DOCUMENT RESUME

ED 215 045 UD 022 202

AUTHOR Collins, R.; And Others
TITLE Case Studies of Three Urban University-School Collaboratives Mandated for the Improvement of Educational Practice. Volume II, Final Report.
INSTITUTION TDR Associates, Inc., Newton, Mass.
SPONS AGENCY National Inst. of Education (ED), Washington, D.C.
PUB DATE Oct 81
CONTRACT 400-79-0064
NOTE 277p.; For related documents, see UD 022 201-203.

EDRS PRICE MF01/PC12 Plus Postage.
DESCRIPTORS Case Studies; *College School Cooperation; Community Involvement; *Cooperative Programs; Educational Cooperation; Educational Facilities Improvement; *Educational Improvement; Elementary Secondary Education; *Improvement Programs; *Information Utilization; Instructional Improvement; *Organizational Communication; Organizational Theories; Program Effectiveness; Systems Analysis
IDENTIFIERS *Boston Public Schools MA

ABSTRACT

This is Volume II of a two-volume final report of a study on the exchange and use of knowledge for school improvement in three paired educational systems in Boston, Massachusetts. The pairings, which involved the collaboration of a college/university with one or more of the Boston public schools in carrying out school improvement programs, were among 26 such collaborative arrangements mandated by court order in 1975 as part of Boston's desegregation program. The first volume of the report provides background information, describes the conceptual model and methodology used in the study, and summarizes conclusions and recommendations. This volume contains reports on the case studies of the three paired systems. The pairs investigated were: (1) Harris University-District A; (2) Massachusetts College-District B; and (3) Dunfey University-District C. Each case study describes the paired institutions and their settings, explains the study methodology, describes projects studies in each paired system, provides a cross project analysis of the collaborative processes involved; analyzes the nature of roles/functions that evolved from the collaboration, and examines factors that contributed to program success. The case studies conclude with a discussion of the types of knowledge exchange that occurred within the pairing-sponsored projects. (Author/MJL)

TDR Associates, Inc. Training/Development/Research

FINAL REPORT

Volume II

Case Studies of Three Urban University-School Collaboratives Mandated for the Improvement of Educational Practice

Prepared for the:
National Institute of Education

Prepared by:

TDR Associates, Inc.
October, 1981
Contract No. 400-79-0064

385 Elliot Street, Newton, Massachusetts 02164 / (617) 969-0651

Abstract

This 1 1/2 year study (1979-1981) examined factors and conditions affecting the exchange and use of knowledge resources in three (of twenty-six) larger and more complex Pairings of colleges/universities and the Boston Public Schools, mandated by court order in 1975 as part of Boston's desegregation case. It was found that knowledge exchange/use for school improvement in these complex interorganizational arrangements (collaboratives) is governed largely by an interaction of: their structural arrangements; their particular history and environment; several, staged inter-organizational processes; and a discrete hierarchy of needs and resources (with parallel risk and impact levels).

These Pairings were found to be highly person-dependent (versus product-dependent), in which individual advocacy, networking and verbal exchange are the primary modes of cost-ineffective initiation, knowledge flow, and knowledge use. The predominant type of educational knowledge flow/use was found to be situational knowledge first (47%-53%), craft knowledge second (36%-41%), and research knowledge third (5%-16%). In the Pairings surprisingly little use was made of available federal/state/private R & D products for school improvement. Absence of sufficient feedback/altering mechanisms as a design flaw in the structual apparatus of the Pairings, was identified as the major barrier to moving beyond mid-level functioning and impact.

TABLE OF CONTENTS

PREFACE

This is a final report of a study of factors and conditions affecting the exchange and use of knowledge resources in three (of twenty-six) pairings of colleges/universities and the Boston Public Schools, mandated by court order in 1975 as part of Boston's desegregation case. The eighteen-month study was conducted of these (continued) operational pairings between 1979-1981 by TDR Associates, Inc. of Newton, Massachusetts, under a contract with the National Institute of Education.

The report is presented in two volumes. Volume II consists of the three case studies. Volume I begins with an introduction which includes: a statement of the purpose of the study, definition of key terms used, a description of the three pairings studied, their background setting, and the approach and methods used in the study. We then present a conceptual model derived from the case studies followed by an application of the model in our cross-case analysis. We then move on to a summary of our conclusions, from which we derive recommendations for both practitioners and researchers concerned with college/university and school collaborations. The details of our cross-case coding schemes, a bibliography, and a directory of similar collaboratives are included as appendices.

The study was conducted by and with the assistance of many people. The three case studies were conducted and written separately by Roger Collins, Joseph Ferreira, and Linda Perrotto. They are based on a jointly developed analytic framework refined and modified through frequent discussions with me and others during the course of their work. Patricia Lawrence served as Project Coordinator assisting in all aspects of the study. John D. Herzog and George B. Thomas consultated with us on design issues and data interpretation. Together we developed a draft

cross-case analysis. This draft was revised and expanded into the conceptual model presented through an independent analysis of the cases conducted by Joseph B. Rappa, with the assistance of John D. Herzog and William J. Genova.

We are particularly indebted to the many people associated with the pairings studied, for their time and thoughtfulness in our interviews with them. Our thanks also to Ward Mason, Project Monitor for the National Institute of Education, for his full cooperation and support. However, we accept full responsibility for conclusions and opinions expressed in this report.

Robert Chin
Principal Investigator

TDR Associates, Inc.
October, 1981

A. HARRIS UNIVERSITY AND DISTRICT A

1. Overview

This case investigates the collaboration of Harris University, Community District A of the City of Boston Schools, and parents of the five neighborhoods involved. A description of the collaborative partners follows.

The University

Harris University is a large, urban-based, privately-funded institution. It enrolls more than 25,000 students in sixteen schools and colleges, and ranks as one of the largest private universities in the United States. Over 100 years old, Harris is changing from a regional university to one which draws its students from outside New England. Of its 110,000 alumni, less than half reside in Massachusetts and forty percent live outside New England. About half of the students live in university housing, indicating the degree to which the University serves non-commuters. More than eight hundred students from seventy-seven foreign countries are also enrolled.

Privately funded, with a small endowment, the University is dependent on tuition which is currently set at over $5500 per year. Admissions criteria are high and inching further upward. The average entering freshman achieves SAT scores in the 75th percentile. The University recently has not attracted large numbers of Boston high school graduates because the metropolitan area is replete with other private institutions, as well as low-cost state colleges.

All of Harris University's academic units are located within the boundaries of the City. Fourteen of its colleges (i.e., all except the Graduate Schools of Medicine and Dentistry) lie within the borders of Community District A. In spite of its location, the University has not had a marked orientation toward direct service to the urban community. The faculty of Harris University is

composed of non-local persons. For example, in the School of Education, a key unit in the pairing, only three of ninety-one faculty members are Boston natives and less than twenty percent were raised in Boston or in New England. Similarly, only 23% received terminal degrees at Harris University, and another 18% at other New England institutions. The majority of key faculty, therefore, were born, raised and/or educated outside of the New England region, and these proportions are rising as older, "local" faculty are replaced by younger, non-local faculty.

Harris University would not characterize itself as heavily involved in local service, especially in urban areas, in spite of the individual commitment of some of its persons and departmental units. In fact, one of the stated reasons for the President's initial support of pairing was that it would provide a vehicle for contributing to the community upon whose doorstep the University existed. When H.U.'s commitment to pairing was announced in May, 1975, the President termed it "...an exhilarating challenge for us and a promising opportunity for the Boston schools."

The University is organized on the principles of centralized administration and decentralized operation. Budget allocations, undergraduate admissions, and student activities are some of the services provided at the university level, but program decisions are made at the school/college level.

In the School of Education, at least, some matters are managed by school-wide committees. Both the Faculty Council and the Administrative Council scrutinize the introduction or alteration of new courses and review individual faculty members' requests for tenure and/or promotion. One additional organizational structure, then became important to the pairing program, the Consortium Council of the School of Education's Clustering Program. Its development is described in Section 5 of this Case Study.

