatomy/physiology course based on case method in grade 12. With BioPrep support, labs were renovated and new materials were supplied. The math sequence included algebra, geometry, trigonometry, analytic geometry and pre-calculus, much of which had not been available at all before BioPrep. The math and science sequences today remain essentially the same as they were designed.

Midway into the first phase it was realized that students' poor writing ability necessitated infusion of English courses into BioPrep. Steps were taken during the first phase of BioPrep to provide a full 4-year advanced English sequence. In addition, it was decided to introduce a social studies/history course, at a level more advanced than whatever "honors" course may have existed. Thus, BioPrep came to consist of a block of four core courses.

The pipeline concept distinguished BioPrep from a high school's regular honors track, as the same group of BioPrep students stay together with a set of BioPrep teachers all four years of high schools, taking courses that build on one another.

Professional Development for Teachers. The summer institute for new BioPrep teachers, coupled with frequent visits to the classrooms by BioPrep curriculum developers, as well as inservice workshops during the school year, constituted the centerpiece of the program during its first phase. Teachers were involved not only in designing the curriculum for each course, but also in composing the tests and evaluating them later. Teachers were paid a nominal stipend of $25 per day plus mileage, in addition to room and board on campus for an average of two to three weeks each summer.

During the school year the university provided a rich resource to BioPrep teachers over the first four years. Faculty members and graduate research assistants visited each classroom frequently, bringing with them materials the teachers might want to use. A given BioPrep classroom teacher typically was visited every other week during the school year and could always request additional assistance. One English curriculum developer observed that it was very important in these visits not to tell or advise teachers to do anything, and not to judge or evaluate them; their purpose was to answer questions and offer additional approaches to teaching and using materials, if requested.

Some teachers, particularly those who were certified in English or social studies but who were needed to teach science or math, had difficulty adjusting to the accelerated curriculum. In such cases, extra attention was given. For the most part teachers were highly responsive and motivated to make BioPrep succeed in their schools. A turning point in the program came during the first phase, when the football coach at one of the high schools, who also taught biology, was so motivated by the professional development component that he asked to quit coaching and began teaching science full-time.

Summer Program for Students. Summer camp, as it is called, was first instituted in summer 1983 for the first cohort of BioPrep students, who had just completed the 9th grade BioPrep curriculum. The 4-week residential program consisted of academic courses during the morning from 8:00 am to noon 5 mornings a week, organized recreation every afternoon, and seminars or cultural events every evening. During the interim weekend parents occasionally brought their children home, though students who stayed had a full schedule of enrichment activities.

The BioPrep director planned the annual summer camp during the spring, including assigning instructors, hiring college-student counselors for the program, arranging classroom and dormitory space, coordinating to provide meals and transportation, and scheduling attendance at the cultural events. One of the BioPrep teachers then served as full-time summer camp director. The director of BioPrep taught in summer camp and was always available to the campers and faculty.

Classes were taught by professors and graduate assistants who are developing the BioPrep curriculum, guest faculty members, and teachers. A nominal stipend was paid, as well as room and board if needed. University students were hired as paid camp counselors; they lived with the students in the dormitory, escorted them to all their classes, ate with them in the dormitory cafeteria, took part in the afternoon and evening activities, and served as role models.

The morning classes were small, with 15 to 20 students per class. Students were grouped into classes by grade level. The emphasis in class was typically on lively competition. Summer camp was a unique chance for the "best" students in their own schools to compete with the "best" from other rural schools, and they reportedly thrived on this interaction and competition. Summer camp leaders devised a point system under which individuals and teams could accumulate points, and awards were given in recognition and to spur another round of competition.

At the end of summer camp each year, students filled out evaluation forms, and their comments were used by the BioPrep staff to plan for the next summer program.

School-year Visits to Campus. During the school year, field trips to the university were scheduled about every 6 weeks for BioPrep students. All the students from the five schools were taken by school-district buses to the campus for special cultural or enrichment events. They took place during theschool day, ending in time for the buses to make the 1-to-1-1/2-hour drive back to their schools by the end of the normal school day; these schools had no extra buses for late-returning field trips.

The school-year visits provided a valuable opportunity to have the BioPrep students and teachers convene again. Moreover, students became familiar with the university campus during the academic year, and this helped them overcome apprehensions about college settings.

Counseling. The high school counselors came to play a critical role in implementing BioPrep as it developed over the first phase. With BioPrep, precollege counseling had to become more institutionalized within each school. More information about the requirements of colleges and universities, application procedures, and financial aid options had to be provided to the counselors. Furthermore, it would be the counselors who were best equipped to maintain data on the BioPrep students through their high school years and to provide the data to program staff at the university. Thus, a chief duty of one of the BioPrep staff members was to work intensively with the counselors at the five schools to help them implement BioPrep, convey information to the students as they prepared to apply to college, and collect and maintain data on individual students' courses, grades, and ACT scores.

Parent Involvement. One key principle of BioPrep was to institute an ongoing BioPrep parent group at each school. Depending on the school and the strength of leadership of the principal and parents, the parent groups chose to organize and supervise evening study halls at the school once a week, held fundraisers to help with costs (such as the cost of taking Advanced Placement tests, for example), or held workshops concerning the college and financial aid application process.

Organization, Staffing and Budget

The BioPrep office was housed in the College of Community Health Sciences and had a staff of approximately five FTE personnel: the full-time director, a full-time data/evaluation manager, a full-time coordinator with the schools, and two FTE curriculum specialists supplemented by consultants as needed to develop the BioPrep curriculum.

The university staff's role was to define the parameters of the program (such as student selection and retention criteria), develop the curriculum in cooperation with participating teachers, provide staff development for teachers, and operate a summer program and periodic school-year visits to campus for the students.

While operated at the university, BioPrep's aim was to be decentralized and, in time, run by the schools. During the first phase, school administrators and teachers set up the program in their schools, implemented the curriculum, and enabled BioPrep teachers and students to participate in all Macy-sponsored BioPrep activities, whether at the University of Alabama or at Macy conferences bringing together representatives from all its sites.

The Macy-funded budget of $275,000 per year was devoted primarily to staff and consultant salaries, summer programs for both teachers and the increasing number of students in succeeding years, stipends for participating teachers, travel to and from the distant schools, curriculum materials and office supplies. Funding from other sources, both public and private, supplemented the program's budget. The university provided office space and equipment.

Evaluation

The founders of BioPrep were determined that measurable outcome evaluation should be built into BioPrep from the beginning, using a variety of data from students, parents, and other individuals associated with the project schools and from two control groups. The internal control group consisted of a sample of students from the same schools as the initial BioPrep students. These control students were matched for academic performance, California Achievement Test (CAT) scores, and recommendations--but were one year ahead of the pilot students. This control group's academic performance was followed from the 9th grade, as was that of the BioPrep students.

An external control group was also created: each BioPrep school was matched with a comparable non-BioPrep school. A matched cohort of students at the same grade level was then selected using the same procedures as for the internal control group. They too were followed from the 9th grade. BioPrep gained the cooperation of these schools largely by ensuring that they would become BioPrep schools in Phase 2.

Comparisons of students' subsequent performance on the ACT exam showed that BioPrep students' performance exceeded that of both control groups, and exceeded both national ACT norms and Alabama ACT norms for 1985. In addition, BioPrep students reportedly were much more likely than control students to express a career choice, to indicate a professional career, and to express an interest specifically in medicine. College-going rates among the BioPrep students greatly exceeded those of both control groups. And the program was able to monitor the college grades of the first cohort of BioPrep graduates. The authors concluded:

> That all students graduating in this first class will be enrolled in a college or university, 74% of them on competitive academic scholarships, provides further indication of the success of the BioPrep program, particularly when considering that fewer than 20% of the graduates of these schools have historically gone on to any form of postsecondary education. Combined with strong grade point averages subsequently achieved in college science courses, the students' composite ACT scores would predict a minimally acceptable performance on the Medical College Admissions Test.

Other evaluation data were also collected on the initial cohort of BioPrep students. The program staff visited each student and family, conducting extensive interviews in their homes or workplaces to build an information base for case studies and general descriptive purposes. At the same time, each counselor in coordination with the BioPrep database manager collected demographic and academic data from BioPrep students who began the program each subsequent year. Data were maintained throughout the high school years on all BioPrep students, for eventual outcome evaluation purposes.

Process evaluation data were gathered continually, from teachers who had completed summer institute programs and school-year inservice workshops, and from students at the end of summer camp. These were used to improve program implementation.

Phase 2: The Expanded Program, 1986-90

Development

Plans were made during the latter part of Phase 1 to expand the program to a large number of other rural schools outside Tuscaloosa and throughout western Alabama. By that point, news of BioPrep's positive influence in the pilot schools had spread, and a number of principals were interested in becoming involved. First, the five external control schools were added, as well as other schools in their counties and bordering counties. In addition, BioPrep staff had decided to disseminate their new 12th grade anatomy/physiology course in non-BioPrep schools as well as in the five pilot schools. Teachers in non-BioPrep schools who wanted to try teaching this course provided a natural inroad to participating in the overall BioPrep program in Phase 2.

Macy funding was continued at the same level for a second 4-year period, and in the wake of the widespread interest the program had attracted, Phase 2 had a total of 34 schools spanning 12 counties.

Introducing the program to a new school involved much personal effort on the part of BioPrep staff. In the case of one non-control-group school in a rural area nearly 2 hours from Tuscaloosa, one of the founders first contacted the county superintendent. The superintendent called in the principals of the three high schools to meet with him at the superintendent's office. Following this introductory meeting, the principal of the high school in this example asked him to come to a second meeting with the principal and all teachers at the school. In the interim, the principal held a meeting with the teachers to brief them about BioPrep. Then the founder came out to the school and met with the principal and teachers. It was explained that under a decentralized structure, the school would have significant autonomy to implement the program as it deemed best. Following that meeting, other BioPrep staff made a series of visits to the school, making sure to attend every meeting at which parents were present, working closely with the counselor to set up a data system, advising on the selection process, and meeting with the teachers who would teach the block of BioPrep courses in math, science, English, and social studies/history.

The graduate assistants worked closely with the teachers both during the school year and at summer inservice workshops. Noted one graduate assistant and an M.A. candidate in English, who helped develop BioPrep's English courses:

> We suggest activities they can use in their classrooms. We focus on or emphasize certain things in the English curriculum and see if there are any problems they have or any resources we can offer. We also trade ideas that other teachers have given us.
>
> On an average day, we get up about 6:00 in the morning and we're on the road. We go to three or four schools....

The assistants visited every school about every 4 weeks, with frequent telephone contacts in between.

Thousands of miles were driven to establish and maintain the personal contact considered to be so critical to successful long-term implementation within the school.

During this period, not only did the number of schools expand, but the program's original medically oriented goals changed. As BioPrep graduates began their university studies, program staff came to realize that not all BioPrep students would actually pursue biomedical careers and return to the rural areas to practice. The stated goals remained firmly the same, as did the curriculum components that gave students direct experience in their rural communities and clinics. But as the program director acknowledged (Gay Chow, "The University's BioPrep Program: The Painstaking Making of a Country Doctor," Alabama Alumni Magazine, July/August 1987, p. 41):

> We have no delusions that they'll all have medical careers. They're not all oriented in that way. We just hope that a number of them will choose medicine and that we can instill in them an appreciation of their hometown so they'll want to go back, but it'll be several years before we can assess the success of that....The first objective is to give these students a sound academic background so they can go to college and compete successfully in a professional curriculum. That can be medicine, engineering, law, economics, whatever. Our concern is that they go on to school.

The BioPrep curriculum also expanded during these years, not only to a full English sequence but also into foreign language, which was discovered in many rural schools to be totally insufficient for entrance into a postsecondary professional course of study. To reach all BioPrep students during this expanded phase, a centralized approach to teaching foreign language was introduced: It was decided that one language, Japanese, would be taught via satellite by a visiting professor from Japan.

Expansion on all these fronts, as well as the greatly increasing numbers of BioPrep students in the system and continual attention to improving the core curriculum, strained the program, and the second phase brought not only exhilaration but near exhaustion. However, by the end of this phase, most of the schools were implementing BioPrep on their own, and the need for frequent visits to each school lessened.

Program Targeting and Services

Profile of Students Served. In 1988-89, 1,597 students participated in BioPrep. Thirty-eight percent of the students were black and 62 percent were white. By 1989-90, BioPrep had grown to serve 1,997 students. As of that year, the percentage of minority students had increased to 49 percent. Fifty-eight percent of the 1989-90 students were female and 42 percent male. Twenty-six percent were eligible for free or reduced-price lunches. Forty-two percent of the BioPrep students' mothers were high school graduates; another 14 percent were college graduates. Twenty percent of the students lived in single-parent homes. On average, 80 percent of those who began BioPrep in 9th grade remained through high school graduation.

During the first three years of the expanded phase, the program graduated 144 students. One hundred percent of the students from the first five pilot schools went on to college, 74 percent of them on scholarships. Most of those students enrolled at 4-year colleges and universities in Alabama.

The BioPrep class of 1990 had 323 graduates, 86 percent of whom enrolled in higher education. Another 9 percent enlisted in the military. Seventy-three percent of the graduates enrolled in 4-year colleges and universities. Sixty-one percent of white graduates and 89 percent of black 1990 graduates

enrolled in 4-year institutions. Seventy-five graduates entered the University of Alabama at Tuscaloosa; 12 entered the University of Alabama at Birmingham; 10 went to Auburn University; and 19 went to Livingston University in western Alabama (where they could commute). Fifty-five students enrolled in historically black colleges and universities throughout the south.

Requirements of Students. The requirements placed on students in the program remained the same as established in the first phase. Maintenance of an average of 80 or higher in 10th-12th grade was one of the few centralized rules of the program, and it has been adhered to since the first phase.

Student Selection Process. The selection process remained as it was in the first phase, with the schools determining many of the criteria and procedures. Seventh grade students who have been tracked into 8th grade algebra are commonly considered possible candidates for BioPrep.

Strengthened Core Curriculum. The 4-year BioPrep curriculum underwent continuing modification and improvement. It expanded to provide Japanese I and II via satellite, enabling students in remote rural areas to satisfy two years of a foreign language. Japanese was first presented in 1988 as part of the Ti-In United Star Network, an interactive satellite broadcasting system; the University of Alabama was one of the first institutions to become part of this federally-funded network. Distance learning technology has enabled BioPrep schools, the other Macy-funded schools, and non-Macy schools nationwide to take not only Japanese but a range of specially created courses, including the anatomy/physiology course developed by BioPrep.

Under this distance learning technology, students view their Japanese I course, for example, on a TV screen, taught live by an instructor in a studio at the University of Alabama at Tuscaloosa. The instructor goes on air at a designated time 3 days a week. All schools with satellite equipment that have arranged to take Japanese have their Japanese Teaching Partner (one of the school's regular teachers who serves as course coordinator) supervise the class as they use their books and watch the TV. A cordless telephone allows the Teaching Partner and students to call in and ask the instructor questions or answer his questions. All students viewing the program hear the conversation. Tests that were developed and disseminated by the lead instructor are mailed to the instructor at the university for grading. Students who scored well on a test may find their names and schools highlighted on TV.

Macy made available to all its sites an innovative reading/critical thinking curriculum known as "Touchstones." The Touchstones curriculum uses excerpts from classical literature to help students develop critical thinking and problem-solving skills. Macy also made available a "DNA Literacy Program," in collaboration with Cold Spring Harbor Laboratory on Long Island. This program offers students and teachers the chance to use new technology to study DNA molecules. The core of this project as used by BioPrep is a van, driven by a BioPrep staff member and operated by a scientist, that visits schools around the state.

During the Phase 2 years, BioPrep's effect on the schools' other students became pronounced. A distinct "spillover effect" occurred. In many of the BioPrep schools, BioPrep classes that had room for more students accepted motivated non-BioPrep students into them. And in 12th grade, when all BioPrep students were required to take 2 Advanced Placement (AP) classes and the AP tests, if space was available non-BioPrep students in the "regular" honors track could also take these courses, if they were willing to take the tests. The second phase of BioPrep witnessed a widespread spillover effect as non-BioPrep

students chose to enroll in BioPrep courses. Moreover, since BioPrep teachers commonly taught other non-BioPrep classes, either to "regular" honors students or other students, BioPrep methods, equipment, approaches and, most importantly, high performance expectations, were instilled.

Professional Development for Teachers. By 1990, some 300 teachers were involved with the BioPrep curriculum. New teachers took the summer institute, and during the school year inservice workshops were held several times during the year, either at the university or at a central school district office. Moreover, summer workshops focused on dist learn courses, Touchstones, and DNA Literacy, were offered to BioPrep teachers, with expenses paid. Program staff stepped up their visits to the new schools, and visits to the original pilot schools tapered off.

Programs for Students. Summer camp had to accommodate increasing numbers of BioPrep students, and by the end of Phase 2 the camp had gone from 2 weeks to one week in duration due to funding, staffing and coordination limitations. The school-year visits to campus went from one field trip every six weeks to two to four such visits per year.

Organization, Staffing and Budget

As an independent entity housed at the medical college, BioPrep continued to receive strong commitment from the university president via the executive assistant. The program benefited from frequent publicity both by the university and by local newspapers.

BioPrep continued to operate with its same core of staff members and the same level of funding from the Macy Foundation. The grant supported professional development for teachers; further curriculum development; university-based enrichment activities for the students; books, supplies and laboratory materials; and support for the staff and the graduate students who worked directly with the schools.

Several other foundations provided support for specific aspects of BioPrep, such as summer programs, stipends for high school students working with professors, and salaries of graduate assistants. These included the Hearst Foundation ($115,000); the Lounsberry Foundation ($36,662); the Kaiser Family Foundation ($132,735); the Ulrich Bay Foundation ($10,000); and the NIH Biomedical Research Support Program ($11,807).

Evaluation

BioPrep staff worked intensively with counselors at all the schools to establish and maintain demographic and outcome data on every BioPrep student. Telephone contacts and periodic visits to the schools culminated in the counselors' sending data summaries to BioPrep every June. Data were maintained in part for purposes of annual reports that were submitted to the Macy Foundation.

During the latter part of Phase 2, Macy leadership and priorities changed, and the Macy high school education programs underwent an independent evaluation by the McKenzie Group, a consulting firm based in Washington, D.C. McKenzie evaluators visited the university and a number of the BioPrep schools, conducting an in-depth evaluation that included site visits, case studies of both school systems

and individual students, interviews with program teachers and staff, and examination of outcome data. The report, issued in October 1990, found all six Macy programs to demonstrate success, including Alabama's BioPrep. In addition to reporting the student and graduate data that were described above in "Profile of Students Served," the report's "Program Outcomes" section concerning Bioprep concluded:

> The Alabama schools housing Macy programs have experienced a significant improvement in the quality of their college-preparatory and honors programs as a result of their participation. More advanced courses have been added to the curriculum in all participating schools, and the curriculum for most Macy courses has been upgraded and modified. Parents, teachers, and students attest to the increased rigor and challenge of the curriculum. Students particularly feel they are working considerably harder than their other college-bound classmates; they also believe they are evaluated more rigorously. School and University staff believe the availability of this advanced curriculum has resulted in increased student self-confidence and improved performance.

In light of the more challenging curriculum and higher standards for performance, the average GPA of 83 (out of 100), for Macy students in all grades, was reported to be quite impressive.

Other information was gathered on BioPrep graduates who enrolled at the University of Alabama at Tuscaloosa. For example, among all entering freshmen who take the university's math placement exam, normally 10 percent place in calculus. By contrast, 80 percent of the 1990 BioPrep graduates who enrolled at the university and took the exam were reported to be placed in calculus.

The 1989-90 school year was the last year of detailed data collection by each of the 34 schools covering each student's demographic and academic characteristics. During the last year of this phase it became apparent that Macy funding for its medical education projects would not continue beyond the 8 years it had supported them. One reason was that, as intended, its programs had established themselves within the schools. Where principals and faculty had a strong commitment to BioPrep, for example, it was almost certain that BioPrep would survive and be self-sustaining, given a certain maintenance level of university-based professional development and continuing opportunities at the campus for both students and teachers. Another factor in the changed funding situation was that Macy's precollege education programs were transferred from the Macy Foundation to a newly created foundation called Ventures in Education, also based in New York City. Ventures in Education was able to continue providing professional development for teachers in the form of periodic workshops for all interested teachers in BioPrep and the other Macy projects, the latest of which was in March 1992. Beyond this, however, Ventures in Education planned to seek funding for continued core support for the Macy schools, including renewed data collection. A proposal to this effect has been submitted to the National Science Foundation.

Phase 3: Technological Expansion, 1990 to the Present

Development

The period of transition from eight years of Macy support to uncertainty in core funding coincided with the rapid development of satellite educational technology at the University of Alabama at Tuscaloosa. The BioPrep director became heavily involved in developing new distance learning technologies, first to

apply them to the outlying BioPrep schools needing a stronger foreign language curriculum, then as a natural outgrowth to reach large numbers of non-BioPrep schools in rural areas throughout the south. Possibilities abounded for strengthening a school's curriculum in any college-preparatory subject.

At the Tuscaloosa campus, a Center for Communication and Educational Technology (CCET) was established in 1988 to design and implement distance education programs in several academic disciplines, reaching middle schools and high schools throughout the United States. Dr. Knopke, who is now Vice President for Student Affairs, is director of this center. Dr. Rainey co-directs the center. Course offerings for 1992-93 will include Honors World Geography, Japanese I and II, and Integrated Science at the 7th and 8th grade levels. The BioPrep director wrote the curriculum for the Integrated Science courses. He is now writing the 9th grade curriculum for Integrated Science, which will blend with and possibly supplant the current 9th grade BioPrep science course. Eventually, he envisions 10th, 11th and 12th grade Integrated Science as supplanting the entire traditional sequence of high school science courses. The curriculum model used is based on a concept of integrating the sciences promulgated by the National Science Teachers Association.

A typical CCET course is taught three times a week by a lead instructor in the center's TV studio. As described earlier, a class of students in a distant school uses a special telephone to talk with the instructor. An assistant in the studio screens and prioritizes incoming calls, speaking directly with the students or teachers who place the calls. The course comes with its own book, workbooks, tests, and teacher manuals.

The key link in a distance learning course is the classroom teacher, or "Teaching Partner," who follows through with all assignments and tests, does the actual teaching two days a week, evaluates and grades the students, supervises individual projects, and communicates by phone and electronic mail with the lead instructor. In addition, each course has a professional development component consisting of mandatory week-long inservice workshops with the lead instructor during the summer, and regularly-scheduled video conference meetings during the school year (after school hours) using the TV. Thus, the teaching partners and the lead instructor know each other and collaborate to teach the course.

With revenues from the subscribing schools that may average about $2,000/year per course, and given an estimated 80 schools each of which subscribes to two courses, the distance learning courses at the University of Alabama at Tuscaloosa may eventually be largely self-supporting. These revenues, supplemented by university support in the form of facilities and technical assistance, will cover teachers' inservice expenses as well as all materials and much of the salary costs of the CCET instructors and curriculum developers.

Integrated Science for grade 7-8 alone has grown from about 10,000 students enrolled in 1991-92 to nearly 30,000 for 1992-93, spanning 11 states. Integrated Science has just won a Grand Gold Medal Award for school and college partnership sponsored by the Council for the Advancement and Support of Education (CASE).

Given the recent attention concentrated on developing the distance learning technologies that evolved out of Phase 2 of BioPrep, less attention has been devoted at the university level to the detailed implementation of BioPrep in the 34 participating schools.

Program Targeting and Services

BioPrep has stabilized to serve about 2,000 students per year from grades 9 through 12. Student characteristics appear to be much the same as they were throughout Phase 2, although data on student characteristics and outcomes have not been consistently maintained at the program office since 1990.

The 4-year curriculum is in place in all the BioPrep schools. There is little in the way of professional development for teachers. Summer camp for students will be held in 1992, probably for one week, although it had not yet been determined how many can participate. The level of 1992-93 professional development and student on-campus components will become clearer when the results of the NSF proposal are known.

It is estimated that about one-third of the schools are implementing BioPrep very strongly, under the leadership of principals who remain deeply committed to BioPrep. Such schools typically have strong BioPrep parent groups, collegiality among the BioPrep teachers, and willingness to commit school funds to laboratory materials, AP tests, additional books, or the costs of transportation to campus. These schools also tend to take full advantage of the BioPrep staff, calling them to request materials or a visit, or making arrangements for a student to see a faculty member on campus to research a report. Principals at active schools make sure their teachers take advantage of unusual inservice workshops that BioPrep is able to arrange funding for, such as Touchstones, the DNA Literacy project, or conferences sponsored by Ventures in Education. In short, for school principals who are committed to BioPrep, the university offers them a lifeline of academic support.

Organization, Staffing and Budget

BioPrep will continue to come under the Vice President for Student Affairs. BioPrep is headed by Dr. Rainey, the same director since its first phase. He now concurrently co-directs the CCET, serves as lead instructor for Integrated Science, and is writing the 8th and 9th grade Integrated Science curricula. Vice President Knopke maintains a strong commitment to BioPrep.

The current BioPrep staff consists of one full-time curriculum developer who is strengthening and modifying the English curriculum throughout the BioPrep schools. Serving on a part-time basis are the program director and the program's longtime data management specialist, who continues to work with the schools to keep up their data-collection activities. Her coordination work with the school counselors is done mostly by telephone.

BioPrep currently has no budget of its own. The ongoing operational costs of BioPrep in the schools are minimal. BioPrep schools that subscribe to Japanese now pay for the course themselves. Other costs faced by BioPrep students, such as the cost of taking AP exams, are covered by the schools, and in some cases BioPrep costs are paid for by the fundraising events held by active BioPrep parent groups. Staff salaries, office space, equipment, supplies, and utilities are covered by the university. Summer camp and inservice workshops were suspended for summer 1991. Occasional field trips to campus and teacher workshops did take place during school year 1991-92, with university, CCET or Ventures in Education support.

Evaluation

Data on student characteristics and outcomes have not been collected systematically since June 1990. Continued systematic data collection is dependent on additional funding; applications are pending with several organizations.

PROBLEMS IN IMPLEMENTING BIOPREP

The most significant implementation problems occurred not in the pilot phase, which had a full-time team working intensively with five schools, but rather in the expanded phase of the late 1980s. A number of problems surfaced as the staff tried to set up the program, with its still-changing curriculum, in 29 other schools.

It was difficult in the second phase to cultivate the same levels of personal interest as were invested in the pilot schools. The number of school-level meetings necessary and the sheer amount of driving to the distant schools became almost overwhelming. Staff members were constantly on the road, commonly as early as 6:00 am, visiting two or three schools in a given day. Teachers needed to be consulted on planning and implementing each new BioPrep course; counselors needed help setting up data systems and working with the forms BioPrep gave them; parents needed to hear from BioPrep representatives.

Another problem of rapid expansion was the scheduling of teachers' inservice workshops several times a year to adopt the new curriculum. These were important to attend, as a large number of teachers were being introduced to new curricula, and some curriculum elements were undergoing modifications. Yet scheduling was difficult. Each school system had its own vacation times and half-days to work around. Fridays were not practical because of football or basketball games. Mondays were not advisable because of a general desire to start the school week in class. Saturdays were out of the question. This left Tuesday, Wednesday or Thursday as the least problematic workshop days. However, it would have overburdened the rural schools to have all their BioPrep teachers absent on one day. Thus, fewer workshops were scheduled, and attendance at professional development workshops was often lower than desired.

Another problem that emerged mainly in the second phase stemmed from hastily dispatching graduate-student curriculum assistants with no prior teaching experience out to the schools, without adequate preparation to communicate well with experienced teachers. A number of teachers and principals reported that the BioPrep representatives were not responsive and tried to push unrealistic ideas upon teachers. This resulted in some erosion of trust in the program, which then had to be re-established. It gave rise to considerable turnover among BioPrep curriculum assistants until a core of curriculum experts with prior teaching experience could be identified and brought into the program.

An external event occurred in the late 1980s that strained the ability of some BioPrep schools to deal with the program's intervention. The State of Alabama mandated that public school principals carry out a new, more stringent evaluation plan in which every teacher was to be formally evaluated annually, reporting to the state. This evaluation mandate in addition to the BioPrep staff coming in to advise and evaluate the BioPrep courses proved to be a strain on some schools.

The difficulties of too-rapid expansion may have been brought on in part by an enthusiasm and desire to meet Macy's expectations--as well as their own expectations. The academic needs of the rural schools of western Alabama were certainly obvious. BioPrep's ability to serve 29 other schools in a short time span was not questioned during the first 4 years or when planning the second funding phase. In retrospect, moderating the rate of implementation in the additional schools would have helped the program take firmer root in more of those schools. And if the staff had been able to phase in implementation--or if the staff had been able to expand in preparation for the second 4 years--data collection could have been better maintained. As it happened, existing data may be insufficient to draw conclusions about the strength of BioPrep implementation school by school.

THE OUTLOOK FOR BIOPREP

BioPrep today is a decentralized program under which a university created a unique, rigorous college-preparatory curriculum targeted to students who attend isolated rural schools that essentially lacked the means to prepare students for the challenges of competitive 4-year colleges and universities. The program was designed to be put in place in these schools, becoming an ongoing,integral part of their operations. Once well-established in the schools, the university would continue to conduct professional development for teachers and programs for the students. For those schools that have fully participated in BioPrep, the University of Alabama is a true lifeline to them, linking students and teachers from rural areas to a modern university.

As its decentralized model took hold, BioPrep evolved and, in a sense, transcended itself. Its goals broadened beyond concentration on the biomedical sciences; it realizes that BioPrep students may well choose other professional careers. Its curriculum broadened beyond just math and science to encompass English, social studies and foreign language. Finally, through technology its teaching approach broadened to include non-BioPrep schools throughout the south and to add new courses starting at the 7th grade level that would be accessible to BioPrep and non-BioPrep schools alike.

The BioPrep director sees a need for a certain maintenance level of operations, if BioPrep is to remain alive and well in its participating schools. At minimum, a need is perceived to resume collecting demographic and outcome data, on at least an annual basis, from all the schools. It is believed that the summer camp for students also should resume. Furthermore, program staff want the university to host BioPrep students at least two or three times during the school year, to maintain their contact and sense of community with each other. Professional development for teachers is thought to be critical to the continued vitality of BioPrep, and staff believe that every effort should be made to re-institute summer workshops for teachers plus periodic workshops during the year. In particular, they would like to organize special days for all BioPrep science teachers, for all BioPrep math teachers, etc. The director envisions devising written contracts between BioPrep and each student, and between BioPrep and each school, specifying all responsibilities in detail. Finally, Knopke and Rainey consider it vital to personally stay in touch with the principals of every BioPrep school, informing them about innovative inservice programs that teachers--both BioPrep and non-BioPrep teachers, ideally--can take under the sponsorship of the BioPrep program, the university, or another organization. Whether with or without NSF funding, BioPrep leaders anticipate that the university in general and CCET revenues in particular can ensure that these supports are reinstated.

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EARLY OUTREACH
University of Illinois
Chicago, Illinois

"Some students do not see any value in Saturday College while they are participating in it. One student told his mom that he was not getting anything out of Saturday College and complained of giving up so many of his Saturdays to be in school. He later told her he wanted to become a chemist.

"How do you know that?" she asked. "You haven't had chemistry in high school."

His reply: "I have it in Saturday College."

PROGRAM HIGHLIGHTS

Students Served: Minority students in grades 7-12 who are moderate to high achievers and show a high level of motivation to pursue a college education.

Services Provided: Saturday core academic curriculum; tutoring; counseling; financial aid; relevant career experience through preceptorships; help with forms; required parent involvement.

Students Served Annually: Approximately 800 in 1991-92 served by all components of Early Outreach. The Saturday College component served 341 7th-12th grade students in 1991-92.

High Schools Involved: More than 90 public and parochial schools throughout the City of Chicago.

Administration: Ethel Caldwell, Director; Early Outreach is administered within the Center for Urban Educational Research and Development (CUERD) located in the College of Education at the University of Illinois at Chicago.

Year Begun: 1980

Evaluations Completed: Each component is evaluated annually by its coordinator; reports are compiled into an overall annual report.

WHAT MAKES THIS PROGRAM SUCCEED

First among the success factors of Early Outreach is the University of Illinois' **rich history of university-school collaboration.** Within the university as well, departments and colleges have enjoyed a history of working together. A booklet issued by the College of Education describes some 50 programs based at a wide range of UIC departments that work directly with Chicago school children, teachers, or administrators. The Early Outreach program had the university's support and financial backing from the beginning, freeing program leaders to concentrate on hiring the best staff and teaching talent, shaping the program's content and structure, and selecting and nurturing young students.

This program has **fostered professional collegiality** that transcends university and school lines. Professors and school teachers alike form the 15-member Saturday College faculty. At a recent luncheon for the entire faculty, several members met others for the first time, as the lower and upper grades meet in different campus buildings. Regardless of whether they were UIC professors or school teachers, pencils, and notepaper came out and promises were exchanged:

"I'll send you a set of these lesson plans!.... Can you give me the name of that author? My kids would love to read that!"

The program director has keenly recognized talented individuals, brought them into the collaboration, and **delegated major responsibility** to them. As a result, each component of Early Outreach operates strongly even in her absence. Saturday College, the Preceptorship program, and the other components all run smoothly under their own leadership. The coordinators often implement their own ideas once they have received the approval of the director. The coordinators are also responsible for preparing the annual report for their respective program component. The Saturday College teachers create their own curricula based on needs evidenced by the students. Parents run their own active group and raise thousands of dollars for scholarships. The director is always accessible to the staff, students, and parents. Imbued with her spirit of professionalism and steadfast support of the talents of others, Early Outreach represents the best of decentralized organization.

Effective and constant communication is key to orchestrating a program that directly affects hundreds of students and scores of faculty and guest speakers. As director Ethel Caldwell emphasized repeatedly: "Do not take anything for granted. In planning programs, clarity of goals, details, effective communications, and feedback are important." The day-to-day details of phoning, returning calls, clarifying plans, following up immediately, taking notes, writing individual notes and letters, confirming every arrangement and understanding in detail--these are the things that make for smooth implementation of Early Outreach and all its components.

The director's attendance to such details is practiced by core staff members as well. For example, despite the large number of 6th grade applicants for Saturday College, the program coordinator writes to each applicant's parents, asking them to come to the office at a specified date and time for the personal interview that is a key factor in student selection. Two days in advance, she follows up with each parent to confirm the interview or reschedule it. This attention to detail reflects the care devoted to the quality of the program.

Staff, faculty, and the college-student tutors **go extra miles to ensure that each Early Outreach student is academically prepared for class**. Students' homework and papers receive written comments. Every quarter, teachers of each course send home written evaluations to the parents. Saturday College tutors are available on immediate notice to help a student through a difficult concept. This kind of attention, continued over the years, ensures that virtually no Early Outreach 12th grader falls through the cracks on the road to college.

For their part, faculty see benefits to their professional development that make it easy to go extra miles for students: "I love these students," said one public high school science teacher. "This program lets me try new ideas. You could say that this is an ideal teaching situation."

Program staff care enough about the students to hold them to **high standards of performance**, attendance and conduct. Requirements imposed seem almost formidable: The 6th grade applicant must come to UIC on a summer day to take a 3-hour standardized achievement test. The student applicant and parent must appear, on a separate day, for an intensive personal interview. Students accepted to the program must maintain a C average or better in school each grading period. Parent involvement is not only required, with attendance taken at the monthly meetings--but **parents** must sign and submit their

child's report card to the office every grading period throughout the 6-year program. High school seniors are asked to apply for five different scholarships on their own initiative, reporting all information to the Early Outreach 12th grade/transition coordinator. Students and parents understand the strict standards early in the selection stage. Those accepted are eager to meet these standards; apart from moving out of the area, very few students quit Early Outreach.

Finally, **the effects of this program extend beyond the students' lives.** As a result of students' involvement in Early Outreach, several parents have gone back to school to pursue their GED or take college-level courses.

A CLOSER LOOK AT THE PROGRAM

The primary goals of Early Outreach are:

(1) to identify talented minority students at an early age and help them to become better prepared for entering and completing college; and

(2) to provide the students with exposure to career options in health and other professions early on so that they are aware of the relationship between course-taking patterns and professional career choices.

The Early Outreach program, based at the University of Illinois at Chicago, is a long-term academic preparation program that identifies moderate-to-high-achieving 6th graders citywide, mostly of minority background, and provides them intensive academic support through 12th grade, with continuing counseling and followup during college. The core of Early Outreach is Saturday College, with structured classes taught on campus in mathematics, science, engineering, composition and public speaking every Saturday morning during the school year. Supplementary opportunities for students--both Saturday College students and others served by the program--include summer institutes in chemistry and math, professional career experience provided through preceptorships (a kind of internship program) and a summer job program. An active Parent Network meets one Saturday a month to schedule and hear guest speakers, plan family events, and raise funds for their own scholarship program.

Early Outreach was initiated in 1980 as part of the campus's newly formed Urban Health Program to encourage the city's junior and senior high school minority students to pursue careers in the health professions. In 1987, the program expanded from an emphasis on the medical professions to a campus-wide effort including all professional career fields. The Early Outreach Saturday College has grown from 60 students at its inception to 365 students in 1991-92. Adding the other components of Early Outreach, more than 800 Chicago-area students are currently involved in some component of this umbrella program.

All of the program's components are based at the university, a busy, largely commuter campus in the heart of Chicago with a total enrollment of 25,000 full- and part-time students. The university has a strong concentration in the health professions, with medical, dental, nursing and pharmacy schools, and a large hospital. Its immediate neighborhood includes the poorer West Side and South Side areas of the city, where the need for health care is acute.

The University of Illinois at Chicago (UIC) has a rich tradition of partnerships involving public and private school students. **UIC and the Schools**, a directory describing over 50 partnerships and highlighted with photographs of students, features programs based at a number of UIC departments. The College of Education is actively involved in collaborations, not only with students (such as a "STAR" Project for special education students) but with teachers (eight different programs), principals (such as the CUERD Principals' Center and the Annual Principals' Institute) and local school council members (such as the Urban Leadership in Education Program). In addition, the Departments of History, Mathematics, Engineering and Chemistry sponsor collaborative programs with the schools. The university's Colleges of Nursing, Pharmacy, and Medicine operate programs that reach young students directly, such as the Minority high School Student Summer Research Apprentice Program and the Urban Health Program.

This tradition of collegiality among numerous community-minded outreach programs helped Early Outreach establish itself. The formative years of Early Outreach were marked by the director's utilizing the talents of people who directed and taught in some of these programs.

The chart on the following page depicts the collaboration of Early Outreach with the university, Chicago's schools and the community.