In summary, organizational arrangements within Harris University are complex with respect to the pairing program. Since the University contributes to the pairing by supplying faculty resources, student resources, equipment for use by the schools, and university facilities, virtually all organizational levels have been engaged. While a public show of commitment was made by the University President, his office only indirectly controls the use of university facilities. Similar sentiments have not been expressed by the deans of all constituent schools and colleges, although some, especially that of the School of Education, have been highly supportive. Within the colleges, departments varied considerably in their interest in the pairing. Many individual professors demonstrated their concern by volunteering their services.

The organizational entity of the University most central to the pairing is the Collaborative Office, created in order to administer it. The Office's operating funds come entirely from Chapter 636; it receives space (one office plus a reception area) and some logistical support from the University. It was staffed during 1979-80 by a two-thirds time director, a full-time secretary, a half-time coordinator of student placement, a half-time liaison to West High School, and a one-tenth-time parent liaison.

The origins of the Collaborative Office are as follows. When the pairing began in the summer of 1975, the Dean of the School of Education became Chairman of the newly-created Coordinating Committee composed of single representatives from nine other schools and colleges of the University, the Dean and three Associate Deans from the School of Education, the director of the University office that manages student volunteers, and an Associate Vice-President of the University. The composition of the Committee was intended to reflect the expected relative contributions of the various units of the University, and to proclaim the pairing program as a University-wide operation, not a special province of the School of Education.

During the fall of 1975, the Dean played a double role as Harris University Coordinator and advisor to Judge Garrity. Accused of "conflict of interest" by Boston school personnel and politicians, and by spokespersons from the other participating universities, he relinquished the Coordinator position in January 1976, replacing himself with a faculty member recognized as an expert on citizen participation. The latter, in turn, appointed a second faculty member, also knowledgeable about citizen participation and highly experienced in Boston education and politics as his "Co-Coordinator". This woman performed day-to-day administration of the Collaborative from 1976 to the present. She later became Director of it, with full autonomy.

Without question, the key person at Harris University over time has been the Collaborative Director. Before accepting the job, she had earned a reputation as an organizer, technical writer, and thinker, with an understanding of the requirements of funding agencies. She utilized these strengths to provide leadership in proposal development and implementation. Her experiences in community work and her knowledge of the techniques of community analysis moved the Collaborative to a stronger commitment to community development and parental participation than most other pairings in the city ultimately evinced.

The involvement of the University has depended very heavily on the contributions of individual professors, rather than departments, colleges, or other units. While the President's office publicly supports the Collaborative, there have been no tangible rewards for participating individuals. On the contrary, H.U.'s system determining increments, promotion, and tenure reinforces research and writing, thereby systematically punishing those who divert their attention to service in the field. This policy has serious consequences for those who try to recruit faculty time and energy for the schools of District A. Chapter 636 money has been used to buy released time for some faculty, but as it declined and salaries increased, its value as an incentive also became less.

The Schools

Community District A began in 1975 with 13 elementary schools (grades K-5), 2 middle schools (grades 6-8) and one high school (grades 9-12), serving a total of 6890 students. The schools were staffed then by an instructional staff of 398, 3 administrators, and 264 other school staff, plus district office personnel. When the 1978-79 school year began, there were 4833 students, a decline of 30% over a three-year period. Reflecting declining enrollments, three elementary schools had closed and the school staff reduced by 24 teachers from 1967-77 to 1978-79.

The racial composition of District A's student body in the Spring of 1975 was 44% white, 33% black, and 23% other minorities, and in 1979-80 was 27% white, 38% black, and 36% other minorities.

A feature of District A's schools is the fact that the elementary schools are old, small, and serve an immediate neighborhood. During 1979-80 they ranged in capacity from 100 to 400 students. A pattern of closing the oldest, smallest schools, which coincidentally served white neighborhoods, has characterized the recent past and plans for the immediate future. An individual school's white and hispanic student percentages tend to covary with the populations of the neighborhood in which the school is located, but the black population seems to be bearing the burden of busing disproportionately.

In the secondary schools of the district, and especially in West High School, the black population is overrepresented, and "other minorities" are underrepresented, relative to the elementary schools. There are a number of factors which influence school enrollments and racial composition in District secondary schools:

> 1) differential age-cohort distributions, with an older white population, younger black population, and still younger hispanic group; 2) existence of several private/parochial schools within the district that serve white neighborhoods, including one small high school and a parochial girls' academy; other parochial high schools outside the district are easily accessible by mass transit;

3) District H, the magnet school district, includes more than a dozen functionally specialized high schools which a substantial number of District A high school students attend; 4) The district high school includes units which serve nondistrict students; for example, a vocational training program is located at the high school but is administratively controlled by District F, and some bilingual students and some special needs students at the high school are also nonresident; these three programs total 375 students so that only about 800 of West High's students are district residents;

Summing the combined impact of the points above; it appears that as few as half of the district's 400 eighth graders proceed to the district high school. There is the further possibility that they are the less qualified or less motivated half of the distribution. Hard data on these matters is not available.

The school unit most central to the pairing has been, and is, the District Office. A major component of the desegregation Order was decentralization into districts, requiring creation of district offices headed by a district superintendent. When the pairing began, an appointed Community District Superintendent guided the pairing through its first few months and was then transferred to another district at his request. Another person took office in the fall of 1975 and remains the incumbent. This Superintendent came to the assignment after a successful tenure as principal of a large elementary school, but with no experience at a higher level. A Boston native, her entire career as teacher and administrator had been in the Boston schools. The Superintendent has a reputation as a person primarily concerned with basic skills in education. The District Office initially consisted of Superintendent, Special Education Coordinator, Staff Development Coordinator, and a full-time secretary, housed in a small, rented office. Two years later the District Staff, now enlarged, moved to a small school building which had been closed due to declining enrollments.

At the level of individual schools it may be generalized that each which has successfully exploited the pairing has had one or more persons advocating engagement in it. Principals and headmasters were designated as pairing coordinators for their buildings, although the High School headmaster officially delegated the task to his data processing director. A few principals and headmasters took the role seriously, but most did not sustain an interest in the pairing. In some of those instances, individual teachers became unofficial advocates of the pairing within their buildings. It must be emphasized, however, that the pairing took shape during several years of heavy teacher and administrator "migration" within the system, as the result of the Court Order. Both middle schools, for instance, had three headmasters each in the five years, and many elementary schools replaced their principals at least once.

The Community

District A is located in the northwestern quadrant of Boston and comprises five communities. The Court Order mandated parental participation in school affairs, at both the district and the school building levels, specifying in detail the structures to be used. For the District, the Community District Advisory Council (CDAC) was created to advise the Superintendent and was intended to mirror the Council of Principals which communicated administrators' concerns to the District Superintendent. CDAC's were originally monitored by the Court's appointed body, the Citywide Coordinating Council (CCC). The CCC later dissolved and the monitoring function shifted to the Citywide Parents Advisory Council (CPAC), created to oversee progress toward racial equality.

CDAC supposedly represented the community, broadly defined. It initially included twenty members: ten parents, two students, and eight representatives of community agencies. The ten parents were elected by parents (those with children currently enrolled in one of the district schools); five elected parent members

were to be white and five were to be black. The high schools' Racial-Ethnic Student Council (RESC) and the middle schools' Racial-Ethnic Parent Councils (REPC) elected the student representatives. The Court appointed the eight community representatives; Harris University had a reserved seat among this group since its inception. CDAC elected its own officers, including two co-chairpersons, one black, one white. Later Court Orders required representation from each REPC, thereby enlarging parental representation, and instructed that one co-chairperson be elected by the parent representatives and one by the community agency members. CDAC is commonly regarded as the District's parent group, since no other group exists, and since the majority on it are parents. (Some community agency representatives are also parents and/or residents of the District.)

It proved virtually impossible to develop leadership within the CDAC during the period of the pairing. The co-chairpersons were potentially powerful and while a few incumbents achieved considerable influence, none remained in the position for more than one year. In addition to a Chair, the CDAC also controlled one paid staff member, called the Community Representative. Enjoying continuity of appointment and partial control over channels of communication, the Community Representative initially emerged as a powerful figure in the pairing. The first occupant was a woman involved in political affairs and previously active in the Home and School Association. After three years, the CDAC members brought pressure on her to resign, she was replaced, and the role was altered. A man with no previous District ties served for less than a year, but redefined and strengthened the role. He was followed by the incumbent, a woman with strong ties in the Hispanic community and well known in the District.

It is hard to generalize about the characteristics of CDAC members who emerged as community leaders: four were white, two were black, one was Hispanic; two were relatively young, five were fortyish, one was elderly; two were men, six were women; half were products of Boston schools; two were identified as "conservatives," one as "liberal." What they all shared was time, and a willingness to work hard. Their influence on the pairing was felt primarily in the process

of planning, reviewing, and approving 636 proposals. Leaders spent much time with the Reading Coordinator and the Collaborative Director, with the latter often at the University.

The court also ordered structured participation by parents at the school building level. Each school elected representatives to a Racial-Ethnic Parents Council (REPC) through caucuses of parents by race, with one vote per family. Three white parents were elected by the caucus of white parents, three black parents by a black parent caucus. Proportionate numbers were chosen by other minorities for those schools in which sufficient minority students were enrolled. Middle and high schools followed the same procedure, except that the bodies were larger.

The original purposes of the REPCs, as stated by Judge Garrity, were "...to insure adequate and impartial investigation and responsible recommendations on racially and ethnically oriented problems...; to create means of communication between parents, students, teachers, and administrators regarding the solution of such problems; and to promote an environment of understanding and common purpose among the various elements of the community so that the best available education may be offered to all children." These purposes were reasserted by the Court (6/5/75) and later (9/1/77) sustained in a rejection of a proposal by the Boston Association of School Administrators and Supervisors that parent groups' input be limited to racial/ethnic problems. In fact, the sphere of the REPCs has grown so that it now includes participation in preparing annual reports of progress, representation on screening committees to select principals and headmasters, and strengthened liaison with districts by enlarging parent membership on CDAC's to include a member from each REPC in the district. Of particular relevance to this study is the Judge's suggestion that "...support of participation by colleges and universities..." be considered as appropriate topic for REPC concern and action.

As late as 1977, Judge Garrity said, "The growth of multi-ethnic parent involvement in the Boston REPC's is a basis for great hope and promise in the Boston school system." The judge's perception was not universally shared. Some REPC's defined themselves as P.T.A.-type support groups, while some wished to exceed the considerable authority given to them. Some school people, especially administrators, attributed great power to REPC's, but some attributed none and defined REPC's as nuisances.

The mission of the REPC's was broad, and the impact of the REPC's and their chairs on the school-university pairing became minimal. In a few cases, individual parents developed as strong and effective voices in their schools, but pairing activities were incidental to the broader range of issues in which they became involved. Some community leaders served on REPC's as well as the CDAC, but no parental leadership emerged solely as the result of engagement with a REPC.

Operating Procedures of the Pairing

Activities and projects have been numerous, ranging from small-scale attempts to major thrusts and serving a minority clientele or a broad range of students. Ideas and proposals for spending the District's allocation abounded from the beginning, so priorities were quickly established. In the pairing's earliest days, parents, school personnel, and university personnel jointly determined nine "objectives" to guide allocations. These are reflected in the 1967-77 funding proposal, in spite of the fact that the funds were separately assigned to the University ($92,765) and to the schools ($120,331). Those objectives are:

	University	Schools	Combined
1. To improve reading and related communication skills of students	$7,603	$29,471	$37,074
2. To upgrade services for children and youth with special needs	$9,618	$10,575	$20,193
3. To improve the mathematic and scientific literacy of students	$8,357	$4,900	$13,257

	University	Schools	Combined
4. To improve the motor skills, physical development and pleasure in movement of students.	$11,850	$27,400	$39,250
5. To strengthen guidance/counseling services for high school and middle school students; to expand and sharpen the awareness of alternative careers among high school students.	$10,733	$34,485	$45,218
6. To improve health care services for students.	-------	--------	-------
7. To improve the quality of bilingual teaching and learning in Spanish and Chinese.	$3,200	--------	$3,200
8. Within the public housing project in the District, to improve counseling and instructional support for students close to home and out of school	(included in #5)		
9. To provide workshops to strengthen skills in community participation.	$12,140	--------	$12,140

Objective #1 above subsumed eight different projects during the 1976-77 year: scoring tests and training teachers from the Green and Berry Elementary Schools, a district-wide workshop for elementary teachers and parents, a district-wide workshop for development of a curriculum guide, a district-wide workshop for first grade teachers, technical assistance for the Berry School, for West High School, and for development of a district-wide reading program, and a reading resource center for the Dunn Middle School. Objective #2 encompassed four workshops for elementary teachers and intensive intervention at the Berry School. Objective #3 funds provided three workshops for individualizing mathematics instruction at elementary and middle school levels, purchase of calculators for instruction at the high school, and technical assistance for program development. Objective #4 provided a pilot physical education program at the Berry School and on-site assistance at the high school, University-based physical education activities for two middle schools and two elementary schools, and residential field experiences for 200 high school and 200 fifth graders in New Hampshire and Maine.

Objective #5, guidance and counseling, provided one-to-one counseling at Dunn Middle School and West High school, established a demonstration Career Education Resource Center at Bell Middle School, ran four workshops for teachers and three workshops for parents on problem-solving in a multicultural situation, and provided technical assistance for program development. To implement objective #7, workshops for bilingual teachers to develop math/science materials and workshops to assist classroom teachers in meeting the needs of bilingual children with special needs were offered, and two graduate assistants helped develop instructional tests and materials for Chinese bilingual high school students. Finally, community participation was enhanced by the production of newsletters and printed materials and by a series of workshops for parents.

The list of 636 activities for 1976-77 is typical of the five-year history of the pairing, although there has been a decline of physical education and guidance programs in the recent years, with a relative upswing in basic skills and bilingual education.

The standard operating procedure for funded projects is for ideas and proposals to arise from the point of delivery, initiated either by professors or teachers; to undergo review by an ad hoc planning committee drawn from all three parties to determine consonance with the District's pre-established goals; and to be forwarded to CDAC for approval. Upon "sign-off" by CDAC and an appropriate delay for review at city and state levels, implementation of approved projects is jointly managed by the Collaborative Office of the University and the Office of the District Superintendent. During operation, verbal progress reports are made to CDAC and written progress reports are sometimes submitted to university and school personnel. Finally, all funded projects are annually evaluated by an outside agency, chosen by BEOC. Copies of the evaluator's written reports are distributed to CDAC, discussed, and incorporated into the planning for the next funding cycle. Chapter 636 funds separately earmarked by BEOC for the school and the university have always been pooled into

a common fund.

As projects developed that used non-636 funds, a similar procedure was utilized. For these, and even for non-funded activities, a high degree of joint planning occurs, and deliberate attempts to rationalize all activities under a unified set of goals and objectives and to pool resources, have persisted throughout the history of the pairing.

Methodology

Since the purpose of this study is to investigate knowledge exchange, the methodology employed derives from a definition of knowledge exchange as a process that can lead to knowledge utilization. That is, if bits of knowledge take the form of assertions, then knowledge exchange consists of the back and forth transmission and sharing of assertions by two or more parties. Knowledge exchange may be results in joint knowledge assertions, written or in other forms, from which knowledge utilization (enactments of joint knowledge) might occur. The research strategy, then, was to enter the pairing at a point where a joint knowledge enactment (projects) had emerged, and proceed backwards to determine if knowledge consensus had earlier occurred, and whether knowledge exchange between the parties of interest helped to explain the concensus. By tracing the sending and receiving of knowledge assertions, knowledge exchange leading to knowledge utilization could be inferentially reconstructed.