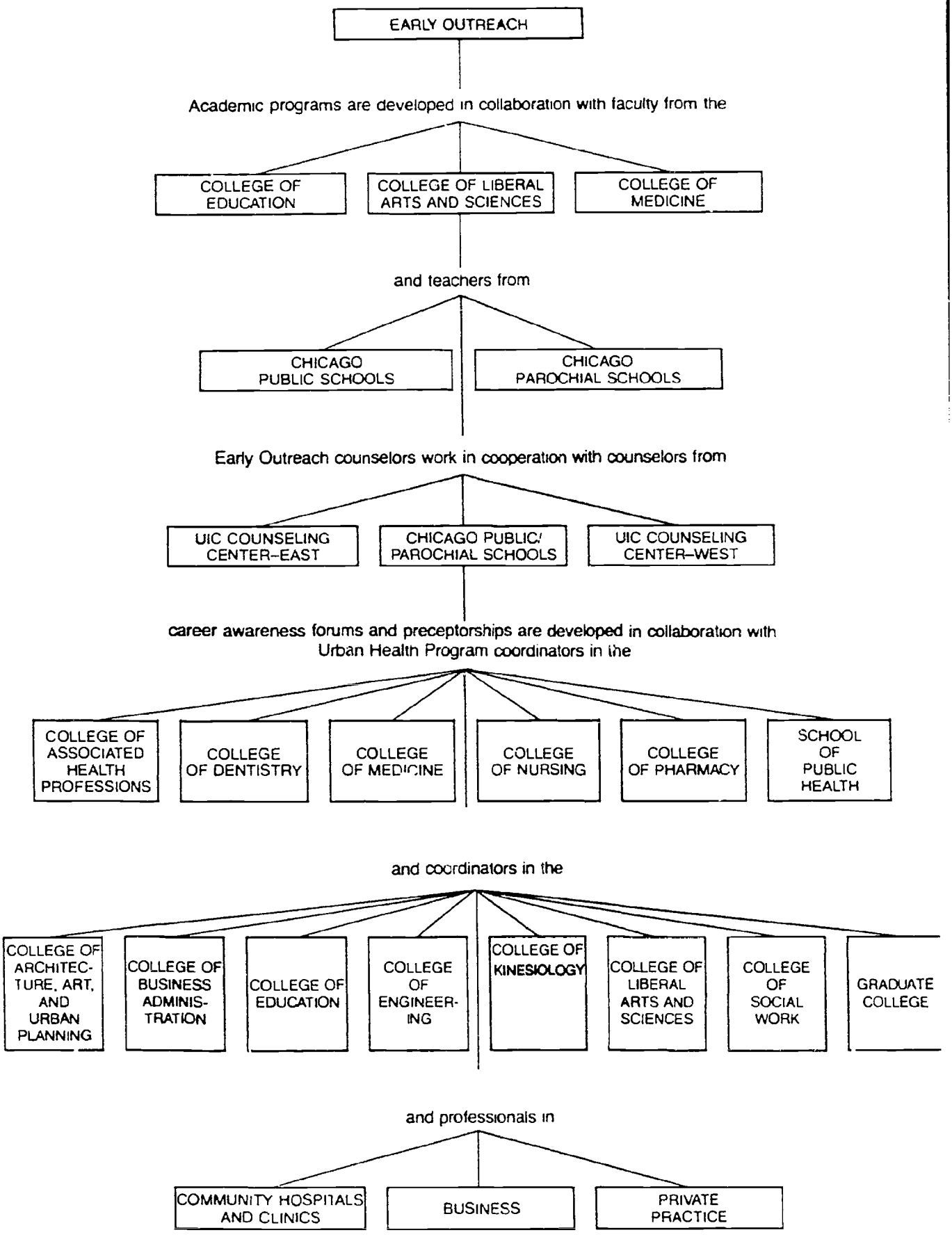
PROGRAM HISTORY

Chicago's neighborhoods that border the university historically have been among the most in need of basic health care services. In 1978, in response to residents' concerns about the shortage of health manpower to serve their communities, UIC initiated an Urban Health Program to foster the development of minority health professionals. It did so under mandate by the Illinois State Board of Higher Education, and with the mandate came state support for the program.

The Urban Health Program's aim was, and is, to identify and train potential minority doctors and other health professionals, to alleviate manpower shortages and the poor health services found in the inner city.

Importantly, from the beginning the Urban Health program had the financial support of the state-funded University of Illinois. With this foundation of support, the program could concentrate on organizational development. In this aspect, too, support was solid from the start. The program was organized by an innovative leader, an official within the Chancellor's office, and she had the Chancellor's complete support. Within a year, the Urban Health Program had three full-time staff--the visionary director, a secretary, and an energetic research assistant.

The idea to add an early outreach component emerged almost immediately. Recruiters for UIC's health professions schools were expressing concern about the limited pool of minorities from which they had to recruit. They also stressed that competition for that pool was very stiff. Thus, the concept of Early Outreach evolved in 1979 and, after meeting for several months with an ad hoc committee composed of faculty from the Colleges of Education and Liberal Arts and Sciences, the Early Outreach program was created. Its goal was to expand that pool of minority students citywide interested in pursuing careers in health professions. Its dual emphasis would be on strong academic preparation for college and in-depth exposure to careers in health professions at an early age.


EARLY OUTREACH
Academic programs are developed in collaboration with faculty from the
COLLEGE OF EDUCATION
COLLEGE OF LIBERAL ARTS AND SCIENCES
COLLEGE OF MEDICINE
and teachers from
CHICAGO PUBLIC SCHOOLS
CHICAGO PAROCHIAL SCHOOLS
Early Outreach counselors work in cooperation with counselors from
UIC COUNSELING CENTER–EAST
CHICAGO PUBLIC/ PAROCHIAL SCHOOLS
UIC COUNSELING CENTER–WEST
career awareness forums and preceptorships are developed in collaboration with Urban Health Program coordinators in the
COLLEGE OF ASSOCIATED HEALTH PROFESSIONS
COLLEGE OF DENTISTRY
COLLEGE OF MEDICINE
COLLEGE OF NURSING
COLLEGE OF PHARMACY
SCHOOL OF PUBLIC HEALTH
and coordinators in the
COLLEGE OF ARCHITEC-TURE, ART, AND URBAN PLANNING
COLLEGE OF BUSINESS ADMINIS-TRATION
COLLEGE OF EDUCATION
COLLEGE OF ENGINEER-ING
COLLEGE OF KINESIOLOGY
COLLEGE OF LIBERAL ARTS AND SCIENCES
COLLEGE OF SOCIAL WORK
GRADUATE COLLEGE
and professionals in
COMMUNITY HOSPITALS AND CLINICS
BUSINESS
PRIVATE PRACTICE

The first Early Outreach program, Saturday College, was started in January 1980 with 30 7th graders and 30 8th graders. Initially, the idea was to recruit 9th graders. But the staff believed it was vital to reach students early enough to influence their selection of their high school academic program. Left on their own, minority students often opted for the easier courses without considering the impact high school course selection has on future college and career choices. It was envisioned that Early Outreach would eventually have several programs for different age groups under its auspices.

The Urban Health Program director had considered several models for Early Outreach before deciding on a Saturday school model. Two in particular were studied: The American Foundation for Negro Affairs (AFNA) had a minority academic preparation program in New Orleans emphasizing apprenticeships in the medical professions. The California Early Outreach Partnership Program at the University of California-Irvine took grade 7-9 students and provided tutoring and counseling, with tutorials on Saturdays and parent involvement. With university support, directors of these programs were invited to UIC for discussions.

In considering how Early Outreach programs at UIC should be structured, the AFNA experience seemed to confirm the value of apprenticeships; the California experience confirmed the importance of a parent component and that given a good reason, junior high and high school students could be persuaded to attend Saturday classes at a university. Finally, the staff wanted to track students individually from 7th grade until they exit undergraduate/graduate school and enter the world of work.

The ad hoc faculty committee involving the College of Education, the College of Liberal Arts and Sciences, and professors of mathematics, physics, education and English was the critical core planning group for Early Outreach. This committee of about a dozen members voluntarily met weekly from September through December 1979 in the Dean of Education's conference room. They developed the program's curricula and identified individual public and parochial teachers they thought would share their vision and join the program. Indeed, for the first three years university faculty members taught Saturday College without pay.

With internal planning underway, the staff then needed to approach the schools. The Urban Health Program director contacted and met with the Chicago Public Schools administration and obtained the support of the General Superintendent of Schools. He arranged a series of meetings with groups of school principals so she could present the program to them and receive their input. She also formed linkages with the Office of Catholic Education, Archdiocese of Chicago.

The Urban Health Program research assistant teamed with a dedicated education professor serving on the ad hoc committee; together they met with school principals, one by one, to recruit the program's first 60 students in 1980. The contribution of this education professor was invaluable: she knew the principals of many schools, having placed teachers-in-training in the schools for their practice teaching. The principals trusted her when she assured them that Early Outreach was not supplanting traditional education but would instead provide Saturday academic enrichment.

Saturday College grew steadily over the program's first several years, and by 1983-84 it served some 200 students. Early Outreach had added other components--career apprenticeships, called preceptorships, for older high school students; a summer employment program; and a gifted summer institute in chemistry--so that Early Outreach served a total of about 400 students in 1983-84. The staff

had grown to half a dozen to perform the increasing administrative and individualized recordkeeping functions. In 1983 the recordkeeping, which had been done by hand, was computerized. Also in that year the program director was promoted to Associate Vice Chancellor for Academic Affairs, and the research assistant who had been instrumental from the start assumed the directorship; Ethel Caldwell has been Director of Early Outreach since 1983 and now oversees academic preparation services to more than 800 students. The moment when the program's viability was driven home to the director came one day several years ago. She was walking to the dais of the Chicago Urban League to give a presentation on Early Outreach. She noticed a young, accomplished-looking black man among those already seated on the dais. She recalls:

> After I had given my presentation and before he began his, he said that he could attest to everything I had said, because he had been one of my students.

PROGRAM TARGETING AND SERVICES

Targeting

As of 1991-92, there are 341 7th-12th-grade students in Saturday College, the main component of the Early Outreach program. Some students' parents drive them to the UIC campus every Saturday; others take public transportation from all around the city's generally poorer neighborhoods. Black, Hispanic, and American Indian students are targeted as being underrepresented in the health professions. Among the 341 students currently in Saturday College, 182 are black, 142 are Hispanic, 10 are Asian and seven are white. Slightly more than half of the students are girls.

Students must be attending a City of Chicago public or parochial school and must be at least on grade level in reading and math. Parents must also be prepared to participate in the Early Outreach Parent Network.

Student Selection

The selection process for Saturday College is dramatically influenced by the sheer heavy demand for this program. Before the first step is taken in the spring of the 6th grade year, the coordinator for recruitment and the 7th-8th-grade component must face the long waiting list from last year. A small number of waiting-list students may fill in for the few students who began Saturday College and then left the program. The coordinator gets numerous calls from parents of wait-listed students. But never more than 10 have quit, so hardly a dent is made in the waiting list.

As recruitment season begins, schools are first targeted--schools with high proportions of minority students and that have already participated in the program, and then a few new schools are contacted each year. As of 1991-92, some 90 schools with a 6th grade were sent a letter and five applications to give to students who were to be identified by school personnel. Thus, initially about 450 applications are distributed. Seventy-five 7th graders will ultimately be selected.

Followup calls with interested schools result in the coordinator and her assistant (the 7th-8th-grade counselor) visiting about 20 schools to give an assembly or to speak in 6th grade classrooms about the program. Some schools are actively responsive and eager to host a visit; others have minimal mail contact with the program. Regardless, the program's ultimate goal is to serve individual students. Interested students fill out an application with a hand-written essay ("We don't want Mom to be typing it for them!"), standardized test scores and a teacher's recommendation. Typically, more than 200 completed applications are received.

The next step is for the applicants to come to the campus one day during the summer and take a 3-hour Comprehensive Test of Basic Skills (CTBS). The test is given on 3 different dates for parents' convenience. About 175 applicants complete this step.

Then personal interviews with students and parents are carefully scheduled throughout the latter part of the summer. Each 20-minute interview requires a letter and a telephone confirmation by the staff beforehand. The 7th-8th grade coordinator and other Early Outreach staff members conduct these interviews. The personal interview is considered a critical test for selection: The care with which the student dresses, signs of being prepared for this interview, and his ability to express himself do not go unnoticed. Perhaps the most important sign of a weak candidate at this point is: Is the student passive, with the parents doing most of the talking? The coordinator commented:

> In the beginning, we didn't do interviews. But we realized we lost something by the lack of personal interviews. We were losing students, and parents didn't know the important details. We began doing group interviews, but found that personal interviews work best. It's well worth the effort, because they'll be in the program for a 6-year commitment.

The staff involved then meet to consider each applicant's achievement data, application, essay, and interview results.

> We want a balance between middle-achievers and high achievers, even though we could easily select all students from just among the high test scores. It's better with a mix of ability levels, because they work together, and the lower-achieving ones become very motivated to do better.

In selection, a balance is also sought with respect to gender and race, as well as some sense of geographic and public-parochial distribution citywide. Then 75 are accepted, about 70 receive "waiting-list" letters, and the rest receive denial letters.

In the fall, the coordinator sends a letter to each principal listing the Early Outreach students selected from that school. Some principals go out of their way to honor those students; others do not do anything special with the information. It does not really matter to the Early Outreach staff, since this program operates wholly outside the domain of the schools.

Services Provided

The central component of Early Outreach is **Saturday College at UIC**, an academic enrichment program for 7th-12th graders with continuing assistance during the transition to college and through the college years. Saturday College students also have the chance to take **preceptorships**, closely-supervised internships in a lab, clinic, school or other professional office.

In addition, Early Outreach administers several summer programs serving nearly 300 6th-12th grade students. Most of them are not Saturday College students. But the overarching goal to serve underrepresented minorities by providing them academic preparation, meaningful job experience and exposure to the professions drives all the programs that come under the Early Outreach umbrella.

The workings of Saturday College and the preceptorships will be described below in some detail, followed by brief summaries of the other components of Early Outreach.

Saturday College

The UIC campus is quiet on Saturday mornings--until 8:30 am, when more than 300 young high school students are dropped off by their parents and walk into the College of Education building or the medical school building to go to school until noon. Fifteen Saturday College teachers--who during the week are public or parochial school teachers, UIC professors or medical students--are setting up their classrooms and labs according to the curriculum they designed on their own. Early Outreach teachers receive $80 per Saturday. Actually, teachers extend themselves beyond the typical 8:30 a.m. to 12:30 p.m. Saturday. They grade papers, write detailed comments for students, prepare quarterly evaluations of student progress, meet with parents as needed, plan next term's curriculum and provide a detailed outline to the component coordinator, attend Early Outreach planning meetings, program events, and student/parent orientations.

"I'm glad to do it," said one faculty member, a former UIC education graduate who taught school before staying home to raise children. She was preparing to re-enter teaching. "Teaching at Saturday College is great experience to get back into the field. And it works perfectly with being home for now."

Every Saturday from October to May, Saturday College begins at 8:30 as students and parents gather in one room for announcements regarding room numbers, special guests expected, a future family event, news of honors or college acceptances, or schedule changes. At 9:00 they disperse to the first of three classes, divided by grade level and academic subject. A studious quiet falls upon the school.

By 9:00, parents have taken up stations as hall monitors to oversee the changing of classes through the morning. And two other parents have set up the Parent Network concession stand, where the ever-hungry students can buy crackers, cookies and juice at supermarket prices--much cheaper than using the vending machines. The proceeds support student social activities. Once a month, about 150 parents convene at 9:00 in a large classroom to hold their monthly Parent Network general meeting and hear a presentation on financing college or a related topic, over coffee and refreshments.

Typically, a Saturday College teacher begins class immediately with a challenging problem on the blackboard. While the 12-15 students tackle it, the teacher takes attendance and then conducts the rest of the fast-paced class. Often the students team up to do an activity and report their solutions or results to the rest of the class in turn.

The teachers know both their current and former students by name. There is almost no teacher attrition in this program, and most of the teachers have been in the program for more than five years. They get to see their students progress from year to year. Students come neatly dressed, and teachers dress more formally than "Saturday morning casual."

The 7th and 8th grade curriculum is highly structured, while in the higher grades more courses are divided into several-week modules covering specific topics in depth. The higher-level curriculum moved from traditional courses to academic modules in 1984. As the program director explained:

> Making this change enabled us to take advantage of the expertise that faculty had to offer in their various disciplines without requiring long-term commitments from them.

By 12th grade, much of the time is given to practical matters such as proper completion of college application and financial aid forms, preparation for Advanced Placement tests, and college interview techniques. The university's counseling center plays an important role in visiting 11th and 12th grade classes. Graduate students in counseling or psychology who work part-time at the counseling center give workshops at Saturday College.

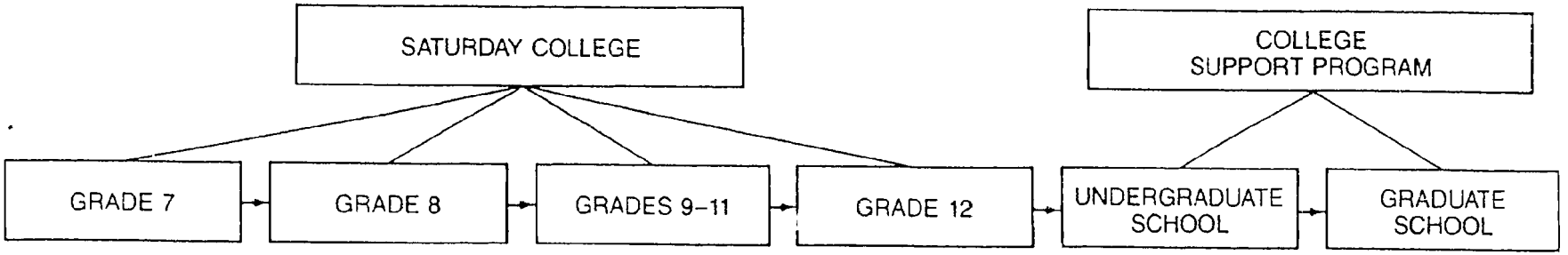
Students receive university ID cards entitling them to full use of the library and athletic facilities. By the same token, strict requirements are placed on the students, over and above attendance and behavior standards. Saturday College students can usually expect 1-2 hours of homework per week. Moreover, students' regular school grades are collected by parents every grading period and maintained by the Early Outreach office; if a student gets less than a C in any course during a grading period, he must have tutoring. Currently, about 10 Early Outreach tutors work with individual students after school at the office or on Saturdays after 12:00; they are UIC students who earn $5-6/hour. The goal is to bring up the grade within the next marking period.

The chart on the following page depicts the components of Saturday College from 7th grade on through the followup activities for the graduates who enroll in college.

The 12th grade High School/College Transition component of Saturday College helps the students (and their parents) make the transition from high school to college. They are assisted through the college selection, admissions, and application process. The students and their parents attend a group financial aid workshop after which counseling sessions are scheduled to provide individual, private assistance for each family in the completion of the financial aid forms.

One important event in this program component is the College Lifestyles forum. This involves the seniors and their parents hosting a luncheon for Early Outreach College students, who are matriculating at local schools, and their parents. During this luncheon, the college students share their college experiences with the seniors; and the parents of the college students share information and experiences with the parents of the seniors. Also, seniors are linked with other Early Outreach students who are

The University of Illinois at Chicago
College of Education
Early Outreach
Activities by Program Component



Math
Science
Reading
Composition
Library competency

Math
Biology lab
Computer lab
Reading
Composition

Study skills
Iowa prep
Tutoring
High school fair
Field trips

Career awareness forums

Math
Composition
Anatomy physiology
Chemistry
Microbiology
Physics
Exercise physiology
PSAT/SAT ACT prep
Career awareness modules
Academic olympics
Forums
Field trips

Communication skills:
- Oral
- Written
- Affective

Workshops:
- College selection, admissions, and application
- Financial aid
- Budgeting/money management
- College lifestyle
- Stress management
- Study skills
- Career awareness

AP Placement Test prep
Residency UIC dorms
College algebra calculus
Composition 101 (for credit)
Tutoring
Preceptorships
College tours

Counseling
Tutoring
Preceptorships
Monthly newsletter
Job assistance

Linkage with:
- UIC colleges and schools minority recruiters

Linkage with
- UIC Office of School and College Relations
- UIC colleges and schools minority recruiters

matriculating at the colleges where they will be attending. Early Outreach sees over 95 percent of its graduating high school seniors entering college.

The budgeting/money management workshop listed on Chart B was implemented after one of the Early Outreach college students over-extended herself with charge cards, which resulted in trouble with numerous creditors. Ethel Caldwell elaborated:

> I was amazed to learn that college students who only work part-time have access to a great deal of credit. I had to seek the advice of the university's legal counsel in helping the student to resolve her credit problems. Now we try to assure that the students are aware of what could happen if they fail to budget and manage their money wisely.

The 12th grade transition component has its own coordinator, who keeps a well-stocked, attractive library of college catalogs, exam-preparation materials and reference books in a corner of the Early Outreach office. Students may use this room Monday-Friday until 5:00 and Saturdays by request. The coordinator is available to help students and parents personally with these materials and with application forms, and books are lent freely.

This year the coordinator is encouraging each senior to seek out and apply for 5 scholarships. He is aware of hundreds of well-known and obscure sources of scholarships, many of which are competitions requiring essays on particular topics.

> I tell them there are so many opportunities to earn scholarship money, and I'm really pushing them to fill these forms out properly and get their entries in. I'm really looking forward to getting some results.

The 12th-grade/transition coordinator also keeps track of all those who go on to college, through a periodic newsletter to the "alums" and personal contact with them as they seek summer or school-year jobs relevant to their career plans. An excerpt from the January 1992 newsletter's column "Early Outreach graduates in the News and on the Move":

Rudy Barahona	Rudy started his first year of medical school this past Fall. Rudy is attending the University of Illinois School of Medicine.
Teresa Bautista	Teresa is an outpatient supervisor at St. Elizabeth Hospital in Chicago.
Jose M. Rodriguez	Jose is now attending the University of Chicago and is a member of the football team.