In this case, each project funded by 636 funds required the approval of three parties and therefore presented a high possibility that is was the result of a product representing knowledge exchange. Through interviewing key role incumbents, especially the District Curriculum Coordinator and the Collaborative Director, a list of 636-funded pairing projects was derived.

A number of criteria were used to select a sample of projects from the list for intensive study. These factors included the scope and aims of the project, the school level(s) involved, and the institutional location of the project's initiator. To improve comparability with the other pairings being studied, the four projects chosen were to represent, if possible, one activity from each of the catagories of basic skills teaching and the organization and dissemination of information. A decision was also made to focus primarily on projects involving secondary schools.

In this pairing, the field worker quickly encountered problems in adhering to the design. First, the list of "projects" was surprisingly short. A large proportion of funds had been allocated to "technical assistance" rather than to identifiable "projects." Second, among identifiable projects, 636 funds were often only partial sources of their support, frequently even minor sources.

Only one project, labeled "Project 1: Movement/Multicultural Program" in the following pages, and operating at the elementary school level, derived its major support from 636 funds. Since its goal of serving the needs of bilingual students fell into the category of educational equity, it was selected for further study.

Project 2: Developmental Reading at West High School, did not receive its major funding from 636, but identifiable components of the overall enterprise were funded by 636. Since the total project was devoted to basic skills, had a broad scope, and was confined to a secondary school, it was included for further study.

One project involving the development and dissemination of a parent handbook fell into the category of information dissemination, but data on its development were not sufficiently available to the researcher.

As the researcher moved about the pairing, he became aware that the fact that representatives of parents had "signed off" on a project, did not verify that they had been full partners in planning it but rather constituted acknowledgment and approval of an agreement achieved by the university and the school. The research for us then narrowed to projects in which two-party knowledge exchange could be initially inferred and perhaps documented through later research.

Project 3: District Reading Support Team was chosen for inclusion even though a clearly defined knowledge enactment situation in it could not be identified. The District Office initiated this project, but representatives of the University participated in planning and participated in significant knowledge exchange by providing technical assistance and training workshops.

Project 4: Student Placements is included as an example of a large-scale attempt at knowledge exchange, and because it required initial and continual efforts at consensus between the two parties. It also fits into the selection grid as an instance of direct assistance to students (and schools).

Project 5: Other Pairing Activities summarizes the full range of collaborative ventures between the University and the schools which occurred largely as the result of the pairing order. Their range illustrates also the productivity of the "technical assistance" mode which has characterized the operation of this pairing.

In tracing all activities, the same data collection procedures were used. The researcher first interviewed "key informants" often including the Curriculum Coordinator and the Collaborative Director, in order to gather background information on a project and to identify a sample of participants. These were then intensively interviewed, usually at their place of work. At least six participants were interviewed for each project. Relevant documents were systematically accumulated and reviewed, and observations were made whenever feasible. Raw data consists of field notes and typed transcripts of tape recordings of interviews.

2. Project 1: Movement/Multicultural Program
Harris University - District A

The Frese Elementary School began its Movement/Multicultural Program in January of 1979, and ended the program in May of 1980. In that period of time, the program provided direct services to a total of 300 children via an instructor, Ms. Alecia Vasquez, who was hired by the University Collaborative Office using Chapter 636 funds, to serve two days a week at the Frese School and two days in a school (the Roosevelt) in another district. At the Frese School, Ms. Vasquez provided instruction in physical education and movement in the gymnasium, and outdoors when weather permitted. Full classes came to her from the following regular classrooms in 1979: two kindergarten classes, three first grades (one bilingual): Each class received one forty-five minute period of instruction per week. During 1979-80, only one bilingual first grade class participated plus a special needs group. The classroom program included typical elementary-level physical education activities, with special emphasis on music and dance in the kindergarten and first grade and reflected Ms. Vasquez's interest and training in the identification and treatment of perceptual motor problems.

The origins of this project extend to the 1976-77 school year when the first deliberate attempt at systematic multicultural education began at the Berry Elementary School. The Berry School is located in predominantly Hispanic neighborhoods, and prior to desegregation had been actively supported by hispanic parents. With the help of the Harris University liaison with Berry School, and with the support of parents, the teachers and principal arranged classes so that bilingual classes and English-speaking classes were "paired" with each other, throughout the school. Paired classes were next to each other, with connecting doors, and the teachers planned and conducted joint activities. Simultaneously, bilingual kindergarten classes were installed at the Berry by the central school administration. Presented with this structure, but without a well-developed

program, the Berry teachers asked for help in designing a comprehensive bilingual curriculum.

During the 1977-78 school year, the Harris University Collaborative Office provided funds for a part-time bilingual curriculum expert, Mr. Jorge Torres. After familiarizing himself with the District, and offering his services, Mr. Torres began to work with the Berry kindergarten teachers. With support and pressure from parents, the kindergarten teachers were eager to use the services provided by Mr. Torres. However, the teachers perceived no further need for Mr. Torres at the Berry School, in spite of his repeated offers.

Mr. Torres hoped that other District schools would be inspired by the Berry experience and he tried to engage them in bilingual curriculum work, with no takers. Frustrated and somewhat embittered, he began to believe that District teachers had no real desire for innovation or even improvement. He felt perceived as a source of funds, not of expertise. He ascribed a compliance mentality in the teachers, and felt that "planning" usually came after the fact.

It was during this period that some of the Frese School teachers responded to Mr. Torres' and the University's offers of assistance. The bilingual classes at the Frese School were then physically and socially separated from the rest of the school, on the top floor of the building. The bilingual teachers and some of the classroom teachers disliked the segregation of the bilingual children and were looking for ways to reduce it.

Several originally independent threads must be woven together to follow the development of the project from this point. One concerns the Frese teachers' attitudes towards working with student teachers, particularly Harris University student teachers. Ms. Martha Pritchard, a leader within the Frese faculty, stated the matter succinctly:

> I think throughout the school the basic philosophy is that student teachers are more work.

The staff was especially unenthusiastic about Harris University students because of a recent change in University policy that eliminated tuition voucher stipends for supervising teachers (see Project 4: Student Placement), and because of unspecified "bad" experiences with Harris students and supervisors. Ms. Pritchard again:

> ...(I)nitially, the program with Harris University was that on the teacher level there was not a great deal of enthusiasm about taking student teachers. They'd had problems with them in the past.

Ms. Pritchard had been an active supporte of practice teachers in her special needs classes, but she was unusual among her colleagues.

The University, however, was particularly interested in placing student teachers at Frese, since it was one of the schools formally included in Harris' then-new "Clustering" or Consortium, which potentially embraced all of the schools in the pairing (again, see Project 4). To the teachers, however, internal arrangements at Harris were obscure. The University's staunchest supporter, Ms. Pritchard, remarked:

> I think the basic problem between Harris University and the school right now is communication -- direct communication. I see a real need at the beginning of the school year for someone in an administrative position at the Collaborative office to come directly and speak to the total staff: this is what we're about; this is where the money comes from; and this is how you get the money...and you have to use basic terms like, 'if you take so many student teachers, you get so much money'.

The Collaborative Director spoke about student teachers to the Faculty Senate, but not to the entire staff, and the visit had little impact. It was apparent that some incentive(s) had to be arranged to get the support of even a few volunteers to work with student teachers.

The teachers, meanwhile, were beginning to express their needs for relief from a hectic schedule and to unburden themselves of duties for which they felt inadequately prepared. Ms. Pritchard polled the staff and found

that they had greatest interest in assistance in the teaching of music, art, and physical education. At about the same time, Mr. Barnes, the Principal, succeeded in acquiring usable gymnasium facilities and equipment, but no instructional personnel trained in this area.

A plan was generated -- its specific authors have not been identified -- to install a program of music and movement that integrated bilingual and monolingual students. The Collaborative Office hired a qualified instructor, who at the last minute became unavailable. Suddenly, the plan itself was in jeopardy, as were the small amounts of good will and trust toward the Collaborative and the University that had been generated in the planning process.

At this juncture, Mr. Torres encountered Ms. Alecia Vasquez, a Cuban native interested in bilingual education, and a recent Ed.M. graduate of the Department of Movement, Health, and Leisure of the Harris School of Education. Ms. Vasquez was well-trained, well-recommended, and with the kind of personality that would likely be acceptable to the Frese teachers; further, she was looking for a new job. Fortuitously, in the person of Ms. Vasquez, all of the assorted interests coalesced: the school people wanted a physical education program of student teachers; the University wanted student placements and to a lesser degree a bilingual presence, and was willing to support a physical education operation in order to attain its greater goals; Mr. Torres wished to continue the development of bilingual programs in the District, and was happy to use "movement" as a vehicle and simultaneously to assist the University to expand its Consortium.

From the Frese teachers' perspective, the Movement/Multicultural Program was linked with the placement of student teachers. They saw it as payment for services rendered, in lieu of tuition vouchers. Ms. Vasquez, developer and implementer of the program, explained it this way:

> I understand that Harris University sends student teachers here, and we provide them services, like a bridge between one and the other.

Yet the relationship between the Collaborative (the pairing) and the Consortium (Harris' student placement network) remains mysterious, even to the best informed teachers. Witness this exchange with Ms. Pritchard:

> Fieldworker: Actually, there are two things going on; one is the Collaborative, and the other is what they call the Clustering Program (the Consortium). I don't blame the teachers for not understanding the distinction.
>
> Ms. Pritchard: I'm not quite clear on it, either. I mean, Alecia's funding is not coming from the Collaborative, it's coming from the Clustering? Or vice versa? I think it's vice versa.

It remains true to this day that University leaders refer to the project as "Multicultural" and school people refer to is as "Movement". For example, the University Coordinator said:

> We're doing a project at the Frese School on motor skills for bilingual students.

Also, the Interim Evaluation Report described the project as a:

> Multicultural Physical Education Program intended as a pilot program in bilingual education.

On the other hand, Ms. Vasquez said:

> What I understand from the Principal and others here is my role is a physical education instructor.

Further, her self-evaluation report is entitled, "Movement Program Evaluation".

Despite the conflict of ideas as to what to call the project, it was successfully implemented and teachers and university personnel are proud of it. This success is due largely to the individual efforts of Alecia Vasquez, who organized the plan without broad-based support from the school staff, and wrote the objectives. The 1978-79 objectives were to:

1. introduce basic neuromuscular skills concentrating on fine and gross motor development;
2. develop physical fitness by means of activities which are selected to increase vigor and vitality;
3. identify, and if possible correct, perceptual motor problems of respective age groups;

4. provide through physical education activities an opportunity to integrate bilingual and English-speaking children in order to develop better communication and interaction among them;

5. develop and recognize the need that students have to perform cooperatively in order to attain their goals.

6. expand communication channels for presenting the school to parents and the public.

In the first year it was optional for teachers to participate, but one who volunteered her class was required to remain in the gym while instruction was provided. All of the participating teachers initially conformed to this rule, but by May only a few were staying with their classes. During the second year, the requirement was dropped.

During 1979-80, the list of "purposes" shrank to four, through the omission of the two last objectives of the previous year. The new objectives were to:

1. increase non-verbal communication skills by means of movement education;

2. develop and practice basic neuromuscular skills;

3. identify and if possible correct perceptual motor problems;

4. provide through the movement program an opportunity to integrate bilingual with English-speaking children.

In both years, the bilingual objective was obviously secondary. It was met in practice by scheduling one "regular" class and one bilingual class, of the same grade levels, simultaneously in the gym. Ms. Vasquez offered the same lesson to both groups, speaking in both English and Spanish. This proved too difficult for her to manage, since it produced class size of 40 to 50 children. In the second year, then, only one bilingual class receives this physical education on a regular basis.

ORGANIZATIONAL ARRANGEMENTS

The Frese project was operated almost entirely at and by the local school. Except for supplying financial and logistic support to Ms. Vasquez, and Mr. Torres' interaction with Ms. Vasquez, the Collaborative Office had little influence on the operation. Parents played no role in the design or implementation of the program. It was operationally shaped, and its objectives were altered by the teachers and the principal at the Frese School. The result was that multicultural aspects faded into the background.

If one takes a broad view of knowledge utilization, this project illustrates the difficulty of transferring a successful operation from one school to another. The collaboration of hispanic parents, classroom teachers, and the principal of the Berry School, and the Collaborative Office of the University, led to a successful and institutionalized bilingual curricula there. However, these ends were not achieved at the Frese, despite a less challenging goal and participation of some of the same people who collaborated at Berry. The conflict between school people who wanted "movement", and Collaborative Office people who wanted "multicultural" caused both to compromise. The absence of parents as viable third parties did allow the conflict to continue. Ultimately, the school people's interests prevailed: multicultural education waned. It is interesting to note that Ms. Vasquez conducted a similar program in a third school outside the District. This program was described as effective by knowledgeable observers. Asked to compare the two cases, Ms. Vasquez attributed the good results elsewhere to "the parents (who) are strong, vocal supporters at the Roosevelt, and I just never could get the parents interested here". When asked about the REPC groups in both cases, Mr. Vasquez said:

> They have councils there (the third school) that meet. I've seen them and I've talked to some of them... They are active in a way...They've been gearing the students there so they can go to aquariums, field trips, and to ballet performances, which is excellent... This council has been actively involved in getting the kids out of school so they can experience different things

and I think that's been very successful so far.

When asked about the Frese, Vasquez said:

> I don't know. I don't know if they have a council or not. Martha doesn't either, so apparently they don't. I don't think they have one. I've never seen anything mentioned about them.

Informal parental involvement at the two schools was also different. At the Frese School Alecia had no interaction with parents "except last year they asked me to dance with them and I did a dance, and we performed, and the parents came." When asked, "How many parents came?", Alecia responded, "One hundred and fifty, or more. This place was packed. At the Roosevelt School parents are coming in all the time. I think it's mostly because they're hispanics and not Americans, because they're more interested in working with the kids, and they have involvement with school affairs there." It is possible that parents can be pivotal in the resolution of conflicts between teachers and University staff. Parental involvement might have altered the development of this project so that the multicultural element was retained. In actuality, the school controlled implementation with little opposition.

This project is an example of forced cooperation. As the University and the District planners expended the realm of collaboration initial "target" schools, bargaining replaced genuine cooperation. University representatives felt they they ought to expand Collaborative activities to other schools in the District, and secondarily keep a multicultural presence. The school wanted a tangible expansion of services provided by the University. Both were able to shape the project initially to satisfy their needs. But the District Curriculum Coordinator summed up the ultimate situation well when she said, "(The University Coordinator) sees this as the start of a school-wide program using physical education

as a multicultural program. I don't think teachers view it as the start of a multicultural program. Especially if you're teaching in this District where there's no planning and development time for anybody, they're looking for people to come in and give them a break. They don't see this physical education as part of a multicultural program."

3. Project 2: Developmental Reading at West High School
Harris University - District A

West High School's Developmental Reading Program was fully implemented in 1976-77, and it continues today as a seemingly permanent component of the school's program. Its creation and implementation involved a combination of 636 funds and School Department money. The present analysis will give closer scrutiny to those aspects of the program which depend on 636 support.

In the Program's present form, which has changed little since its inception, all ninth and tenth grade students take instruction in reading, ranging in focus from remediation to enrichment, and some eleventh and twelfth graders also participate on a voluntary basis. Reading classes meet five times a week. Two Hoffman Reading Laboratories are used, each staffed with a reading teacher and teacher aide, together serving about 200 students, all of whom are reading three or more years below grade level. Diagnosis is conducted at point of entry to the ninth grade, and assignments are made to one of five levels:

1. Reading Lab Classes: Students reading at approximately Grade 6 level and below. Both individualized and small group instruction is provided in the lab by specialists.