More formally, the assistant director of Early Outreach is conducting a mail/telephone survey of all recent Early Outreach graduates now in college, to learn their retention patterns, majors, part-time and summer jobs, and career plans.

Preceptorships at various UIC offices and labs provide meaningful **summer job experience** to Early Outreach students age 16 and over. Most preceptorships pay the student about $6.50/hour, while some preceptorships are unpaid internships; the particular College or School's financial resources

determine whether they can offer a paid position. Of 30-35 preceptorship matches for summer 1992, about half involve high school students and half place "alums" who come home for the summer.

This component is headed by the 12th grade/transition coordinator, who devotes much time to contacting university staff and corporate contacts personally to secure preceptorship positions; those who agree to supervise students must give them meaningful tasks and professional guidance throughout the 6-8 weeks of the preceptorship. A great deal of energy is devoted to this component, as the coordinator emphasized:

> I keep a constant eye out for preceptorship supervisors. I try to get the employers to provide paid positions, but I'll take whatever they are able to offer. Because of the adverse economic conditions many university units and corporations are experiencing, it is becoming increasingly difficult to get paid preceptorships.
>
> I really try to interest our college students in doing a preceptorship. I help get their resumes into shape.
>
> Above all, I tell the students: "Don't ask about pay!"

Director Caldwell elaborated on the importance of offering students compensation:

> Although we encourage our students to accept non-paid preceptorships because of the value to be gained from the experience, it is sometimes difficult to get them involved in the Preceptorship Program without the promise of a stipend. This is due largely to the fact that students often have to forgo summer employment to participate in the preceptorship program. For those students whose summer earnings are depended upon to help meet their and their family's needs, participation in the preceptorship program requires quite a sacrifice. The program works best when stipends, even small ones, can be provided; otherwise we are competing with the fast food chains for the students' summer involvement.

Parent involvement is not only important but mandatory in Early Outreach. In the early years of the program, parents were encouraged but not required to be involved. As the director explained:

> Some students among our first high school graduates elected not to attend college because their parents wanted them to go to work and help the family, which meant that the parents were not clear as to the purpose of our program. At the time, parent participation in the program was low. This bothered me; I had tried numerous ideas to stimulate their participation and was almost at my wit's end. I asked a friend who heads an outreach program at the University of Chicago what he would do; he convinced me to mandate parent involvement. I took the big leap and made parent involvement a requirement of the program. It really worked. Since then we have had very strong parent participation, and it has made a big difference to their children in the program, in terms of their motivation and persistence.

Early Outreach requires parents to attend 4 of the monthly Parent Network meetings each school year, and attendance is taken at all meetings. Dues are $9 per year. Moreover, parents are responsible for submitting their child's grade report at the end of each marking period; both the student and parent sign it.

Parent Network meetings usually feature a speaker from UIC's academic departments, counseling center, admissions office or from the professional community. Other business includes fundraising events, such as the candy sale that recently raised $7,000 for scholarships to new graduates as they enter college. Such funds are also used to provide students' stipends for preceptorships that would not otherwise pay students.

The executive committee of Parent Network meets one alternate Saturday a month. Among its officers are president, vice president, recording secretary, corresponding secretary, treasurer, program chairman, fundraising chairman--and the sergeant-at-arms: "I keep order in this room!"

Other Services Administered by Early Outreach

Saturday College and preceptorships are not the only activities of Early Outreach. The office is home to other UIC-based outreach programs for young students in the Chicago area. Early Outreach core staff members direct these programs, which generally take place during the summer and, like Saturday College, are virtually free of charge to students. The four main programs in this category are highlighted briefly below:

Summer Trek. This nonresidential 2-week math-oriented program brings moderate-or-high-achieving students 11-14 years old on campus for intensive math and computer instruction, balanced with athletics and relaxation. Students are divided by age into groups of 25, taught by school teachers or upper division UIC students. The $250 tuition is absorbed by the Department of Mathematics, Statistics and Computer Science, which sponsors this program.

Gifted Summer Institute in Chemistry. Early Outreach and the Department of Chemistry co-sponsor this annual 4-week summer institute for about 30 Chicago public high school students who have had at least one chemistry course. Using the chemistry lab, students are introduced to safe laboratory practices, instrumentation, and the use of computers and graphics in the preparation of reports.

Summer Enrichment Program for Students Attending Project CANAL Schools. Certain Chicago public elementary schools serving disadvantaged children are designated "Creating a New Approach to Learning" (CANAL) schools. This 4-week summer academic enrichment program serves 48 rising 6th graders from CANAL schools. During the fourth week, the students stay in a dormitory on campus, supervised by Early Outreach staff.

The Mayor's Summer Job Experience Program. Early Outreach has collaborated with the city's Office of Employment and Training each summer since 1983 to provide relevant entry-level summer jobs for some 175 low-income youth aged 14-21. The Early Outreach Saturday College coordinator for grades 9-11 directs this program during the summer, including interviewing and helping each applicant with necessary forms, calling UIC departments to recruit employers who would supervise the young aides,

organizing an employers' orientation, setting students' timekeeping procedures, leading the new employees' orientation, following up throughout the 6-8 weeks as to individual progress on the job, and distributing the paychecks. Most of the youths are not in Saturday College, but the coordinator directs this program with enthusiasm; young people who come in for this program can take advantage of the Early Outreach library and one-on-one counseling or academic planning with the coordinator. Some of them have subsequently been hired on a longer-term basis by the university.

PROGRAM ORGANIZATION

Current Partners

In 1987, Early Outreach was moved organizationally from a component of the Urban Health Program to a unit in the College of Education, because its focus broadened to expose young people to the full variety of professional careers.

The current partners are:

- **Chicago public/parochial schools**

  69 elementary schools; 42 high schools
  (86 are public schools; 25 are parochial schools)

  The schools cooperate in the student selection process, and a number of Saturday College teachers teach in these schools.

  Early Outreach coordinates with the Chicago Public Schools to administer its Project CANAL 4-week summer academic program for 48 6th graders selected from the city's "Project CANAL" schools.

- **UIC Colleges, Schools and Student Support Units**

  College of Associated Health Professions
  College of Dentistry
  College of Medicine
  College of Nursing
  College of Pharmacy
  School of Public Health
  College of Architecture, Art, & Urban Planning
  College of Business Administration
  College of Education
  College of Engineering
  College of Kinesiology
  College of Liberal Arts and Sciences
  Jane Addams College of Social Work
  Graduate College

Educational Assistance Program
Latin American Recruitment and Educational Services Program
The Native American Program
The President's Leadership Program
UIC Counseling Centers, Libraries, Hospital and Clinics

The above units provide a variety of services for Early Outreach, such as the development and implementation of workshops for Early Outreach students and parents, facilitation of preceptorship and work experiences, college/career counseling, development and teaching of academic and career awareness modules, study skills development, and test-taking skills.

- **Borg-Warner Foundation and Motorola, Inc.**

  The Borg-Warner Foundation awarded Early Outreach $127,000 in 1989 to be used for students scholarships: five scholarships to be awarded in 1990, five in 1991, and five in 1992; this is the last year for the Borg-Warner scholarships. Each scholarship winner is awarded $2,000 per year for 4 years.

  In 1990, a Motorola executive contacted the director because she had begun a Motorola Precollege Scholars Program with the Chicago Public Schools and needed an already-established academic enrichment/career awareness program to provide support for the students identified through the schools. To date Early Outreach has 57 Motorola Scholars (16 of whom were referred by Early Outreach from its student body). To support these students and program activities Motorola has provided the following funds: $9,000 in 1990, $9,000 in 1991, and $10,000 in 1992. In addition, Motorola provides staff to conduct career awareness and academic modules in engineering.

- **Early Outreach Subcommittee to the Community Advisory Council for the Urban Health Program**

  The 11 members of this group include representatives of the Chicago city government, the Urban League, and the teaching, law and medical professions. They meet with the Early Outreach director once or twice a year in an advisory capacity. They have identified mentors, preceptorship sites and funds for new programs. Some have also led workshops for Early Outreach students and parents.

Early Outreach also enjoys an informal cross-referral relationship with another academic-preparation program in Chicago, the Illinois Institute of Technology's Chicago Area Health and Medical Careers Program (CAHMCP), a collaboration among seven medical schools that serves several hundred students from 7th grade through medical school. The director of that program voluntarily taught a genetics module one year at Saturday College.

Staffing pattern

The core staff comprises 10 employees (nine full-time and one half-time), paid through university/State of Illinois funds. Core staff members include:

- The director
- The assistant director for operations and evaluation
- The coordinator for the 12th grade/college component
- The coordinator for grades 9-11 and summer jobs
- The counselor/assistant for grades 9-11
- The coordinator for grades 7-8/6th grade recruitment
- The counselor/assistant for grades 7-8/6th grade recruitment
- The coordinator for a newly-forming Saturday College called the Hispanic Math/Science Education Initiative
- Two secretaries

Three part-time UIC student workers round out the central staff and serve as tutors and office assistants.

The core staff is busy throughout the summer as well as during the academic year. In addition to Saturday College during the year, summer Early Outreach programs administered by the staff include the Mayor's Summer Job Program, the CANAL Summer Enrichment Program, Summer Trek, and the Hispanic Math/Science Education Initiative summer component.

Fifteen Saturday College teachers, who are public/parochial school teachers or medical students, make up the paid teaching faculty. They receive $80 per Saturday, funded by UIC/State of Illinois monies or Motorola. The new Hispanic Saturday College is staffed with three teachers and a site coordinator.

Volunteers from a variety of UIC departments, other colleges, local companies and city government serve Early Outreach as guest speakers, workshop leaders, and the summer employers and preceptorship supervisors who are mentors to the young employees.Parents are valued volunteers, serving as hall monitors and site coordinators for Saturday College, raising significant funds for scholarships and arranging for guest speakers.

Program Budget

The total 1991-92 budget of $289,000 (which averages out to less than $500 per student) is derived largely from university appropriations by the state. The Mayor's Office of Employment and Training funds the summer job program ($12,000 for administrative costs plus direct payment of participants' wages). Borg-Warner scholarship support for 1991-92 is $10,000. Motorola's contributions are teaching faculty, materials for the engineering courses, staff for career awareness forums, and $10,000 to support Saturday College program activities.

EVALUATION

Data related to academic performance, attendance, retention and college enrollment are maintained on all Early Outreach students for purposes of outcome evaluation. The overall retention rate for Saturday College is reported to be 75 percent. A variety of reasons account for the program's attrition (e.g., students drop out on their own, some are dropped by the program, others move out of the Chicago area).

The coordinator of each major component of Early Outreach prepares an annual report for that component, a comprehensive evaluation describing the component's goals and activities in detail, with retention/completion rates used to indicate success in achieving its stated goals.

An example of one component's 1990-91 annual report results is provided by the High School/College Transition component, which enrolled 41 students who graduated high school in June 1991. "Of the following 41 June 1991 graduates, 39 will enter college in the fall"--and the report lists the students by name and their colleges. Of the 39 graduates entering college, 19 planned to attend the University of Illinois: 8 at Urbana and 11 at Chicago. The great majority were reportedly going to 4-year institutions in or near the Chicago area.

Since 1980, data indicate that about 95 percent of Saturday College graduates entered college the fall semester immediately following high school graduation.

Evaluation does not focus on students' academic achievement, grades or test scores. As the director reasoned:

> While important, (academic achievement indicators) are expected and are not identified as specific program outcome measures. Students are expected to progress steadily through high school and to graduate and meet acceptable (college-preparatory) standards on all criteria while in junior and senior high school. Academic progress and performance is monitored by program staff to ensure that students are maintaining grade point averages of C+ or better in their subjects.

Early Outreach staff are conducting mail and telephone followups--as their limited time permits--with program graduates who are in college to determine retention patterns, majors and career plans. However, the low response rates and missing data from students thus far have hampered data analysis. A full-time evaluator on staff would be needed to complete a proper followup study of longer-term outcomes.

Process evaluation is active and ongoing at Early Outreach. Saturday College students and teachers complete forms evaluating their experiences over the year. Preceptorship supervisors and students also provide written feedback. Indeed, all services provided under the Early Outreach umbrella utilize evaluation forms for both participants and teachers or employers. The results are read closely by each coordinator, filed carefully, and used to make changes. The care devoted to feedback is evident in the smooth implementation of all the multi-faceted programs of Early Outreach. Its rewards are evident in the enthusiastic smiles of every staff member of the Early Outreach family.

FUTURE OUTLOOK

Early Outreach's Saturday College will hold steady at 350-400 students. Growth is limited primarily by physical space on campus on Saturdays--not by any doubt that students would receive the individual attention and caring they need. As the director explained:

> We could probably take another 100 students in Saturday College, but no more than 500 total. It's simply too hard to find buildings that are already open on Saturdays and that are ventilated.
>
> Our state has serious budget problems. The university had to give back a certain amount of money. Buildings are increasingly closed on Saturdays. We are very lucky our budget is maintained as it is.
>
> But could we serve more students if we had the resources? Yes! Yes! Yes! There are enough faculty and teachers who I know would serve, who care about these students.

STEP-TO-COLLEGE/MISSION-TO-COLLEGE
San Francisco State University
San Francisco, California

"Don't believe what you read about these kids [not being able to succeed]. Tell them you care and follow up with whatever it takes---medical help, listening to their problems. Believe that they won't quit, and do a little more for them to show it."

Jacob Perea, Director,
Step-to-College/Mission-to-College

PROGRAM HIGHLIGHTS

Students Served: Underrepresented minority students from 9th-12th grade who want to pursue college but need training and support to see it through.

Services Provided: College level classes for high school juniors/seniors; tutoring; counseling; followup in college; strengthened core college-prep curriculum for 9th-10th grade students; professional development for teachers/professors.

Students Served Annually: In 1991-92, 700 seniors were admitted to San Francisco State University under the Step-to-College program; over 500 younger students are served in Mission-to-College.

High Schools Involved: 10 high schools in the San Francisco Unified School District.

Program Administration: Dr. Jacob Perea, Program Director, Department of Administration and Interdisciplinary Studies, San Francisco State University.

Year Began: 1985

Evaluations Completed: Formal evaluations of Bilingual Mission-to-College and the Academic Fellowship components; for original Step-to-College and other components, data are maintained but not formal evaluations.

WHAT MAKES THIS PROGRAM SUCCEED

Several key factors account for the considerable and enduring success of Step-to-College (STC) since its inception in 1985:

Step-to-College has proven to be quite **adaptable.** The program's success can be directly attributed to its capacity to continuously shape and reshape its services to meet the needs of the students. The program has rapidly and effectively responded to students' racial and ethnic differences and to their varying abilities with English by creating new components as the circumstances arose. When it became apparent that students needed to be identified and targeted at an earlier age, Mission-to-College was developed. Subsequently, Bilingual Mission-to-College was formed for those students with special language requirements. The Afrocentric Step-to-College component was created in response to STC's ineffectiveness with African-Americans. Most recently, the Academic Fellowship program was designed to assist those students who otherwise would have taken jobs after school.

The program director's **clear understanding of institutional dynamics** enabled him to construct a network of support for the Step-to-College Program within San Francisco State University (SFSU). The director's status as a full professor and department chair lent academic credibility and respectability to the effort. Subsequently, working from a split appointment in both the School of Ethnic Studies and the School of Education, he acted as a bridge

in developing good working relations between the formerly separate Schools and generating support for the Step-to-College Program in both. A key factor to success was his reliance on ties to SFSU admissions personnel in carving out a niche for the Step-to-College Program within the university administration.

The program's leadership has had a unique ability to create and sustain intense **loyalty and commitment among program participants.** Those active in the program share in the vision of college-going success for disadvantaged minority youth and consistently go beyond the call of duty. The university president stated that much of STC's success can be attributed to "sweat equity," the uncompensated addition of value to the program." As a result of the intensity of effort, the program has received official recognition and achieved a more secure status both within the university and the school district.

The loyalty and commitment of the school teachers is the result of fostering a **collegial and professional relationship** with their counterparts at the university. The teachers became convinced that they were equal partners in this collaboration. One means of building such collegiality was the establishment of a teacher exchange whereby high school faculty taught Step-to-College first year students at SFSU, just as SFSU faculty taught high school seniors college level classes at the school site.

The program's longevity is also attributable to **the continuing development of interest in and support for the program.** This interest and support continues to grow. Examples include corporate support for summer positions for students; the purchasing of program sweatshirts; and an anonymous donation to fund a part-time program assistant's position. The admissions office shows its support of the program through its special handling STC students' applications, and the university recently established a special admissions code which is assigned to all STC students at SFSU. This code will enable the program director to track STC students through the university.

Recently, several granting organizations have urged STC to apply for funding from them. These are the very same agencies which, at the program's beginning, turned STC's applications down and said, "these types of programs don't work."

Caring and personal attention that does not draw boundaries between the students' personal and academic lives has been key to the continued growth of the program. STC students show their enthusiasm for the program by relating their experiences to their friends and siblings. Students can, and do, bring their scholastic and personal problems to the program director and others involved with the program. Students have learned that STC faculty listen and help them resolve their problems, which have ranged from domestic to complicated immigration issues. Quite appropriately, the idiom of STC as a surrogate family is constantly invoked.

It is the **total commitment to the students, not just to the program,** that makes this program work. This commitment is eloquently stated by the program director: "They are all my children."

A CLOSER LOOK AT THE PROGRAM

The Step-to-College (STC) Program began in 1985 as an idea developed by three people: a professor at San Francisco State University and two administrators at Mission High School in inner-city San Francisco. It wa. designed to increase the representation of Chicano-Latino students in colleges and universities, particularly those in the California State University system. Since then the STC program, in which high school seniors take college level classes for credit, has grown to encompass an ethnically diverse population of Chicano-Latino, Asian-American, Pacific Islander and African-American high school seniors at a total of 10 high schools in the San Francisco Unified School District, 8 of which offer an Afrocentric curriculum adapted from the original model. The program also incorporates a Mission-to-College (MTC) component for younger students at the original Mission High School site and Bilingual Mission-to-College Programs at Mission and two other high schools, which offer college preparatory core curricula and study skills courses starting in the 9th grade. An additional component of Mission-to-College at Mission High is an Academic Fellowship Program that pays qualified 9th and 10th grade students to study intensively in supervised after-school study halls. The rationale for payment is that, in reality, most of these students would otherwise take after-school jobs to help support their families.

Step-to-College grew out of a fortuitous confluence of events spurred by a new university admissions policy. The policy allowed waivers of admission requirements to students whose circumstances or qualifications might not otherwise allow them to be admitted. This enhanced the efforts of a few well-placed individuals committed to increasing the numbers of students from underrepresented groups pursuing and completing college. Through their efforts, a new program called Step-to-College was created for 12th graders at Mission High School. Over time, the program developed in response to its initial success, becoming more inclusive of different racial and ethnic groups, and reaching out to younger students and recent immigrants. As this process unfolded, new participants were drawn into the network both from the university and the San Francisco Unified School District (SFUSD).

The program's overriding philosophy is that all students--if given the proper training, support and encouragement--can successfully pursue a college education. Through a combination of messages received from the schools, family and community, many disadvantaged minority students like those in the Step program have come to believe that college is not for them, and that they should set their sights accordingly. The goal of Step-to-College/Mission-to-College is to create a culture of college-going at these high schools, firmly supported by a program of academic preparation, cultural awareness, skill training, and social support. Informal support continues for Step-to-College students who go on to SFSU, some of whom become tutors and peer counselors at their former high schools.

PROGRAM HISTORY

Neither the university nor the San Francisco public schools had a history of sustained university/school partnerships prior to Step-to-College. In 1985, Dr. Jacob Perea, then Chair of the La Raza Studies Department in the School of Ethnic Studies, spotted a memo in the provost's wastebasket announcing a California State University (CSU) Chancellor's policy making available admissions waivers for students who might not otherwise qualify for university entry. The memo was a response to a study commissioned by the chancellor, which found that only 15 percent of Chicano-Latino and African-American high school graduates in California in 1985 had achieved the necessary grade point average and

SAT qualifications and had completed the required preparatory courses to qualify for admission to the CSU system.

When Dr. Perea asked whether anything was being done to implement the waiver policy at SFSU, the provost said that the information had been passed along to the student services administration, but that, if Dr. Perea wished, he could do something with the memo. At this point, Dr. Perea phoned a former student, Lupe Arabolos, vice principal at Mission High, and the partnership that led to Step-to-College was created.