The other four levels are taught by members of the English Department, some of whom are certified in reading.

2. Reading Skill Classes: Students reading at sixth grade level.
3. Reading Comprehension Classes: Students reading at seventh grade level.
4. Critical Reading Classes: Students reading at or above ninth grade level.
5. Advanced Reading and Composition: Tenth grade students who did well in Critical Reading in Grade 9 and who should acquire advanced reading and writing skills in preparation for college.

The Reading Lab Classes are supported by 636 funds, with space and standard classroom equipment for the Labs supplied from District funds. The University's 636 monies lease-purchase the Hoffman materials, and the District's 636 funds pay the salaries of two reading teachers and two reading aids. These arrangements

have remained essentially unchanged over four years of operation. Total costs, however, grew 22%, from $46,000 in 1976-77 to more than $56,000 in 1979-80, because of increases in staff salaries. This increment in funds allocated to the program indicates the strength of the school's and the District's commitment to it, and its high level of acceptance as a pairing operation.

The origins of the high school developmental reading program go back to the beginning of the pairing. In the summer of 1975, Harris University hosted a workshop for University and District faculty and for parents of District A. This group of more than 100 persons considered District needs and attempted to establish priorities. One topic of great interest was improvement of reading skills. It was felt that the pairing could be well utilized by focusing on reading for middle and high school students. Later, the focus narrowed to the high school level, primarily because of the enthusiasm of the high school teachers, especially of the English teachers from West High School.

During several weeks of the summer workshop about 25 people representing the High School faculty (most English teachers), parents with an interest in reading, and representatives of Harris' Department of Reading met together to explore needs and possible courses of action. It was decided that a diagnosis of the students would be conducted in the fall and that a workshop in the teaching of reading would be offered to West High School teachers by faculty from the School of Education.

The summer activities ended on a high note of enthusiasm and hope. One participant, a professor in the Reading Department, said, "We got paid, they got paid, and as a result, the people were really cheerful and positive, and we had a profitable workshop." The summer period was also useful for the exchange of information. The three parties got to know each other, and began to develop trust. One of the reading professors recalled: "As a matter of fact, (another professor) and I had done some workshops at the Dunn School, and I think it was because we had established a relationship with people at the Dunn

that some of the other teachers got to trust us." Another reading professor who participated said, "They got paid but got no credit. That's what I meant by morale being extremely high. We came in at 9:00 a.m. and stayed through the day."

As has been planned during the summer, two university professors shared responsibility for conducting teacher training workshops that started in January, 1976. The workshops were offered in the High School library one afternoon a week for the balance of the 1975-76 school year. There were fifteen regular participants with others dropping in less regularly. One professor's workshop was directed at teaching reading within English classes, the other's at the improvement of reading within the context of other classes (e.g. math, science, automotive shop). Neither the University nor school personnel received any compensation or academic credit for their participation, although the teachers were later awarded "inservice credit" through the efforts of the District Reading Coordinator (later, District Curriculum Coordinator). One of the professors said, "It was strictly a professional workshop." Interest and morale remained high and, in the opinion of one of the professors, "I thought is was as successful as any inservice course I've ever done."

During the fall of 1975, one of the professors (who also chaired the department) assisted the High School English Department to develop procedures for diagnosing the reading skills of students, in conjunction with a District-wide reading diagnosis effort then going on, at all grade levels. The University supplied jointly selected test materials, the teachers administered the tests, and the University scored them and returned results to the teachers. The diagnostic test, generally used to test reading abilities up to Grade 8, revealed that 279 of 754 students tested were reading below grade level (37%). More than half of the freshmen, one third of the sophomores and juniors, and one quarter of the seniors were significantly below grade level. These data alarmed the teachers since the numbers of deficient students were more than could be served. Planning which led to the present Developmental Reading Program was completed during the spring semester

of 1976. The program became a formal 636 proposal and the necessary monies were approved in late May. The proposal was made by the District, drafted by the District Reading Coordinator. The University Coordinator summarized the funding strategy:

> We made the agreement that the District would pick up the basic skills staff -- that that was their main responsibility and we would support and encourage that....The reading is a good example of where we provided every support we could...In this case it was the University support role for a bona fide school responsibility.

Materials were ordered, staff members were hired, space was arranged, and student schedules were made. In spite of experiencing some of the mix-ups such complex arrangements usually entail, the program got underway in December of 1976.

Also during the fall of 1975, the University offered the services of its reading clinic to twenty West High School students who were released from classes and bussed to the University three times per week. Although this activity was not funded by 636, it helped to build collaboration and provided immediate, direct service to the most needy students.

The appointment of a District Reading Coordinator was also of significance in the development of the High School Reading Program. The Reading Coordinator quickly became an eager supporter and an enthusiastic participant in planning, which helped to gain and keep the endorsement and the support of the Community District Advisory Council (CDAC). The Reading Coordinator's incorporation of the Program into her District-wide (K-12) reading plan not only legitimated it, but added an external rationale for its existence. Another reading laboratory was soon installed in one of the middle schools, a third was scheduled to be set up at the second middle school. The High School's laboratory was clearly an authentic component of a District-wide campaign.

In the earliest stages of the Program, 636 funds underwrote the summer

workshop. The University used them to reimburse its faculty members for participating in these three weeks of day-long planning sessions with school personnel and parents from District A. Although the University staff attending came from many departments of the School of Education, as well as other units of the University (e.g., School for the Arts, Liberal Arts, Nursing, etc.), only Education's Department of Reading and Language directly contributed to the Reading Program. The Pairing Office's Director supplied technical assistance and played a central role in securing funds to purchase the Hoffman Laboratory materials.

Arrangements for enlisting and assigning school personnel were varied. In the earliest stages, the District Superintendent recruited volunteers from all schools, grades K-12, for the summer planning workshop. After the workshop, initiative rested with the High School faculty, especially its English Department. The Chairman of the High School English Department was never fully involved, but made no attempt to discourage forward movement. Two High School teachers provided unofficial leadership in joint planning with the University and with the District Office. One of them has continued to be the primary contact person for the High School faculty working on this project.

In early 1975, the current District Superintendent replaced the incumbent who had participated in the summer planning as District Superintendent. The new Superintendent immediately appointed a Reading Coordinator for the District, who quickly and enthusiastically promoted further development of the high school reading program, wrote the proposal, and saw it through at the city and state levels. She also earned the respect of school and university faculty by attending the 1976 training workshops.

Later, the Reading Coordinator enrolled in courses of the Reading Department at the University and eventually matriculated in its doctoral program. Although the Reading Program remained identified with the High School faculty, the Reading Coordinator succeeded in meshing it with the District-wide plan for reading improvement, and in its form it resembled the work begun in the middle schools. The

District, through the efforts of Reading Coordinator, allocated a considerable portion of its 636 funds to pay the salaries of the two reading teachers and the two reading aides added at the High School. The Reading Coordinator with one of the High School English teachers, became heavily involved in jointly investigating and selecting the particular methods and materials for the Laboratory. In its overall pattern, then, implementation involved a high degree of collaboration between the High School and the District, with the assistance of the University.

Within the High School, also, there is evidence of the engagement of several organizational units. All members of the English Department became involved, as did members of other academic departments (e.g., Science, Business, Industrial Arts) who were well enough represented in the workshops to be at least minimally informed about the Program. Further, the Faculty Council was supportive of its development. The Headmaster negotiated with administrators at the Central Office (downtown) and achieved two important concessions: allocation of two classrooms plus a large storage room to the Reading Laboratory, and alteration of student schedules so that each ninth and tenth grade student could be required to add reading to his/her course load.

Organized parent groups were not directly involved in planning, but provided support and endorsement. The Racial-Ethnic Parent Council (REPC) at the High School was informed and approved of the plans for the Reading Program. One parent who had been involved in the first summer workshop, who later became an REPC member, and who still later became an aide in the Reading Lab said, "The REPC was not involved, as a group, in the planning stages, but they provided general support, were pleased with the planning, and were enthusiastic in endorsing it to the CDAC for their sign-off." CDAC became engaged at those junctures when its approval was needed to secure 636 funding. On those occasions they sought information, including REPC's position on the proposal, discussed the issues, and formally voted to endorse the 636

Planning Committee's request. A parent who was at that time on CDAC, and later became a member of REPC, remains satisfied. "I must say that the Reading Program up in the High School has been superb."

4. Project 3: District Reading Support Team
Harris University - District A

District A's Reading Support Team began during the 1976-77 school year. Its goals are to build a structured network to coordinate the efforts of each school in the District, to stabilize the reading curriculum, and to provide a resource network for teachers within schools and among schools.

The Reading Support Team is a District-wide project, in contrast to most projects which are based in single school buildings; it is primarily operated by the District Office. While not organized as a joint effort with the University, Harris has been involved and supportive, and the project's roots go back to the pairing.

The Reading Support Team's structural design is relatively simple, which is probably one of its virtues. Each school building in the district has an appointed "reading coordinator," usually the reading specialist if the school has one, otherwise a teacher with training and interest in reading. All reading coordinators gather two days per month to meet with the District Reading Coordinator District Office. These are full-day meetings, and the reading coordinators are released from other duties for the days.

The Reading Support Team's functions are to develop a District-wide reading curriculum, to coordinate the use of the District's reading resources, and to provide on-site instructional support within each building. Their regular activities include the planning of skill-building units with classroom teachers, demonstration of effective techniques, and conduct of workshops within their buildings as well as District-wide.

Beginning in the 1976-77 school year, and in every funding cycle since, the Reading Support Team has received 636 funds. The salaries of substitute teachers for two days per month for ten months ($7,600 in 1976-77) are funded by 636 and a smaller budget for materials ($2,600 for reading tests in 1976-77) is also included.

During November and Devember of 1975, the District Reading Coordinator, Ruth Palmer, surveyed the needs of teachers regarding reading curriculum, materials, and programs. The results are summarized in the 1976-77 proposal. Most teachers saw a need for:

1. an organized program of reading, with support services available;
2. on-site help in teaching of reading -- specifically, teachers wanted consultants, aides, and volunteers to assist in the program;
3. remedial reading teachers;
4. a materials resource center, located in the District, from which materials not readily available in the schools could be borrowed for use in classrooms;
5. adoption of standardized reading materials throughout the District;
6. availability of materials spanning instructional levels in each classroom;
7. provision of workshops to improve their ability to diagnose and deal with learning disabilities in reading, and to enhance their general competence to teach reading.

Parents' perceptions coincided with the teachers'. During the spring of 1976, CDAC and building REPC's sponsored a series of parent seminars designed to inform parents and give them an opportunity to express concerns and clarity their educational priorities. The parents clearly stated two areas of need: clarification of attitudes affecting relations among different social and ethnic groups, and improvement of basic skills.

Because of the expressed needs of teachers and of parents, and with the dramatically poor results of the West High School's diagnostic test as background, (see Project 3), the District, University, and CDAC formed a Joint Committee and their nine-person core planning team prepared a statement of formal goals, objectives, and activities. The Joint Committee was probably also influenced by the Superintendent's call in the fall of 1975 for a city-wide effort at improvement in basic skills.

The Joint Committee listed two broad goals for the basic skills program: improving student competence in reading, communication skills, math, and computational skills in grades K-12; and expanding and strengthening instructional resources

available to students in classrooms. One of the three objectives which flowed from the two goals was "to improve the reading and communication skills of K-12 students (as measured by test results) by assisting teachers in using test results for diagnostic/prescriptive instruction and by establishing a laboratory program for 325 West High School students". One of the specific activities listed as a mean of attaining this objective was the Reading Support Team.

During the spring of 1976, fifteen classroom reading teachers participated in two week-long workshops conducted by the District Reading Coordinator in which they developed a K-12 curriculum guide in reading and acquired additional skills in diagnosing student weaknesses and prescribing instruction in reading. One member of the University's Reading Department attended daily and participated as an active member of the group, making input or bringing materials and specialized persons when requested by the group. These workshops were conducted at a retreat center located close to the District Office.

Most teacher participants in the two weeks of workshops later became members of the Reading Support Team. Four of the teachers who were interviewed felt that the workshops were very successful in providing information, enabling participants to share ideas with each other, and in establishing relationships which carried over beyond the workshops.

It was primarily at the insistence of the teachers that the Reading Support Team was created to establish permanently the network of relationships which had developed in the workshops. One reading coordinator described the Reading Support Team:

> We basically got together to be able to communicate with our colleagues on various levels, like elementary school people talking to middle school people, talking to high school people....It gave us an opportunity to get to know reading colleagues much better....I looked upon the reading support team as a wonderful opportunity once a month to talk to people about something that's in my field. Usually in schools...you're very much alone in being the only reading person trying to get your message across to people who are basically content-oriented. I find it to be a wonderful professional support.

On several occasions, the Chair brought speakers to the team meetings for special topics and arranged for the team to visit other schools. Enthusiasm ran so high that the teachers were willing to continue after the workshops without pay.

In addition to the good feelings and the hopes for positive results which were important to establish at that point in the implementation of the Court Order, a very useful network had been established. In addition, the workshop produced important substantive outcomes. Participants chose two basal reading texts after a thorough investigation of available possibilities, and they committed the District to a policy of "leveling" to accomodate the individual needs of students. In summary, the workshops directly responded to points five and six of the teacher needs assessment: the adoption of standardized reading materials throughout the District, and the provision for spanning ths instructional levels present in a given classroom. The workshops also made general progress in building a coherent curriculum in reading (point one).

The creation of the Reading Support Team flowed from the desire to fill other needs cited by the teachers: to make support services available, to provide on-site help in the form of in-house consultants, and to provide continuing workshops in which participants could acquire additional skill at diagnosing and dealing with learning disabilities, and improve their teaching techniques in reading. The form and details of the project were developed by the District Reading Coordinator with consultation from a Harris University professor, and largely written into proposal form by the University Coordinator. The 636 proposal for 1976-77 contained a well-documented case for the project and a detailed list of goals, objectives, activities, and suggestions for evaluation strategies. The Reading Support Team proposal was scrutinized and approved at five levels of the proposal review process.

IMPLEMENTATION

The significance of this project lies primarily in that it constituted a shift in locus of operation and that it embodies new organizational arrangements. For the first time a district-wide project had been launched, meaning that school-based projects operating with only the endorsement of the District and the University were not to be the exclusive model. The Reading Support Team is clearly the creation of the District Office, with the help of the University and of the individual schools. Other "District-wide" projects are, in reality, only based in several schools simultaneously and are not genuinely in the service of the articulated goals of the entire District. The usual style of operation for the Team was for the District Coordinator of Curriculum and Competency (originally the District Reading Coordinator) to determine agendas, announce and arrange meetings, and make contacts with the University when appropriate.

The University's encounters with the Reading Support Team occurred through the Department of Reading and Language, with all formal and informal contacts made through its Chairperson. Two other reading professors made presentations and provided technical assistance, and the R & L Chairman sought advice from individuals from other departments (e.g., Special Education, Bilingual Education, Curriculum). The Reading Coordinator and the reading professor arranged for the team to attend a conference hosted by the Curriculum Department at which a nationally prominent academic expert from another city spoke. One reading teacher said,

> We were over at (the University) this year: 'Rethinking In-Service:' It was a program sponsored by a variety of organizations, and they presented (the curriculum expert). I just thought that was great. I thought it was very exciting to be there, to hear him.

In all cases, participants rated University people highly, and felt an especially strong alliance with the Reading Chairperson as an individual and through him with the Department. One typical comment:

> Getting to know people at (the University) like (the Chairman). You can call up and say 'Hi, Tom.' You know, just talk on a personal basis. He's wonderful. He's a very caring person and he would do anything for you if you call upon him.