When the provost granted Dr. Perea permission to "run with" the waiver memo, it is doubtful that either of the two really foresaw what this would mean in the long run. Establishing the Step-to-College program on the academic side of the university gave it needed credibility within the institution; otherwise it might have ended up as a limited support program housed in student services. Moreover, no one anticipated that the number of students in the program would grow so quickly. In fact, after the first year, the former university president commented to Dr. Perea that the STC should not expand too much, since SFSU could not afford to take in "too many of these kinds of students." Initially Step-to-College was granted 100 waivers; in 1988, the number was increased to 300. Yet as many as 1,000 students have been admitted to Step-to-College in a given year since then, and a way has always been found, often with the help of sympathetic admissions personnel, to provide Step-to-College students with the necessary waivers. By now, the STC program has such a solid reputation both on and off campus that it would be difficult not to continue to support it in this way.

Until recently, Step-to-College operated without a firm institutional commitment from the university. Dr. Perea has worked from his position as a full professor and department chair in building blocks of time and resources with which to run the program. In 1985-86, he began a split appointment as halftime Chair of The Department of Administration and Interdisciplinary Studies (DAIS) in the School of Education and halftime Chair of La Raza Studies in the School of Ethnic Studies. This broadened the base of support for Step-to-College in the university by linking the two previously separate Schools, and enhancing the program's status through association with the more established School of Education. Initially, the provost granted Dr. Perea .2 FTE release time to run Step-to-College, which he used to pay faculty salaries, essentially covering the cost of program administration out of his own time. As the program grew, release time was increased to .4 FTE, and instructional time was built up through both DAIS and La Raza Studies. Someone less well positioned and less secure in the academic hierarchy would probably not have had the maneuverability to have done this successfully.

The current president of SFSU is very supportive of Step-to-College. When he assumed his post in 1988, the program was well underway and had already begun to generate favorable publicity and good public relations for the university. However, it was not until 1990, at the initiative of the new Vice President for Academic Affairs, that SFSU earmarked three faculty slots in the university budget specifically for Step-to-College. In 1991, the program received its own designation code on the university database, thus making possible computer identification and tracking of STC students. Together with the acquisition of the faculty slots, this marks Step-to-College's more complete institutionalization within the university.

PROGRAM TARGETING AND SERVICES

Targeting

Step-to-College and Mission-to-College students are predominantly inner-city, economically disadvantaged minorities--primarily African-American, Chicano-Latino, Chinese, and Filipino. A large percentage of these students are recent immigrants to the United States with limited English skills. Many students also find their lives further complicated by a myriad of factors such as immigration issues, living with relatives while their parents remain in their home country, or even living on their own. Many students must work to help support their families.

The most important characteristic of the students in the STC/MTC Program is their common desire to pursue a college education. Some STC participants say that they have always wanted to attend college; more indicate that before they began to participate in the program, college seemed beyond their realm of aspirations. A number of STC students now at SFSU report that they were told over and over again by school counselors and teachers that they were not college material and could never hope to succeed there. While not all STC students enjoy strong family support in their college-going plans, once students are enrolled at SFSU, the families usually support their remaining in college.

Services Provided

Students in the Step-to-College/Mission-to-College Program are offered a variety of services, including college level and college preparatory classes, tutoring, advising, and assistance with completing college and financial aid applications. Once in college, they are monitored and given assistance to stay in college.

The program components consist of:

- the original Step-to-College program;
- Mission-to-College;
- the Academic Fellows program;
- Bilingual Mission-to-College; and
- the Afrocentric Step-to-College program.

The specific services associated with each program component, and how they were developed, are described below.

The Original Step-to-College Program

Development. The three founders of the Step-to-College program at Mission High were Dr. Perea, Lupe Arabolos, Vice Principal of Mission High, and Pat Aramendia, Principal. In designing the program, they followed an approach that was to become a hallmark of Step-to-College's development--adaptability. To maximize the possibility of program success, they adapted the Chancellor's waiver guidelines to what they perceived as the distinctive needs of Mission students. The guidelines had

specified that students admitted under the waiver provisions would come onto the SFSU campus in the second semester of their senior year. However, having the students come to SFSU would have made it difficult for the schools to maintain control of the program, and many of the Hispanic parents would have resisted letting their daughters travel to the SFSU campus on public transportation after school. Thus, it was decided that all Step classes, although taught by SFSU faculty, would be held once a week after regular school hours at the Mission High site.

The founders also deliberated over how to interest the students in participating. They came up with two ideas, both of which were implemented. One was to offer at the high school, for full college credit, two semesters of Critical Thinking, a course which is a graduation requirement at SFSU. Then if they did go on to enroll at SFSU, STC students would already "have the jump" on other students; even if they did not, the credits would transfer. The second idea, which turned out to be much more compelling for the students, was to provide the STC students a SFSU photo ID-card for the nominal fee of $2.00. The ID card gave them the right to use all university facilities, including libraries and student health services. Beyond its practical value, the card rapidly became a status symbol with great prestige value in the peer culture at Mission High. The vice principal tells how STC students would contrive to have the ID's slip out of their purses or pockets, so that other students would see and ask about the cards. They could reply, "Oh, that's my SFSU ID card."

The job of selecting the STC students fell largely to the vice principal, who chose 47 students from Mission High. Thirty students from the Immaculate Conception Academy, a nearby Roman Catholic girls' school, also participated that first year, because it was not clear that there would be enough students just from Mission to sustain the program. At Mission, the vice principal selected students who would not otherwise have planned to go to college. The only absolute requirement was that the student possess some facility with English. Although the Chancellor's guidelines had stated that to be eligible for waivers students should have a 3.0 GPA, this requirement was almost immediately modified to a 3.0 by the end of the junior year, a counselor's or teacher's recommendation, or self-referral by the student. This effective opening of Step-to-College to all Chicano-Latino students who wanted to participate or were recognized as having promise was part of a conscious effort not to create a program directed only at "the cream" of the students. The overarching philosophy of the Step-to-College program--that all students, if given the proper training, support and encouragement, can succeed--was already taking shape.

The program founders also considered whether to involve the parents in the Step-to-College Program. They decided that given the circumstances of many parents, many of them economically struggling recent immigrants to this country speaking little or no English, it made sense not to have active parental participation be a key part of the program. In addition, some of the students were living alone or were without family connections in this country. Moreover, many students were already playing the role of cultural emissary by mediating their families' or other relatives' contacts with the wider society; it would be up to the school to transmit the educational component of that culture to the students, and through them, to the parents. However, once the program began, both the Mission High principal and the university sent congratulatory letters to the parents informing them that their children had been accepted into the program and briefly explaining what that involved. Vice Principal Arabolos fielded calls from parents who had questions or concerns, or who simply could not believe that their child was, indeed, a college student.

Dr. Perea selected two bilingual SFSU instructors to teach three sections of Critical Thinking, two at Mission and one at the Immaculate Conception Academy. The first classes began in spring of 1986, and were such an immediate success that participants at Mission began to press to include their friends in the program, and students from a variety of ethnic backgrounds came to ask how they could get into Step-to-College. This created a dilemma, for STC originally targeted only Chicano-Latino students; furthermore, the idea had been to keep things small. However, at an open meeting held so that Step students could voice their views on the matter, the students argued that it should be available to all ethnic groups. And so, after the first semester, it was decided to open the program to everyone seriously interested. At this point, the number of students enrolled in the STC classes began to skyrocket.

The founders were as surprised as anyone when Step-to-College took off the way it did. They had not given much forethought to the number of students the program could accommodate, partly because there were doubts whether Step-to-College would even survive. Dr. Perea too harbored doubts at first; while he wanted to believe that the program could work, research suggested to him that disadvantaged, low income minority youth could not succeed in academically rigorous programs. But the program took an "immediate and very hard turnaround" once it became clear that the students were attending classes and doing the work. The first class of STC graduates from Mission High School entered SFSU in the fall of 1986. Eighty-five percent of the Immaculate Conception students and 65 percent of the Mission students from this group who went on to SFSU remained through graduation.

> "At the beginning," reports Dr. Perea, "I used to wake up in a cold sweat in the middle of the night, wondering what was going to happen if the kids did this or that. I don't anymore."

That the Step-to-College program caught fire with the Mission High students almost from the start does not mean that there were no other obstacles to overcome. Mission High teachers were, on the whole, older and predominantly white. Having witnessed the ethnic and racial transformation of the student body and the physical deterioration of the neighborhood, many had scaled down their expectations of what the students could be expected to accomplish academically. As STC students began to recognize that they were capable of mastering more difficult and intellectually stimulating material, they began to challenge their high school teachers. When combined with wariness toward university professors coming into the school and possibly threatening to disturb long time professional territory, practices, this created a situation in which many Mission High teachers were initially quite resistant to the program. Says Dr. Perea, "There were some who wouldn't even look at me in the hallway."

It was recognized that for Step-to-College to succeed it would need to create truly collegial bonds, on an equal and reciprocal basis, between the Mission teachers and the STC instructors. As a way of helping to bridge the divide, a program was established that hired Mission teachers on sabbatical as SFSU lecturers to teach Step students arriving for their first semester at the university. Not only did this help to overcome the Step students' sense of being in a strange environment, it also established a "beachhead" of support for the program among the Mission High teachers. As Dr. Perea put it: "I like to think of it not as SFSU adopting Mission High, but as Mission High adopting SFSU."

The initial success of Step-to-College at Mission created an impetus to spread the program to other inner-city high schools. In 1986-87 Step-to-College was established at Balboa High School, and the next year, at Woodrow Wilson High School. However, in neither has the process gone quite as far as it did

at Mission. The first year at Wilson was rocky, as neither the principal nor the assistant principal managed to successfully mobilize support around the program. The following year, the school counselor stepped forward to be the "in-house" coordinator and promoter of STC, and the program began to take hold. At Balboa, although the principal was supportive, the staff was resistant; even now, Step-to-College has not really "broken the seal" and penetrated into the life of the school as it has at Mission and at Wilson. Making a program like this work is a delicate process, and having support from school-level administrators is clearly not enough. As Lupe A. Bolos noted, "You (also) have to get the teachers to buy in."

Program Components. Step-to-College gives high school seniors the opportunity to experience college level courses and earn college credits while still in high school. STC recruits students during their junior year; the students fill out an application to SFSU, pay a $2.00 fee for their university ID card, and are registered as transitory students at the university. Students enrolled in STC classes take a three-credit course each semester in critical thinking skills, a university graduation requirement in the CSU system. These classes are taught on the high school campus by SFSU professors one day a week, for three hours, after school. To remain in the Step-to-College program, students are required to complete homework andtests from all their classes at a C level, maintain good attendance, show a positive attitude in the classroom, and complete other requirements which may be requested.

STC students can enter college with six credits on their transcripts, which gives them a head start on their college requirements and shows them that they can complete college-level work. Students who decide to attend a college or university not in the CSU system---and a growing proportion of STC students are now doing so--can usually transfer their credits. In all but one of the participating schools, STC students take the critical thinking course during the first and second semesters of their senior year. At Mission High School, because so many students were heavily involved in extra-curricular activities as last semester seniors, beginning in 1991-92, students were enrolled in STC during the second semester of their junior year and first semester of their senior year. This same year, more than 80 percent of the junior class at Mission High enrolled in Step-to-College.

All STC classes aim to foster and sharpen the student's critical thinking skills; the course revolves around key concepts such as "description," "analysis," "comparison," and "contrast," but the exact content and pedagogical style vary with the instructor. Although cultural awareness is not an explicit aim (as it is in the Afrocentric component) of STC, because many STC professors are in the School of Ethnic Studies and are members of ethnic minorities, they may ask students to apply critical thinking skills to their own experiences, discussing and analyzing issues such as inter-group prejudice or ethnic identity. Participation in the Critical Thinking class gives students the opportunity to become familiar with the format and tone of college courses. They are introduced to a more active classroom experience in which they openly exchange ideas and take part in disciplined discussion.

STC students also get information on college and university requirements and assistance in filling out applications and financial aid forms. Those who will go on to SFSU attend orientation sessions on campus that walk them through registration procedures and familiarize them with campus logistics. There is a final orientation during the summer to prepare the students for the fall. This is all part of an effort to "demystify" the college experience, including the mechanics of the application process. Former STC students now at SFSU almost uniformly concur that, for them, the application process had seemed to be an insurmountable barrier.

STC high school seniors are not guaranteed automatic admission to SFSU. They complete the normal application forms and submit transcripts and SAT scores. Those who enter the university as freshman are subject to the same tuition and fees as anyone else.

The STC program seeks to keep its students together as a peer group as they enter SFSU. As of the fall of 1991, 97 STC students entered the university as freshmen. Students are placed in a required STC "College Success Skills" course (for credit) with others from their high school STC classes. As they spread out into the university, the STC director and administrative assistant, as well as faculty and former STC students now working as tutors for the program, try to stay in touch with what is happening in their personal and academic lives, and provide help when possible. This creates the benefits of an on-going support group of fellow STC students and faculty mentors.

Step-to-College has transcended academic lines and affected students' personal lives. Beyond acquainting students with college material and familiarizing them with the college environment, Step-to-College creates support networks to reinforce or replace those that may be lacking in their families and neighborhoods. Says Mission High Principal Aramendia: "We have to be their family."

Step-to-College and Mission-to-College have been able to penetrate into the peer culture at Mission High--so much so that several gang members have successfully quit their gangs after entering the program. Mission High staff believe that this happened because these students' self-images improved as a result of program participation, so they no longer felt the need to belong to a gang. Moreover, with the creation of a "college-going" culture at Mission, it is no longer considered "nerdy" to do well in school. When the first class of STC students at Mission was given "Step-to-College" sweatshirts, they wore them proudly while inside the school building, but self-consciously removed them before venturing out into the neighborhood. Now, STC students have few compunctions about wearing the sweatshirts outside the school, as well as inside, almost as though these shirts now substitute for gang colors.

Mission-to-College

Development. The Mission-to-College program was created in response to the need to intervene with at-risk students at an earlier point in their school careers. The success of Step-to-College at Mission High almost immediately highlighted the need to reach out much sooner to those who might otherwise fall between the cracks or even drop out of school before ever having the opportunity to participate in STC. In fact, in 1987-88, almost half of SFUSD's students dropped out between grades 8 and 12. The period between 8th and 9th grade, which coincides with the transition from middle school to high school, is a particularly vulnerable time.

It was recognized that expanding the STC model to younger students would entail a reorganization of the core curriculum. In summer 1987, with funding from the Achievement Council, a California-based nonprofit organization supporting efforts for educational change, Dr. Perea and a core group of teachers and administrators from Mission High spent several weeks at a high school in Los Angeles where a schoolwide college preparatory core curriculum was already in place. "We had some intense sessions that lasted until 3 or 4 A.M. A lot of things were being worked out." The following year, the Mission High counselor began visiting all the feeder middle schools to recruit students into the program, starting in the 9th grade and leading into Step-to-College in the senior year. MTC began at Mission High School in the 1987-88 school year with 150 students.

Program Components. Mission-to-College operates at Mission High School. Participants are recruited in the 8th grade from the schools that feed into Mission. To be eligible, students need only demonstrate a desire to continue their education beyond high school. Some students are recommended to the program by their middle school teachers or counselors; others request to participate, often through hearing about the program from older siblings, relatives or friends.

Figure 1 shows the overall design of the Mission-to-College/Step-to-College curriculum at Mission High. Students are grouped into college preparatory core courses beginning in the 9th grade and follow these through 12th grade, when they join STC, adding new subject areas in successive years. Emphasis is placed on the development of study skills and their infusion throughout the curriculum. The need to address study skills was realized when instructors reported that STC students, although capable ofengaging in critical thinking, were being held back by lack of knowledge of basic skills such as notetaking. However, it took some effort to persuade the Mission High teachers to work at integrating study skills into their regular classes. As shown in the diagram, MTC project components having to do with career awareness and job skill training are still in the planning stages.

At Mission High, parts of the MTC curriculum are still being developed, and some logistic issues arising out of the attempt to core group the students and faculty have yet to be fully resolved. Curricular change at Mission is now proceeding as part of a general restructuring effort encouraged by the State Department of Education.

Academic Fellows Program

Development. In 1987, Enterprise for High School Students, a non-profit San Francisco organization, approached administrators at Mission High with the idea of developing a program to help Mission students get and keep decently paying part-time jobs. However, realizing that those who work after school usually come home too tired to do their homework, Mission High staff collaborated with Enterprise staff in developing the alternative and rather unique idea of paying students for demonstrating good work habits in their most important job: their studies. The Academic Fellows component of MTC, like the overall MTC program, began in the 1987-88 school year, with funding secured through Enterprise for High Schools.

Program Components. The goals of the Academic Fellows program parallel those of the MTC/STC program as a whole: enrollment in college preparatory courses and improved academic performance. The program hopes to achieve these goals by improving the students' work habits and attitudes toward school; an added incentive, of course, is that academic fellows are paid so that they will not need to seek after-school employment. The program primarily serves second semester freshmen and first semester sophomores. Students are paid $250 per semester to stay after school and study in the library 4 days a week, for 2-1/2 hours per day. Participants and their parents must sign a contract agreeing to maintain good attendance during the regular school day, to come to all of the after-school study sessions and remain for the entire time, and to maintain at least a 2.0 GPA for the duration of their participation. Students may study alone or in groups. They get help with their homework from paid tutors, who are former Mission High STC graduates now at SFSU. Though specialized in specific subject areas, tutors can typically offer help across the spectrum of high school courses. Coming from similar cultural backgrounds, they also act as role models and informal counselors. Academic Fellows can also get help with their homework from the program coordinator, teachers, or community volunteers.

MISSION HIGH SCHOOL

MISSION TO COLLEGE-STEP TO COLLEGE PROJECT DESIGN

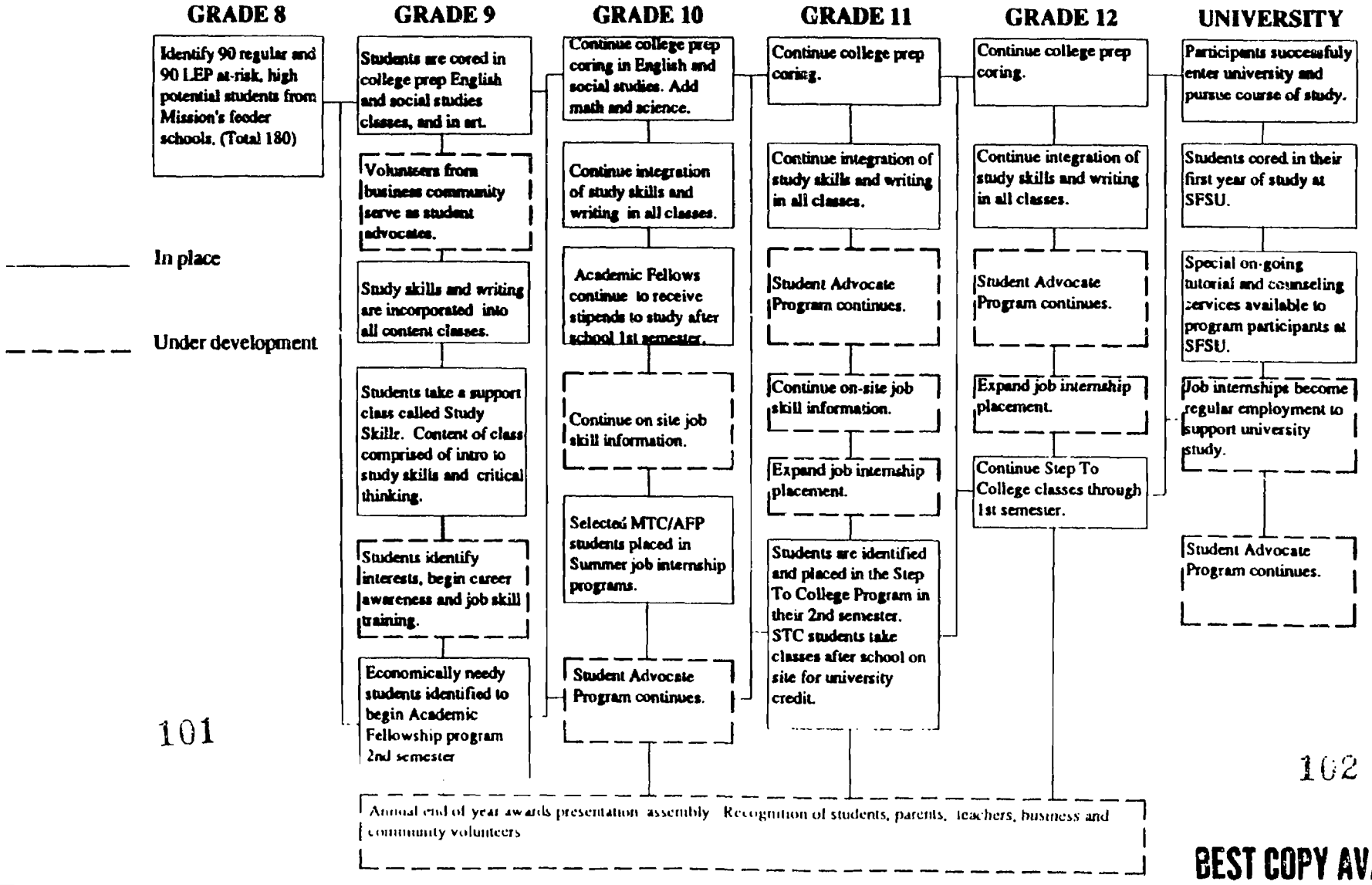


Figure 1

Although the number of applications mounts yearly, because of budgetary constraints, the Academic Fellows program is limited to 50 students, all of whom must be enrolled in the Mission-to-College program. Academic Fellows are selected on the basis of some combination of expressed interest, economic need, and teacher or counselor recommendation. Students must officially qualify as economically disadvantaged youth (EDY) and must write a short essay explaining why they want to be in the program. The applications are reviewed by the program coordinator, who makes the final determination of who will be included. Perusal of several applications revealed a poignant variety of home situations quite unconducive to productive schoolwork: students living in crowded conditions, assuming heavy family and childcare responsibilities, and having little privacy or space in which to do their work. Many applicants also mentioned that their parents and siblings are often unable to help them with their studies.

Bilingual Mission-to-College

Development. One of the few original requirements for eligibility for STC was that students have some facility in English. Consequently, at the outset STC was not able to serve new arrivals to this country with extremely limited fluency in the language, who comprise a fair proportion of the students at Mission, Wilson and Balboa High Schools. The Bilingual Mission-to-College program was initiated in 1988 in those three schools in an effort to put these students too on a college-going track. The essential idea was to "take the kids wherever they are" and move them to where they need to be. In keeping with the overall philosophy of the Step-to-College/Mission-to-College program, the only requirements are that the student have a desire to go to college and be attending school. No language fluency or GPA criteria are imposed.

From the perspective of program development, what is noteworthy is that Bilingual Mission-to-College is funded through a Title VII grant to the Bilingual Education Department of the San Francisco Unified School District (SFUSD) and run as a contractual partnership between SFUSD and SFSU. In the first few years of Step-to-College, the program founders had made a conscious choice both to eschew outside funding and to avoid calling the program to the school district's attention. "Big money would have meant big constraints," Dr. Perea noted. Developing "from the ground up," as it had, the program had the advantage of greater flexibility. There was also concern that "going public" with the school district too soon with word of STC's success at transforming Mission into a school with a college-going rate nearly equalling that of the city's most academic high school might invite negative reaction. However, by 1988, with the STC program on a stronger footing and gaining good publicity, and with a supportive superintendent now in office at SFUSD, it was thought that the time was right to branch out.

Program Components. Bilingual Mission-to-College (BMTC) differs from Mission-to-College in several respects. Classes are similar to regular MTC classes in their focus on developing study skills and their concentration on a college preparatory core curriculum. However, greater attention is paid to their special language needs. Some classes are taught in English, with tutors who speak the students' native languages available to answer questions. Many BMTC tutors are college student interns who receive course credit for their participation and are matched to classes by language needs. For BMTC students starting out with virtually no English skills, classes are taught using a combination of the native language and English. BMTC aims at ultimately improving these students' English skills sufficiently so that a certain percentage of them will be mainstreamed as a result of their ongoing participation in the program.

Another distinctive feature of BMTC is that each of the three participating schools is assigned two SFSU faculty consultants who collaborate in implementation and ongoing refinement and development of the BMTC model. SFSU consultants are teamed with high school instructors in each content area to work on curriculum development and ways of more effectively teaching the students. Curriculum and study skills guides have been produced that have been translated into Spanish and will be translated into Cantonese at a future date. SFSU faculty also provide in-service training to the teachers as part of the BMTC program.

The Afrocentric Step-to-College Component

Development. The final link in the development of the current Step-to-College/Mission-to-College Program was the creation of the Afrocentric Step-to-College component. This emerged in response to the disturbing recognition that Step-to-College was not succeeding with African-American students in ethnically mixed classes at Wilson, even when the classes were taught by an African-American instructor. In searching out causes and possible remedies for the situation, Dr. Perea was put in touch with James Todd, an SFSU Black Studies professor, who, based on his knowledge of strategies that work with African-American students, developed the notion of an Afrocentric Step model. Dr. Todd then proposed the idea to two administrators at SFUSD. The timing was opportune, since the district was being pressed to do something about the high dropout rates of African-American students, especially males. An agreement was forged. The first Step classes using the Afrocentric model, funded through SFUSD, were taught in 1988-89, and were successful in two very different high school settings--an academic high school and a "school of last resort," where students typically go before dropping out. The program had spillover effects at these schools very similar to those at Mission High, as students began to question why their high school instructors had not taught them similar materials or challenged them to think more critically. Since then, the Afrocentric program has expanded into five more sites.

Program Components. The Afrocentric STC component is tailored to African-American students, although others can and do participate. Making the "original" Step model work for these students has entailed alteration of both the content of the curriculum and the style of delivery of the material. Students enroll for college credit in Introduction to Black Studies, an interdisciplinary course that encompasses sociology, psychology, family studies, politics and the arts. To encourage the students to begin considering themselves college students, a sign placed outside the doorway of the classroom reads "San Francisco State University." The students and instructor sit in a circle. Everyone must exchange views rationally and considerately. The rules are enforced through group dynamics. In place of lectures, the instructor and students conduct dialogues about selected themes, such as the relationship of race and class.

The curriculum follows a developmental model in three phases: the first revolves around the goal of empowerment and creating social support; the goal of the second phase is academic achievement and involves critical literacy, or building vocabulary skills; and the final phase aims for the outcome of enrolling in college. A "mini-evaluation" conducted in the first year of operation of this component at the two original school sites revealed a marked jump in the students' verbal SAT scores after exposure to the vocabulary phase. The third, "outcome" is the real "acid test" for the students, since at least initially, many of them do not really believe that they can or will attend college, and they tend to be mistrustful of those making such claims.

There is no formal continuation of the Afrocentric STC component at SFSU. However, those students who do go on to SFSU are carefully watched in their first year on campus to see what courses they take. For example, they are required to enroll in Black Studies courses, which may parallel their former STC class and may even be taught by the same instructor. A number of these students voluntarily like to check in with the program director as often as several times a week.

Faculty undergo a rigorous selection process to participate in the Afrocentric component. They also take an intensive 7-week training program during the summer prior to teaching. Forty-five candidates were interviewed before the choice was narrowed to five instructors, who are regular SFSU Black Studies professors or adjunct faculty. The director has found that those who do best at applying this model have a broad, interdisciplinary orientation and considerable breadth of personal experience. They also have to share in a common vision critical of the way the educational system has treated these youth. The one cardinal rule for those who teach in the Afrocentric component is never to look at a student's past record so as not to bias their assessment of the student's present capabilities and future potential.

PROGRAM ORGANIZATION

Current Partners

The Step-to-College and Mission-to-College programs today are a collaboration involving:

- the School of Education and School of Ethnic Studies at San Francisco State University;
- the San Francisco Unified School District;
- Mission High School, Woodrow Wilson High School, and Balboa High School (Step-to-College and Mission-to-College/Bilingual Mission-to-College);
- Woodrow Wilson High School, Galileo High School, Burton High School, Macateer High School, Lowell High School, Lincoln High School, Independent Studies Academy, Wallenburg High School (Afrocentric Step-to-College);
- McKesson Pharmaceutical Company;
- the Bank of America;
- the Irvine Foundation and Luke B. Hancock Foundation, through Enterprise for High School Students; and
- individual donors.

Staffing, Budget and Recordkeeping

Step-to-College is administered by the Chair of the Department of Administration and Interdisciplinary Studies in the School of Education at San Francisco State University and housed in its departmental offices. The university funds 3 faculty slots for the program, 1.4 through the School of Education and 1.6 through the School of Ethnic Studies, which is roughly equivalent to $105,000 per year in salaries. Six faculty members teach in the STC program as a part of their teaching load in the university or as part-time lecturers. In the 1991-92 school year, one STC instructor is an unpaid volunteer.

Monies for curriculum materials come from the operating funds of the participating Departments or in some cases from the participating schools. A part-time administrative assistant helps with the day-to-day operations of the program, informally counsels the students and teaches one section of the class required of STC students when they come to SFSU. This position is funded by an anonymous donation.

Although efforts have been made to keep track of the STC students over time, recordkeeping for the program has not been comprehensive or systematic. Only since the creation in 1991 of a specific identifier code to designate Step-to-College students have SFSU program administrators been able to track the enrollment status and records of STC students. So far, these data have not been aggregated.

The Afrocentric Step-to-College component is separately administered through the Department of Black Studies in the School of Ethnic Studies; classes are taught by five full-time and adjunct faculty of the Department at the eight high schools listed above. The Afrocentric component is funded by the SFUSD through a combination of state consent decree (integration) monies and funds for educationally disadvantaged youth. Funding amounts have tended to be in the range of $130,000-$160,000 per year for all schools. Two of the schools provide some monies for the program from their own budgets. As far as record-keeping is concerned, intake forms and tracking forms have been systematically kept for students in the 1990-91 and 1991-92 cohorts, but these data have not yet been aggregated.

In addition to providing three faculty positions for the original Step-to-College Program, the university makes indirect financial contributions to both STC components by waiving application and tuition fees for Step students. Figuring at 1,000 students, the maximum number of STC high school students ever enrolled in the program in any year (1990), and at $330 in waived fees per term, this would amount to an indirect contribution of approximately $660,000 for that year. Of course, although STC seniors are entitled to the same services as other SFSU students, in fact they cost the university less, since they are primarily served off-campus.

The Step-to-College, Mission-to-College and Academic Fellowship Programs at Mission High are all coordinated by the school counselor, an individual brought to Mission High specifically to serve in this role. His position is funded partly by the federal Title VII grant and partly by the school. Mission-to-College is funded partly by the school's own monies and partly (in its Bilingual Component) by federal Title VII monies. Funds for the Academic Fellowship Program, administered through the Enterprise for High School Students, presently come from the Irvine Foundation and Luke Hancock Foundation, as well as individual contributors, who for a donation of $600 may sponsor a student in the program for a year.

The Bilingual Mission-to-College Programs at all three sites are funded by Title VII monies. The amounts of these grants, awarded for a five year period starting in 1988-89, have decreased slightly each year since they began, from $400,000 to $350,000. The funds pay for professors, teachers, staff development, books, and resources.

With respect to involvements with corporate sponsors, Step-to-College and Mission-to-College enjoy a special, if largely informal relationship with the McKesson Pharmaceutical Company, a San Francisco-based firm, through a key member of the company's public relations staff. McKesson has paid for Step-to-College and Mission-to-College sweatshirts and has supplied stopgap emergency funds to the program at several critical junctures. For example, one year McKesson wrote a $1500 check to cover the cost of photo IDs; another time, the company arranged to pay dormitory fees for a STC student at SFSU who was being physically abused at home. In addition, The Bank of America has a program providing MTC/STC students with part-time and summer bank jobs.

EVALUATION

A number of success indicators of Step-to-College are apparent even though the program has not been formally evaluated. Data have been collected that could be used for evaluative purposes, but staff and administrative time have been occupied with supporting the growth of the program.

Student outcomes of STC can assessed in terms of STC's accomplishments in boosting college-going rates. For example, prior to the introduction of STC at Wilson High School in 1987-1988, very few students went on to college. Twelve percent of 1988 graduates were accepted to 4-year institutions. The 1988-89 school year, when the program really took hold at Wilson, marked the beginning of a dramatic surge in college-going: in spring 1989, 84 percent of Wilson's 220 graduates were reported to have been accepted at 2-year and 4-year institutions, with a jump from 7 percent to 30 percent of these graduates accepted into the CSU system, primarily at SFSU. In 1989-90, 90 percent of Wilson's 180 graduating seniors were accepted at 2-year and 4-year institutions, nearly half at CSU (again, mostly SFSU). The following year, 83 percent of its 190 graduates were accepted at 2-year and 4-year colleges and universities.

The number of students from Wilson going on to attend 2-year and 4-year institutions is especially striking considering the characteristics of the student body. Of the 1121 students enrolled at Wilson during 1991-92, 40 percent are classified as non-English proficient or limited English proficient and receive bilingual/ESL classes, 12 percent are in Special Education classes, and 87 percent qualify as Educationally Disadvantaged Youth. Twenty-eight percent of the students' families receive AFDC.

Complete college-going figures are available for Mission High School only for 1989-90, the fifth year of the program. In the spring of 1990, it was reported that 92 percent of the 223 graduating seniors went on to some type of postsecondary education. Data indicated that nearly half (49 percent) enrolled in community colleges; 32 percent continued their education at CSU schools, including SFSU; 8 percent went to institutions in the University of California (UC) system; 4 percent attended private and out-of-state colleges; and 6 percent attended technical schools. Many of the students who initially enroll in community college transfer to CSU/SFSU. At both Wilson and Mission High Schools, as the STC program has expanded and solidified, program staff report that more students have opted to "spread their wings" and attend 4-year schools other than SFSU.

Another positive student outcome of STC is reflected in the reportedly high retention rates of STC students once they enter the university. In the fall of 1986, the program reported that 34 students from the first STC class at Mission High School entered San Francisco State University. Thirty-one (91 percent) completed one year, 25 (75 percent) completed two years, and 21 (62 percent) had completed three years by the spring of 1989. All but two of the 13 students who left school during this period were said to be doing successful academic work when they left.

The overall retention rate for STC students at SFSU is reported to be 75 percent, as compared with a rate of 59 percent for all students at the university. Not only are Step-to-College students staying on at the university, they are also making valuable contributions to the institution. For example, many STC students are active in student government and other university organizations.

The increase in percentage of students enrolling in college indicates that STC is creating a "college-going culture" at Mission and Wilson similar to what one finds at an academic high school. For this to have happened, some portion of the teachers and staff had to be convinced that "kids like these" really were college material. It took time, as many teachers adopted a "wait and see" attitude. However, when STC graduates now at SFSU returned to their former schools as tutors--bearing concrete evidence of their success as college students--the tide began to turn. One STC tutor, now a student leader at SFSU, said that a former teacher at Wilson had once told her "she was dreaming" if she thought she was going to be able to make it in college. That teacher now claims to have known all along that she would succeed. The STC coordinator at Wilson discussed her own personal awakening at discovering that students with low test scores could still succeed as college students.

Another reflection of STC's success at Wilson has been its inclusion in the circuit of college and university recruiters who visit high schools to disseminate information and actively seek prospective students. Prior to STC, recruiters had shied away from Wilson as just another inner city high school with a bad reputation.

Both the Bilingual Mission-to-College and the Academic Fellows programs have been formally evaluated. Since its inception, the Bilingual Mission-to-College program has been independently evaluated each year, and was also visited in February 1992 by a representative of the U.S. Department of Education's Office of Bilingual Education. Apart from a wealth of information on program implementation, staff development and curriculum development, the 1990-91 evaluation report contains data on student outcomes for the entering classes of 1988-80, 1989-90 and 1990-91 at all 3 BMTC sites.[2]

In general, the clearest impact of participation in the BMTC program across all schools was reported to be its effect on student retention rates. As the evaluation report concludes:

> Retention rates for all three entering groups are impressive and in contrast to previous history. Evidence from test scores and GPA's is mixed and shows no clear pattern. In some combinations of school, group and content area, gains of importance are shown but these are not consistent and in other areas declines are shown. The best conclusion to be

[2]Wallen, N.E., "Mission-to-College Program for LEP Students, Grades 9-12." Evaluation Report, 1990-1991. San Francisco, CA: San Francisco Unified School District.

drawn from these data is that the impressive retention rates have not been accompanied by the usual decline in academic performance which is to be expected in students with serious language and socioeconomic deficiencies (p.68).

The reported results appear impressive when seen in relation to the difficult conditions that had to be overcome in the first years of establishing the program. Wilson and Balboa High Schools had the added pressures of threatened closures; turnover in administrators and other key staff; some dissension and lack of program support from many of the teachers; initial teacher resistance; and high rates of turnover in the student body. Enormous patience, tenacity, hard work and skill were required to meet these challenges as they came.

BMTC has had a major "spillover" effect on the larger school environment, according to the evaluation report. Non-BMTC teachers in the three schools have requested training in use of its curriculum and study skills guides. Furthermore, the Bilingual Education Office of the Department of Education has recommended that these guides, "once tested, refined and translated," be made available to other school districts. It was suggested that SFUSD apply for an Academic Excellence grant after the BMTC project ends in 1992-93, so that the design and materials can be disseminated for use by others.

The Academic Fellowship Program at Mission High was independently evaluated by BW Associates of Berkeley over the two-year period from May 1989 to May 1991. The evaluation report found the program largely successful in meeting its goals of helping to increase student enrollment in college preparatory courses and positively influencing student academic performance, work habits, and attitudes toward school. As a partial caveat, the program was found to attract students who were already highly motivated and performing better than average prior to their enrollment.

The evaluation also concluded that the AF program's key components---the stipends, after-school study hall, and tutors--probably did work together to create the combination of "incentives, practical support and shifts in student values" that the designers had envisioned. Evaluators judged the stipend "an essential program component" even though most Academic Fellows indicated their willingness to be in the program without the stipend. Stipends were critical for many students who otherwise would have taken part-time jobs. They also served as an inducement to regular study hall attendance, and they strengthened students' sense of self-esteem as valuable family contributors and legitimized academic work as a "job." The study hall was providing a useful place where students could concentrate and complete their work free from disturbances. with access to dictionaries and other resources. Tutors were able to provide significant help with the students' lessons. Finally, the study hall helped Academic Fellows to develop friendships with other serious students, and in some cases, even supplied the impetus for students to break off connections with "less serious" peers. In this respect, the Academic Fellows program fits nicely with the overall goal to create a firmly supported alternative to the "culture of the streets."

FUTURE OUTLOOK

All indications suggest that Step-to-College/Mission-to-College will continue to develop over the next several years. The program director remains active and committed to serving as the "glue" that binds together the various program components. Although he has given thought to a possible successor, he has no plans to withdraw at this time.

One program goal he has for the near future is the development of a stronger, more structured support network for the STC students on the SFSU campus. This network would serve to further build the students' self-confidence, enhance academic success, and further strengthen their retention rate at the university. This goal reflects the program's adaptability to the perceived needs of the students.

For the immediate future, the program does not have plans to expand into more schools. The current focus is on strengthening and refining the current STC/MTC components at their present sites. Apart from probable budgetary constraints looming over the horizon, the program director is concerned that letting the program get too big will destroy its unique character and dissolve the personal, familial quality of the relationships. The director of the Afrocentric STC component said that when he began to get too "expansionist" in his views--"I was seeing Step-to-College of the world"--the program director gently advised pulling back to regain manageability.

The program is threatened by budget cutbacks in the CSU system and in the school district. Even though Step-to-College has been allotted 3 faculty slots for 1992-93, when impending budget cuts take place, the question will be whether to cut Step-to-College or some other program or department. The program director is hoping that Step-to-College has brought enough positive "shine" to the university so that it will be spared, but there are no guarantees.

Personnel cutbacks from the school district over the past several years have already caused administrators at Mission High to engage in creative juggling to continue to support the Step-to-College/Mission-to-College program. Title VII funding for The Bilingual Mission-to-College program runs out in 1992-93, and BMTC's continued survival may depend, in part, on whether the SFUSD will help to absorb some of the program costs into its operating budget. The Afrocentric STC component is also dependent on school district funding. The impending retirement of the SFUSD Superintendent and an Assistant Superintendent very supportive of the Step-to-College Program makes the future somewhat uncertain on this front as well.

In response to these uncertainties, the director, for the first time in several years, is considering applying for outside funding sources for the Step-to-College program. Initially, he had rejected pursuit of such funding as restricting needed flexibility and creativity. Depending on the outcome of the university's budget process, the Step-to-College program may well become more active in seeking outside support.

The Step-to-College/Mission-to-College program does not anticipate the kind of future growth it experienced over the past six years. But the success of these programs has convinced the director that this model, if suitably and creatively adapted to particular local conditions, is in fact replicable. He has been "spreading the seeds" of program development by advising in the creation of a Step-to-College program at Hayward State University, a CSU branch just over the Bay Bridge. He is also helping to initiate a similar model for rural Chicano-Latino students at the University of Colorado at Denver--known as "CU Succeed."

PROJECT STEP
University of California at Irvine
Irvine, California

"The most critical factor in the success of Project STEP is the almost universal commitment to action which was revealed in the site visit....They know the local conditions, they see the future and they agree that they want to do something. This pervasive attitude on the part of a small core group of leaders seems to be rippling out to include an ever increasing circle of researchers, parents, and administrators within the school district and professors and administrators at the four college and universities in the area."

College Board external evaluation team (1989)

PROGRAM HIGHLIGHTS

Students Served: The programs that STEP funds provide services to elementary and secondary students in the Santa Ana Unified School District. These students are predominantly minority, have limited English proficiency, and most live in poverty.

Services Provided: STEP acts as an administrative framework that secures funding for programs, filters, screens, and coordinates potential programs; networks members; and disseminates information about the partnership.

Students Served Annually: STEP served over 3,500 students and 450 faculty members in the 1989-90 academic year.

High Schools or Districts Involved: The Santa Ana Unified School District is the primary target of the project. However, STEP is expanding its activities to include the adjacent Compton Unified School District.

Program Administration: Project STEP is governed by an administrative council and is led by two co-directors.

Year Begun: 1981

Formal Evaluations: Evaluations are conducted on an as-needed basis.

WHAT MAKES THIS PROGRAM SUCCEED

The creators of Project STEP (Student/ Teacher Educational Partnership) successfully established, and continue to foster, an administrative collaboration among four college campuses and the Santa Ana Unified School District (SAUSD) for the purpose of improving the academic preparation of the district's 50,000 students. Project STEP provides an organizational framework within which new funding sources are developed, new methods of teaching are tested and evaluated, new support services are tested and implemented, and new educational technologies are tried and adopted throughout the Santa Ana Unified School District. It differs in scale and style from the other sites visited in that it tackles the problems of the entire school district rather than those at selected schools or among selected groups of students. As one of the district's high school principals stated, Project STEP serves as a "bureaucratic crowbar."

A primary factor in Project STEP's successful efforts has been the ongoing vision of the program's originator, Dr. Manuel Gomez who still serves as one of the project's two co-directors. Dr. Gomez was a product of the Santa Ana Unified School District. His vision contained two elements which played a critical role in solidifying the idea behind Project STEP. First, he saw the

need for a **comprehensive approach** to education in the district. This meant that participants at all levels of education, elementary through postsecondary, would work together to strengthen academic preparation. Second, he perceived the need for **equal treatment across the educational sectors**. It would no longer be acceptable to assume that the postsecondary institutions, their faculty and administrators, were the ones with all the answers. For the benefit of all, the hierarchical attitudes that prevailed would have to be dismantled, the posturing "eroded." In its place would be substituted a sense of collegiality. This, then, was a vision that sought to change the conventionally accepted local educational relationships, to "alter the academic ambience."

The implementation of such a vision required the **support and commitment of numerous individuals**. These individuals comprise a second factor in the project's success. It was apparent early in the development of the project that the use of "fervent, zealous" minority professionals could help assure a strong level of professional commitment. It is apparent now that the project relies heavily on a sturdy cadre of staff, not exclusively minority, at each college and at the district to maintain the project's momentum. Reduced to its barest essentials, the project's daily operations are run by five individuals. But these core staff work together with many others to form the heart of Project STEP.

In addition to the founder's vision and the commitment of a core group of talented individuals, several characteristics of the Santa Ana Unified School District itself improved the project's chances for success. Among these were:

- the preponderance of Hispanic and other minority school children, which made the entire district a natural target for services;
- the project was considered to be on an "intimate" scale since only one school district was involved with four colleges located in the same county. This encouraged a collaborative, even familial spirit;
- the history of early outreach efforts at UCI to minority students in the Santa Ana Unified School District. These efforts, begun in 1975, laid the groundwork for the subsequent development of Project STEP; and
- the SAUSD had several high school principals who were very supportive of university partnerships and were willing to take risks if it meant improvement for their students.

In sum, according to Dr. Gomez, while all "collaboratives take a lot of commitment," one must believe in the "vision that it [these efforts] would lead to better academic preparation" for students.

A CLOSER LOOK AT THE PROGRAM

Project STEP is a fully engaged partnership of administrators, college faculty, school principals, faculty and other teaching staff, parents and students serving the school district and its students. In addition to professional and curriculum development it also supports direct student services, such as counseling and tutoring. Its major goals are to:

- improve the academic preparation of all students for college, especially underrepresented minority students in mathematics and science;
- develop future teachers of mathematics and science, especially from underrepresented minority groups;
- develop a comprehensive model of educational reform, including curriculum review, staff development, and student academic preparation;
- institutionalize this model by establishing permanent intersegmental (school/college) partnerships; and
- disseminate this model throughout the educational community.

To accomplish these goals, Project STEP provides several specific services, including:

- obtaining funding from a variety of sources to support academic preparation programs in the district;
- putting and keeping members of the partnership in touch with one another;
- promoting those programs that are in line with the goals of the district and Project STEP; and
- publicizing its efforts and successes to inform others of the benefits of the collaborative model.

The Santa Ana Unified School District and the Project STEP partners are located in Orange County in southern California. This large county is bordered on the north by Los Angeles county and on the west by the Pacific Ocean. In 1990, it had a population of approximately 2.4 million, 65 percent of whom were White, 23 percent were Hispanic, 2 percent were African Americans, and 10 percent were Asian Americans. The median family income was approximately $51,000 and unemployment ran at about 4.8 percent. The county is home to three public colleges -- the University of California at Irvine, California State University at Fullerton, and Rancho Santiago Community College -- and one private four-year liberal arts college -- Chapman College. All are partners in Project STEP.

In many respects the Santa Ana Unified School District, one of 28 districts in the county, is a minority island in the middle of the county. It has an overwhelmingly minority population, its unemployment rate is about twice that of the county, and its per capita income is about half of the county's.

PROGRAM HISTORY

The idea to launch Project STEP came from Dr. Manuel Gomez, who was director of UCI's Educational Opportunity Program (EOP), and from a member of his staff who was involved in student outreach. In 1981 Dr. Gomez was appointed director of the STEP project. For the next two years Dr. Gomez and others engaged in a series of informal discussions with district officials, school principals, and faculty to discuss ideas to improve the level of academic preparation of entering college students. These discussions centered on adapting existing activities, fostering new initiatives and, in general, promoting the need for stronger articulation and dialogue between district teachers and university faculty.

Project STEP inaugurated its first major activity in 1983 as a series of formal dialogues between UCI faculty and teachers in the intermediate and secondary schools of the Santa Ana Unified School District in Orange County, California. These dialogues, or faculty forums, served to transmit ideas about new teaching methods and the needs of the students. They further served the distinctly important purpose of dissipating some of the basic "mistrust of the university" which apparently was held by many of the teachers in the school district. These forums promoted two-way conversation where there had been little.

To implement their idea for dialogues between UCI and district faculty, the founders enlisted the assistance of the principal of Santa Ana High School. Here they encountered a self-described "desperate principal in search of funds." They found this principal willing to take risks because he felt that the mixing of staff would help raise the self-esteem of his teachers and translate into improved teaching. Dr. Gomez is now UCI's Vice Chancellor for Academic Affairs; his staff member works for the school district; and the Santa Ana principal went on to lead Century High School, Santa Ana's high-technology high school.

Faculty forums were held in April and May of 1983, funded by an $8,000 seed grant from the University of California's Office of the President. Attending the first forum were the superintendent, district administrators, school principals, counselors, and others. Faculty members from the schools and UCI in areas such as the sciences, mathematics, foreign language, and fine arts also attended. Promising models of college-based academic preparation programs were presented. Following these presentations, the faculty broke into discipline-specific discussion groups.

The second faculty forum focused on the development of plans to begin a collaborative at each school. The plans included student identification and recognition, objectives for counseling, teacher enhancement and recognition, parent and community involvement, university involvement, and curricular review activities. As in the first forum, faculty from UCI met with district teachers to continue their discipline-based exchanges.

In August 1983 representatives from the College Board visited UCI and Project STEP as part of their nationwide study of academic preparation. The staff at the project maintained contact with the College Board by attending Board sponsored conferences held mostly on the East Coast. It was during this period that the Board prepared its now classic report "Academic Preparation for College." Also at this time the leadership of Project STEP decided to expand the partnership to embrace the other colleges in the county. The new members of the partnership were Rancho Santiago Community College, California State University at Fullerton, and Chapman College.

In December 1984 the newly established California Alliance of Partnership Programs (CAPP) issued a 3-year grant to Project STEP totaling $174,000. This state-funded program, which then supported about two dozen projects and now supports about a dozen, has as its mission "to develop cooperative efforts to improve the academic quality of public secondary schools with the objective of improving the preparation of all students for college." Their specific grant to Project STEP supported faculty forums, which were especially important in implementing the State's new math curriculum framework, and in integrating mathematics and science instruction into the Santa Ana Unified School District.

In 1985, the current district school superintendent, Dr. Rudy Castruita, took office. He came in with a strong sense of mission wholeheartedly in keeping with the spirit of the project. The district superintendent today serves as co-director of Project STEP, along with Dr. Gomez, the project's originator.

From 1987 to 1990, funded by a second California Academic Partnership Program (CAPP) grant and a Carnegie Corporation grant, the project expanded its service area into the elementary schools. During this period Project STEP became a CAPP showcase project: it served as a model of a successful, mature partnership that had developed comprehensive approaches to curriculum development. This expansion to elementary schools signaled, according to the project's founder, a "conceptual change toward educational restructuring at all levels for all players."

Some of the services and functions that Project STEP nurtured in its early years, such as establishing faculty dialogues, could be seen as the responsibility of the district's school board. The board, however, was reluctant, according to current observers, to recognize the demographic shifts to minority students that the district underwent in the early 1980s or to develop programs aimed directly to serve these students. Also, they were not enthusiastic about the concept of collaboration or partnership. It was not until 1988 that elections brought in a new five-member school board that is supportive of the collaborative notion.

Since 1990 Project STEP has expanded its partnership model to include the Compton Unified School District in adjacent Los Angeles County. This was a planned expansion that was tied to the third year of funding under the project's second CAPP grant.

Currently the project is sustained through two major funding vehicles. One is a federally-funded grant from the Fund for the Improvement of Postsecondary Education (FIPSE). Through this grant the project is working to strengthen intersegmental teaching relationships using discipline dialogues, faculty forums, and faculty teams. The other is a second Carnegie grant through which Project STEP is seeking to establish regional demonstration schools and teacher training programs to promote minority participation in science and technology. Both grants are for three years and total approximately $600,000 in funding.

PROGRAM TARGETING AND SERVICES

Targeting

The primary target population of Project STEP is the Santa Ana Unified School District (SAUSD). This is a predominantly minority district whose 1991-92 enrollment was 47,700 students in 43 schools (28 elementary schools, seven intermediate schools, four high schools, three special schools, and one

continuation high school).[3] Hispanics dominate this school district making up 85 percent of the students. Whites, Asian-Americans, and African Americans make up the remainder with 6, 7, and 2 percent, respectively. With a city unemployment rate of 8.5 percent and a per capita income of $10,019, it is not surprising that 68 percent of the students live in poverty.

The school district has the largest limited English proficient (LEP) population in the state with 64 percent of the students identified as LEP. In the elementary schools, only 25 percent of the students are fluent in English. Just over 40 percent of intermediate students are fluent in English, and almost 50 percent of the students in the high schools are fluent. This language barrier presents teachers with a challenge that is amplified by the fact that many of these students were not exposed to any formal education in their native country and are not literate in their native tongue.

The ethnic composition of SAUSD has dramatically changed during the past decade. In 1982, the district minority population stood at 60 percent; the current figure is 94 percent. Much of this shift can be explained by a large influx of immigrants from Mexico, spawning a "white, black, and yellow flight" from Santa Ana to other districts. In addition to a shifting ethnic composition, the school population is both growing and shrinking: Since it serves a large immigrant population, children register for school throughout the school year. At Santa Ana High School, for example, an average of 10 new students are enrolled each school day. Yet, while so many new students are enrolling, the SAUSD continues to have a dropout rate higher than the state average. In 1990, approximately 28 percent of SAUSD students dropped out of school, compared to the state average of 20 percent. Though some high schools are reporting record enrollments, it is apparent that not all students are enrolled in school for the full year; some stay a week, some a month, and some stay longer.

Of Santa Ana's 1990 high school graduates, one out of two enrolled in college in the fall following their graduation. Most enroll in two-year community colleges since only a small fraction of Santa Ana graduates meet the admission requirements for the University of California and the California State University systems. Only ten percent of the 1992 high school graduating class met the coursetaking requirements for entry into the University of California system. That is, they had completed 15 academic units in the following subject areas: 1 year of U.S. History, 4 years of English, 3 years of Math, 1 year of Laboratory Science, 2 years of Foreign Language, and 4 years of College Preparatory electives. Of the 1,600 seniors, 24 percent met the UC math requirement, 39 percent took the required math courses but were unable to pass, and 37 percent did not attempt to fulfill the requirement. As for the science requirement, 43 percent met the UC requirement, 21 percent took the required science courses but were unable to pass, and 36 percent did not attempt to fulfill this requirement.

Project STEP is in the process of expanding its target population to include the students of the Compton Unified School District (CUSD) in neighboring Los Angeles County. Over 99 percent of the CUSD is minority, with blacks and Hispanics each composing almost 50 percent of the population. Project STEP and CUSD are developing an organizational structure similar to Project STEP to offer similar services to the Compton students. Expansion into this district, funded by the second CAPP grant of 1987, began in 1990. In addition, STEP is furthering its collaborative efforts with the SAUSD and the

[3]A continuation high school serves students who have dropped out of school but now want to re-enter and complete high school.

city of Santa Ana by assisting with the *Santa Ana 2000* initiative. This initiative is a partnership among the school district, city government agencies, and local businesses. It has set goals to bring improved education and job training services to its community by the end of the decade.

Services Provided Through a Unique Structure

Project STEP acts as a catalyst and a facilitator for launching programs within the Santa Ana Unified School District. The specific services that Project STEP provides include:

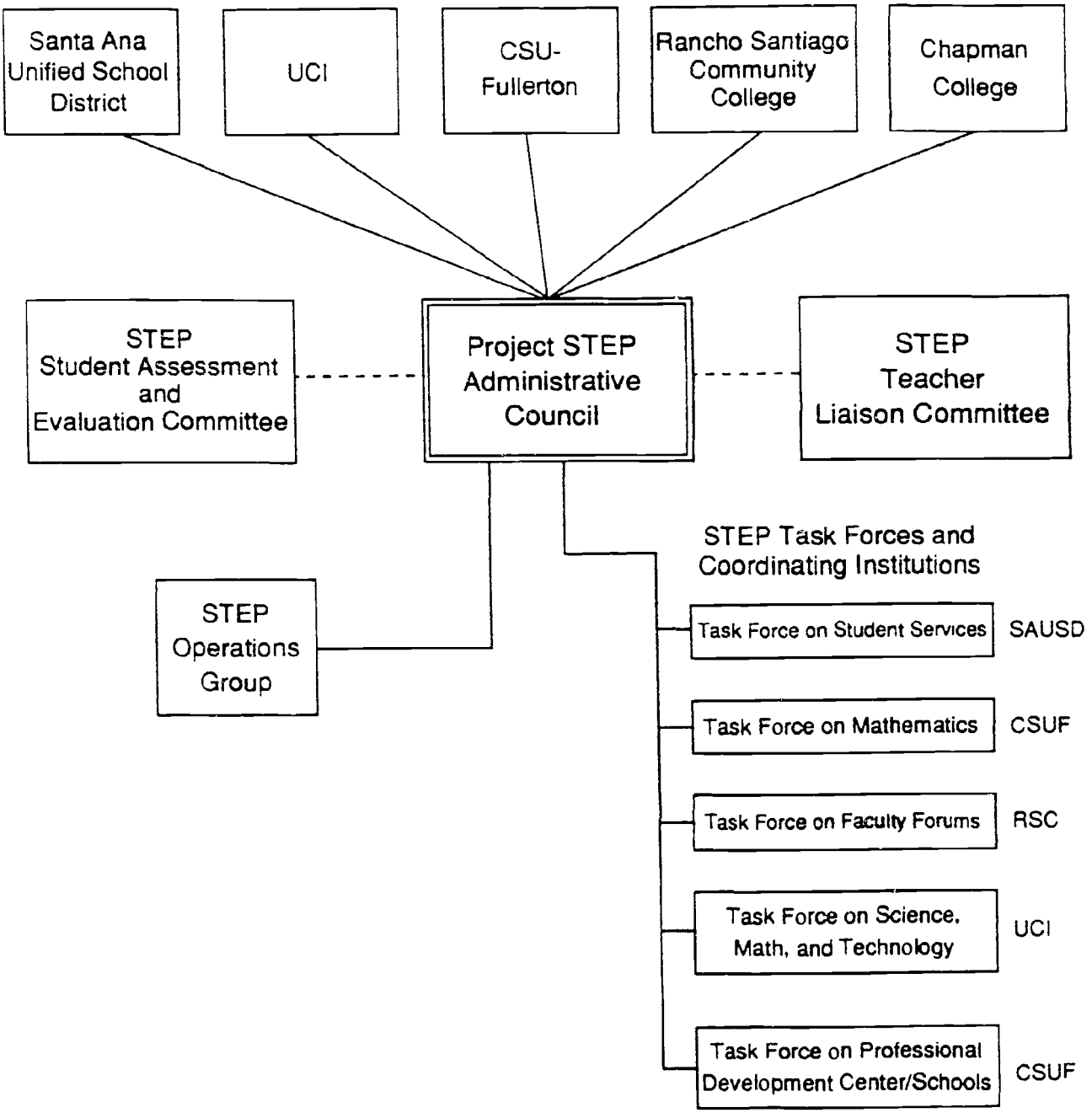
- **securing funding** from state, federal, and private sources to support academic preparation programs within the district;
- **networking** among the members of the Project STEP partnership to make the best use of the district's human and physical resources;
- **screening and coordinating** potential programs to ensure congruence with the goals of Project STEP and the school district; and
- **disseminating** information about partnerships to encourage others in the region and elsewhere to adopt a similar model.

Project STEP services are administered by an administrative council and a set of task forces that are organized by subject area (see Figure 1 on the following page). Each component of the organization is described below. Requests for the allocation of funds for new and existing programs are authorized by the council. The council also acts as a forum where members can discuss district educational needs, potential new initiatives, and other issues. Screening of potential new programs through the council can be accomplished in two ways. First, a council member may propose a new service, such as mathematics tutoring, and can work with an existing council task force to determine if funding is available from existing sources. If funding is available and the council approves, a new program will be developed. In the second approach to program approval, an interested faculty member or council member may learn of a funding opportunity which is tied to a particular service, such as using laser disk technology in the classroom. The faculty member would then approach the council with a proposal to seek out this potential source of funding. In either case, the council can track the types of new programs that are proposed and can evaluate whether they meet Project STEP's goals. As the council and the task forces develop and implement new and continuing programs, they also distribute information of their activities to other school districts, new faculty members, and to the research community through presentations and publications.

The Administrative Council

As the governing body of the project, the 37-member Administrative Council directs the services of Project STEP. The council draws its membership from the five participating partner institutions: the Santa Ana Unified School District (SAUSD); the University of California, Irvine (UCI); California State University at Fullerton (CSUF); Rancho Santiago Community College; and Chapman College. Council

Figure 1. Project STEP Organization Chart 1991-92



members representing postsecondary institutions are appointed by the chief executive officer of the institution or a designate. Members representing the elementary and secondary division are appointed by the superintendent. All members serve a three-year term. Members elect a Chair and two Vice Chairs to lead the council. Officers are elected for a one-year term.

The 37 members comprise eight representatives from Rancho Santiago College, eight from SAUSD, six from UCI, four from CSUF, three from Chapman College, three from the high schools, three from the elementary schools, and two from the intermediate schools. Council members are senior staff at their respective institutions, including the district superintendent; the assistant superintendents; elementary, intermediate, and high school principals; senior postsecondary administrators including deans and chancellors; university professors; school teachers; and special program administrators from the postsecondary institutions. This accumulation of high level people on the council is an illustration of each partner's commitment to the project.

Council meetings are held at least four times a year and are hosted by each partner on a rotating basis. Meetings generally include reports from the directors, the task forces, and the standing committees. Current issues facing the project are also discussed. For example a recent meeting discussed the California budget crises and how this will affect STEP, as well as the status of STEP's involvement with *Santa Ana 2000*.

Standing Committees

The Administrative Council receives input from two standing committees: the Teacher Liaison committee and the Student Assessment and Evaluation committee. While the chairmen of these committees are Administrative Council members, other members on the committees may not be council members; rather, they are persons concerned about their local education system.

The Teacher Liaison committee is composed of five to ten members and usually meets prior to an Administrative Council meeting. This committee is responsible for electing one member, typically a representative of the local teachers union, to serve on the Administrative Council. The committee member represents teachers' concerns and provides input on STEP's services and goals. The committee is also a vehicle to communicate concerns from the teachers to the council and vice versa.

The Student Assessment and Evaluation committee provides STEP with assessment instruments and evaluation services. This committee is also responsible for conducting internal evaluations of the STEP components. The members are typically persons who work at the Office of Institutional Research, or a similar office, at the partner institutions. While the committee is small--again, typically 10 members or fewer--members draw on the staff at their institutions to assist with evaluations. This committee meets on an as-needed basis.

The Task Forces

The Administrative Council has established task forces to coordinate the daily operations of ongoing programs. To promote equality among partners, each institution is responsible for at least one task force. There are five task forces currently operating: Student Services coordinated by the SAUSD; Mathematics coordinated by CSUF; Faculty Forums coordinated by Rancho Santiago; Science, Math, and Technology coordinated by UCI; and Professional Development Center/Schools coordinated by CSUF. Task forces are composed of one representative from each postsecondary institution and two representatives from the school district. Members are appointed to serve a one-year term. Like the Administrative Council, all task forces are to meet at least 4 times a year, and meetings are to be hosted by each partner on a rotating basis.

Task Force on Student Services. This task force coordinates programs that are designed to improve students' preparation for college through support, outreach, and guidance services. In addition, this task force oversees education-based drug prevention programs that help students avoid drug use and encourage them to stay in school and meet their educational aspirations.

The STEP tutorial program is an excellent example of a program housed under this task force. This program, which ran from 1985 through 1990, was funded by the first CAPP grant secured by Project STEP. The program's dual mission was to provide students with academic support in math and science and to nurture future teachers. With Rancho Santiago Community College supervising this program, peer tutoring services were brought to three high schools in the district. The program offered peer-led individual and group tutoring in math and science to students voluntarily seeking assistance and those recommended by a teacher. The program ran during after-school hours and was supervised by a college student serving as an on-site tutor supervisor. Each week, teachers would receive a "tutoring report" providing feedback on their students in the program. Peer tutors were selected from advanced math and science courses and were trained by a tutor trainer. The tutor trainer, a college student, was also responsible for hiring the tutors and maintaining program records. A similar program was conducted at an intermediate school, but the tutors were college students from Rancho Santiago rather than peers.

During its first year of operation, the tutorial program assisted 112 students. This number grew substantially over the years to reach a record high of 801 students served during the program's last year of operation. The program ended in 1990 with the termination of the CAPP grant.

Task Force on Mathematics. The task force on mathematics is designed to address broad-based issues concerning math in the SAUSD. In particular, it focuses on issues of parental involvement and on students with limited English proficiency. In addition, this task force has been instrumental in the restructuring of the district's K-12 mathematics curriculum. Task force members also respond to teachers who request assistance with the revised curriculum.

The Family Math program is an example of how Project STEP furthered its goals in the mathematics area by coordinating its services with an existing program at a partner institution. Family Math, begun in early 1987 and housed at California State University at Fullerton, is an outgrowth of Project SAFEMAP (Santa Ana - Fullerton Mathematics Project), a district/university collaboration program that develops the skills of math teachers. Family Math carries this one step further and trains teachers to help parents work on mathematics with their children. Family Math offers evening workshops where specially trained teachers work with parents and their elementary and intermediate level children to

develop better math skills. Through a hands-on learning approach, the workshops review how math is a part of everyday life. Guest speakers inform parents about careers available for those with a strong math background. Parents may encourage their children to pursue mathematics in school if they know of the job opportunities available in math. The workshops operate for 6 to 8 weeks, and bilingual classes are available.

In mid-1987, Project STEP became involved with Family Math by providing funds to expand the target population of the program from just the elementary level (K-5) to include the intermediate level (6-8). Furthermore, Project STEP supplemented existing funds to conduct the workshops for the parents and their children. This was very timely for Project STEP, since it was eager to expand its activities involving parents and mathematics education for minority students.

Task Force on Faculty Forums. Since its inception, Project STEP has brought together teachers from across the educational spectrum to identify the needs of students in the district and to discuss how best to meet those needs. This task force coordinates programs that bring faculty from kindergarten through college together.

The recently developed Discipline Dialogues illustrate the work conducted through this task force. The Discipline Dialogues, established in 1990 and supported by the Fund for the Improvement of Postsecondary Education (FIPSE), are conferences held five times a year to discuss topics in seven academic disciplines (Language Arts, Visual and Performing Arts, History, Humanities, Social Science, Math, and English as a Second Language). First, a speaker lectures on a topic relevant to all teachers, for example on multiculturalism. Then the teachers break into groups by discipline to discuss the topic and how it affects their discipline. Secondary teachers offer teaching expertise, while postsecondary teachers highlight research conducted in the discipline. The objective of the dialogues is to help all participants better understand each other's goals, strategies, and challenges.

The California Writing Project (CWP), coordinated by UCI, is another example of a program overseen by this task force. It is also an example of Project STEP coordinating with an already existing program at a partner institution. The CWP offers selected K-college teachers a five-week summer institute to 1) determine what teaching techniques work well in the classroom under various circumstances, 2) spend 4-5 hours a week to develop their own writing skills, and 3) listen to nationwide experts discuss language arts reform. In 1985, STEP was able to provide the CWP with additional funds through its CAPP grant. Project STEP encouraged the development of the CWP's Affirmative Action Group that selects teachers of minority students to discuss a cultural diversity approach to teaching. The Affirmative Action Group runs during the summer institute, and many teachers from the SAUSD attending the CWP have been able to participate in the group. Having access to the Administrative Council also assisted the CWP obtain district support for future collaborative, testing, and evaluation efforts.

Task Force on Science, Math, and Technology. Under this task force, UCI faculty work with K-12 math and science teachers to integrate technology into their math and science lesson plans. The National Geographic Bilingual Kids Network, begun in 1990, program is an example of a program that uses innovative technology to enhance students' educational experience. The program links elementary and intermediate students throughout the world via a modem to share research information about scientific topics and experiments. Specifically, students conduct original scientific research, record data on a

computer, and share findings with other students throughout the U.S. and other countries. Kids Network exposes students to a variety of scientific topics including solar energy, acid rain, and water contamination.

In 1991, STEP furnished the program with $4,000 to support four new elementary school sites, increasing the total number of schools participating in the program from 12 to 16. The money, obtained from a Carnegie grant, supported teacher training, installed the computer network, and provided instructional materials and equipment, including TV monitors and computers.

Task Force on Professional Development Center/Schools. This task force oversees Professional Development Schools designed to develop novice teachers and provide continual development for experienced teachers. In the 1991-92 academic year, four schools (two elementary, one intermediate, and one high school) were designated as Professional Development Schools. For the 1992-93 academic year, two additional elementary and another high school will be designated as sites. At these schools, student teachers observe experienced teachers in action and new teaching methods are tested. At Pio Pico Elementary, for example, student teachers from UCI spend a few days at the school to observe teachers. Pio Pico is also experimenting with new teaching methods including team teaching and team planning. Information collected on these approaches to teaching will be analyzed by the UCI Department of Education to examine the university's teacher education program and consider modifications.

In addition to facilitating teacher development through the Professional Development Schools, this task force has sent teachers to national conferences on teacher development. With Project STEP's financial support, selected SAUSD teachers were able to attend the 1991 Yale-New Haven Teachers Institute Conference on "University-School Collaboration: Preparing Teachers and Curricula for Public Schools." District teachers participated in workshops that discussed issues relevant to teachers involved in collaborations.

Project STEP is also discussing the establishment of a Professional Development Center. The center would be located in the district and would offer services and resources that all teachers in the district could use. Proposed services include preservice and inservice courses on the latest concepts in school reform. The Development Schools would serve as sites where methods taught in the center would be practiced. Plans for the center are still in the developmental stage.

The Operations Group

The STEP Operations Group is responsible for drafting the agenda for the Administrative Council meetings. The group is composed of two representatives from each partner institution.

PROGRAM ORGANIZATION

Staffing

A core staff provides overall leadership and oversees the daily operations of the project. The core staff consists of the two STEP co-directors and one contact person from each of the five partner

institutions. None of Project STEP staff is employed on a full-time basis by the project; each assumes STEP-related responsibilities in addition to their regular jobs.

The co-directors of Project STEP have had an instrumental role in sustaining the harmony of the project. In addition to their STEP activities, the directors hold prominent full-time jobs at their respective institutions: one is the SAUSD superintendent and the other is the Vice Chancellor for Academic Affairs at UCI. Their chief STEP responsibilities include: promoting Project STEP in the state and nationwide; writing grant proposals; guiding the long-term goals of the project; gaining and maintaining consensus among the partners; and defining the role of new partners in the project to avoid competing interests. The directors are also involved in the discussions to expand Project STEP's activities into the Compton Unified School District and the *Santa Ana 2000* initiative. The directors intend to make certain that STEP's foundation of quality service will not change with its new growth.

The contact person at each partner institution plays a vital role in the daily operations of the project. A few examples of their responsibilities include: arranging meetings among the partners, directing council members to the appropriate task force to seek services, and addressing minor problems or complaints among the partners. Contacts also work with the directors to write grant proposals to secure funding for the project. Contacts hold a variety of positions at the partner institutions and spend up to one-third of their time working on Project STEP. The UCI contact is the Associate Director of the Early Outreach Program/Student Affirmative Action Office. The SAUSD contact is the Assistant to the Superintendent. The contact person at Rancho Santiago College is the Director of Student Development. At CSUF, the contact is a professor of mathematics. And the main contact person at Chapman College is the Chairman of the Department of Natural Sciences. Partner institutions provide administrative support to these contacts for STEP activities on an as-needed basis.

Budget

In 1990, STEP secured its two current grants, totaling close to $600,000 over a three-year cycle, from the Fund for the Improvement of Postsecondary Education (FIPSE) and the Carnegie Corporation of New York. The amount of money received from various external sources has grown over the history of the project. For the 1985-87 funding cycle, STEP obtained approximately $174,000 from external sources. Since then, this amount has increased more than three times to reach its current funding level.

FIPSE's three-year grant of $210,330 supports STEP's "Visiting Scholars Program." This program supports the Discipline Dialogues Program that addresses problems affecting student achievement and strengthens the relationship of high school and college faculty. Faculty teams draw on the expertise of the high school and college faculty to meet the needs of district students. The first two years of the grant supported the dialogues in the SAUSD. However, funds for the third year are to be used exclusively for the development of discipline dialogues among the faculties of the Compton Unified School District. The funds cover all of the logistics involved in coordinating the faculties, locating available space for the dialogues, and running the dialogues.

The Carnegie Corporation grant provides STEP with $372,000 over three years to increase the participation of minorities in science and technology. Through this grant, STEP has been able to establish science and technology demonstration high schools, expand parental involvement into science, develop

minority teacher preparation programs in science, and, during the second year, further expand its services into the Compton Unified School District. The Carnegie funding has supplemented the funds for several initiatives within the various task forces, such as the National Geographic Bilingual Kids Network. The funds have also fully funded several programs including a one-day technology fair held at Century High School in 1991. The fair brought in representatives from computer companies to discuss how technology is being used in the classroom and workshops were also held. The fair was held for the entire staff of Century High and the staff from its feeder elementary and intermediate schools.

In addition to external funding, Project STEP has always relied heavily on in-kind support from UCI and its partners to operate the project. Like the growth of external support, the in-kind support has increased considerably with the expansion of the project, growing from an equivalent of $200,000-300,000 in early years to a value of some $1 million for current operations. The impressive array of resources that all the partners have contributed to the project is another illustration of their strong commitment to Project STEP. Examples of in-kind contributions include: salary costs for project staff; release time for faculty training; physical resources (e.g., computers and laserdisk machines); logistics for workshops, institutes, and conferences; supplies; and copying costs.

PROJECT EVALUATION

Project STEP staff members rely on several data sources for general information about the students, teachers, and schools in the Santa Ana district. Some of these data are compiled as required for particular grant funding; additional data are available through statewide data collection efforts; and still other data are collected by district staff for Project STEP. Among these data are:

- Grant-related data

  -- CAPP evaluation reports for years 1984 through 1990

- Statewide data

  -- California Basic Education Data System (CBEDS)
  -- Administrator-Teacher Ratio Report (R2)
  -- Language Census Survey (R30)

- District Data

  -- Transcript analysis
  -- Followup survey of high school graduates
  -- Needs assessment survey of parents

The terms of both CAPP grants awarded to Project STEP required an annual evaluation of the services and programs that it funded. These rigorous evaluations were performed by external evaluation teams that relied on site visits and some project-collected data for its evidence. The descriptive data they collected from Project STEP included:

- numbers of students, faculty and parent participants;
- trend comparison of participants from prior year;
- numbers of students by grade level, ethnicity;
- types of curriculum areas covered; and
- types of activities and services provided.

Data gathered for the early CAPP reports (1984-1987) are particularly informative since this CAPP grant was the sole source of STEP funding during this period. According to the 1987 report, for example, about 2,000 students were involved in STEP programs in the district. Also, about 225 teachers and staff participated in faculty forums and other professional development activities. By 1990, when STEP was funded through the second CAPP grant as well as other funding, the number of students served grew to an estimated 3,600 and the number of faculty to about 450.

The California Basic Education Data System (CBEDS) compiles statewide data on schools, teachers, and school districts. The schools provide general data on enrollments by gender, number of faculty, faculty educational level, salary, age, and gender. The district provides general information on size of administrative staff, budgets, and the like. This information has been of general usefulness to the project staff.

R2 provides information on the number of full-time administrators and teachers in the district. It is similar in structure to the CBEDS teacher section but with additional data on administrators. Through R30, data are collected on the number of students who have limited English speaking skills.

Since 1988, evaluation staff at the school district have analyzed the transcripts of high school seniors to determine eligibility for the University of California system. This information has proved to be a very valuable source to members of Project STEP, since it enables them to uncover course deficiencies among high school seniors and to propose possible corrective measures.

Also beginning in 1988, district evaluation staff have conducted an annual survey of high school graduates. This followup survey is a very significant source of data to Project STEP. It provides a direct reading of general trends in employment, training, and schooling of all district high school graduates. Furthermore, it obtains students' attitudes about their high school experiences. However, it is a phone survey and generally cannot trace about 50 percent of its initial sample. It is possible that this level of nonresponse could bias the reported data.

Since 1989, the school district, in conjunction with California State University at Fullerton, has conducted a parental needs assessment survey. A random sample of parents of kindergarten through 12th grade students is telephoned and asked for their views on their children's relation to their teachers and their children's educational aspirations.

These examples of data collected and used by Project STEP staff to document their progress are only one-dimensional; they are not designed to isolate the effects on those receiving STEP-supported services from those who are not. Without establishing control groups, it is extremely difficult to conclude whether effects are the direct result of Project STEP intervention or not.

There is a drive underway in the district--led by the superintendent, supported by Dr. Gomez, and strongly endorsed by the director of outreach programs at UCI--to increase efforts at developing strong evaluative outcome measures and to use these as targets toward which the school district can strive. Such measures would include eligibility rates for the two state university systems, enrollment rates into each of them, graduation rates, and transfer rates from Rancho Santiago Community College to the four-year institutions. While these measures will provide some evidence of the total district-wide effort to improve the college-going capabilities of its students, they will not necessarily improve the ability to evaluate Project STEP's particular successes.

Unfortunately, comparisons of postsecondary education enrollment rates, achievement scores, and other measures between Santa Ana and other districts in Orange County cannot be taken as direct evidence of the project's influence in the district. This is because they are confounded with the effects of all other activities undertaken in the district that could have an effect on educational outcomes. To separate the effects would require evaluation of STEP-supported students in conjunction with an untreated control group.

FUTURE OUTLOOK

Funding. The direction of Project STEP in the short term will be governed by its outstanding funding prospects. Most important among these is a pending "1274" restructuring grant from the state government (named for the State Senate bill that authorized it) and a National Science Foundation (NSF) grant to support a Partnership for Reform in Science and Mathematics (PRISM).

The 1274 grant would provide funds to introduce and evaluate restructuring, partnership, and other innovative concepts at up to 11 schools in the Santa Ana district. The grants would amount to $125-$200 per child per year. Each proposed site will be judged on its educational goals and experience. Project STEP would be directly involved with particular programs at some of these schools. These grants would allow some of these programs to continue and grow, such as the Professional Development School for Spanish Language Arts at Pio Pico Elementary School. Each grant would last for 5 years and, if all eleven sites were funded, would contribute more than $10 million to the district's educational resources.

The NSF/PRISM grant, to be awarded this fall, would fund a three-year, $1.5 million program to improve minority achievement in science and mathematics. Through the combined efforts of Project STEP partners, industry representatives and the SAUSD, the PRISM proposal would: introduce "district wide curriculum changes", such as introducing kindergarten through 12th grade long-term student research projects; develop teacher enhancement programs, such as providing more leadership opportunities for classroom teachers; establish career dialogues for parents and professional; and introduce other innovations into SAUSD. The goals of this science and mathematics intervention model are to: 1) increase achievement in science and math; 2) raise participation in science, math and engineering college preparatory programs; and 3) stimulate a career interest in teaching science, math or engineering. This program would involve about 400 teachers, 10,000 public school students, 75 university faculty, 150 postsecondary students, 1,000 parents and 55 corporate representatives from the science, math, and engineering fields.

Long-term structural changes. Project STEP could grow in several ways in the long run. These include: by expanding the Administrative Council, perhaps to include students, but also by adding more principals and teachers; by focusing more programs and services on elementary schools and their students; by making more use of the resources of local college students having them return "energy to the district"; and, perhaps most importantly, by building a more comprehensive, outcome-oriented evaluation process.

Work on improving the evaluation/reporting process has already begun. Starting in 1993, all partners in STEP will jointly issue an annual report of facts about each STEP-supported program.

Perhaps the greatest challenge facing Project STEP is its role in *Santa Ana 2000*, the city-wide collaborative effort between local government, local businesses, local schools, and citizens to improve education, training, and employment for the people of the city of Santa Ana. *Santa Ana 2000* has established goals in each of these human resources areas to be met by the year 2000. Project STEP is responsible for some educational elements of this effort. For example, Project STEP recently hosted and contributed to the first annual parents' conference for *Santa Ana 2000*. At this gathering 400 parents were introduced to the goals and initiatives of *Santa Ana 2000*. In addition, UCI and Project STEP have received a $25,000 planning grant from the National Center for Urban Partnerships to support their *Santa Ana 2000* work, with a promise of an 8-10 year relationship valued at $3 or 4 million.

As Project STEP matures, its role may change. In keeping with its original vision, the project seeks to institutionalize its ideas. That is, it hopes that other schools, colleges, districts and even local governments will adopt and expand on this collaborative idea as their own. As that is successful, Project STEP becomes more and more an information resource and a funding vehicle, rather than a tester and evaluator of new teaching methods and technologies. Its future would then be as a transmitter of ideas, answering questions on how to establish a partnership, how to obtain funding, how to bring new technologies into a school, how to encourage professional development across all educational sectors, and, most importantly, how to stimulate the desire in students to pursue education and knowledge throughout their lives.

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