All participants in the Reading Support Team who were interviewed responded similarly. They said they would feel comfortable calling the Chairman directly if they had a problem, but preferred that normal contact be made through the District Coordinator.

Interviews with several parents who were members of CDAC and/or REPC suggest that the only direct contact of parents with the project was through CDAC, although parents who have served as REPC members were fully aware of the existence and the work of the Reading Support Team. CDAC members discussed the project at its inception and endorsed it each year of its operation, at the point of review of 636 proposals.

It is the intention of the key figures that the project become increasingly self-sustaining and rely less on the University, as has been the tendency over time. At the present time, there is only occasional contact with the University and parents' groups.

The project has been so useful, and the organizational arrangements so satisfactory, that the District has announced plans to extend the concept to other areas in the form of "School Planning Teams". In an announcement letter dated May 7, 1980, Ruth Palmer, District Curriculum Coordinator, said: "School Planning Teams are a way to formalize the ongoing need for program planning within an individual school. Furthermore, they offer a way to build on the models of the Reading Support Team and the Bilingual Support Team which have demonstrated their success in District A." The plan calls for a team in each school which will include a reading coordinator, a bilingual coordinator, a community resource coordinator, and a parent coordinator, under the leadership of the principal.

The School Planning Team concept also parallels that of the Reading Support Team by building structured relationships between the individual schools and the District Office. The reading coordinators in each building now have a structured relationship with the District Reading Coordinator through the Reading Support Team, and the bilingual coordinators are developing a structured relationship with a District Bilingual Coordinator who was appointed during the 1979-80 school year. Under the new plan, a parent coordinator will be selected for each building by its REPC, and a new person -- Community Resource Coordinator -- will be added in each school. At the building level, the Community Resources Coordinator will "oversee the logistics of the placement of Harris University students in the school..." and "work with the District Coordinator in identifying alternative resources (money and personnel) to meet school objectives."

In addition to producing new organizational structures within the District, the activities of the Reading Support Team created and strengthened personal relationships individually and collectively, among school personnel at the building and District levels, and University faculty in the Reading Department and other units of the University. These connections will probably continue long after funding has ceased, and perhaps after present actors are replaced. Overall, school and University personnel now possess informal points of contact for activating the delivery system of the University to add to the more formal access arrangements of the Collaborative Office.

5. Project 4: Student Placement
Harris University - District A

Via Harris University's "Clustering" program, approximately 160 University students were placed in the schools of District A during 1979-80. The program provided direct services to pupils and to teachers and added a new dimension to the pairing between Harris University and District A. The Clustering consists of a new structure and set of relationships between the schools and the University and indirectly provides an additional source of funding for the Collaborative. It is a potential avenue through which the schools can influence operational policies of the School of Education and it has evolved into an effective vehicle for institutionalizing the University's commitment to the District.

The Clustering Program, often called "The Consortium," is a component of the University's School of Education (SED). Through it, SED manages the placement of its students for field-based instruction. There are three levels of field-based students: pre-practicum students who "observe" field situations as a part of their course work in foundations of education, others who "tutor" as a part of their course work in psychology of learning, and practice teachers. The Consortium is an alliance between SED and nine groups of schools and one group of community agencies. Three of the school clusters are in Boston (District A in its entirety, plus two other schools), two are in urban areas outside of Boston, two are in suburban areas, and two are in mixed urban/suburban areas.

Each cluster of schools has a university-appointed "Cluster Coordinator" faculty member and each school has a "Cluster Liaison" teacher and the Principal. The Consortium Council is composed of one administrator and one cluster liaison from each cluster, plus the Harris University Cluster Coordinators, who

include the Collaborative Coordinator, the Reading Department Chairman, and a professor who has been active in the pairing. The District Reading Coordinator also serves on the Consortium Council.

The Consortium Council meets monthly at rotating sites in the clusters and acts as the policy-making and governing board for the Consortium. It operates under a set of bylaws, and meetings are run quite formally. An important standing subcommittee is that on Allocations, responsible for assigning funds to the clusters and for assessing proposals for funding from individual buildings and teachers. The Council operates on a fixed budget provided annually from SED and the University. The 1979-80 budget of almost $120,000 is evenly divided such that each cluster can request and receive authorization to use up to $12,000. District A, then, has $36,000 reserved for it, from which small portions will be subtracted for the two other Boston schools. None of these funds derive from Chapter 636.

Even though Consortium activities and the funds that support them are separate from 636 activities and the funds that enable them to occur, as well as University-paid activities, the school people of District A do not make the distinction. As reported in Project I, for example, one interviewee was unable to distinguish the source of funding for that project, and several teachers saw University sponsorship of 636 activities as partial payment for the schools' participation in clustering activities, especially for taking student teachers. Within the University's Collaborative Office, too, the Consortium is seen as a component of the pairing program. In fact, in a recent publication (March 19, 1980), the activities of the Collaborative office are listed under three headings: "Contracted 636 Activities," "Clustering Activities," and "Other Services." In short, the pairing program has expanded beyond 636 funding, and its several sources are distinguishable.

The scope of the Clustering Program's impact on District A is best described by the volume of activity for 1979-80 as it appears in the Consortium's annual report. There were 45 beginning and 42 intermediate level Harris University students, 55 elementary school practice teachers, 15 special education practice teachers, and 7 bilingual practice teachers, for a total of 164 Harris University students, plus their supervisors, in District A schools during the 1979-80 school year. The District not only received the services of these students, but also received $36,000 from SED to use in support of projects that survived the proposal review process.

The funded proposals this past year were many and touched virtually every school in District A, as well as the District Office. They fell into three categories: curriculum enrichment (e.g., poet-in-residence, field trips); instructional resources (e.g., ICRT materials in reading and math, slide-tape equipment, videotape equipment); and program planning and development (e.g., in-service training in career education, faculty and student planning at West High School).

The proposal process encourages individual schools and individual teachers to submit proposals. The nine Boston representatives on the Consortium Council review proposals within priorities they have established, and their recommendations are forwarded to the Allocation Sub-committee and ultimately to the full Consortium Council. As a rule-of-thumb, it is expected that each school within the Boston cluster will receive the same amount as any other school. Funding does not depend on the extent to which the school receives Harris University students.

When the pairing program began in 1975, some Harris University students were placed as practice teachers in District A, in many cases diverted from other Boston schools and from suburban schools. During the same year, the School of Education and especially its Dean designated urban education as its highest priority and steps were taken to place more students in District A. During 1976-77,

more than 300 Harris University students served in District A schools. The enterprise was managed by a placement coordinator under the supervision of the Director of the Collaborative Office. The overwhelming majority of Harris University student placements were in District A, and students and faculty made adjustments to urban schools and tried to refine the process of concentrating such large numbers. School people, too, learned to cope with the volume of activity. In at least one school in the District, there were 35 Harris University students working in the building during a single semester.

Simultaneously, several significant developments occurred at the policy level, causing a dramatic alteration in the dynamics of Harris' student placement program: elimination by the University of "tuition vouchers" as payment for supervising student teachers, emergence of new state certification requirements, and a shift from "urban-based" to "field-based" education. In order to deal with all three decisions, the "Consortium" was born, and the Consortium Council created.

Prior to the Fall of 1976, SED, like most universities, used tuition vouchers as compensation for services rendered in the supervision of practice teachers. With a voucher, the supervising teacher could take a three credit course at Harris free of charge. This practice was well accepted by teachers, but SED was increasingly uneasy about evident abuses of the system. It permitted teachers who wanted tuition vouchers to apply for, and receive, practice teachers. Such placements were thus not necessarily made with "master teachers", as was intended, but with staff who wished to continue their training, and who thus could be assumed to be less experienced and less well trained. There were horror stories of incompetent teachers serving as supervisors to the detriment of the school and its pupils, as well as to the University students and their college supervisors.

To make matters worse, there were no restrictions on what courses could be taken with the vouchers, and those who used them at Harris did not necessarily

take SED courses. Teachers exchanged vouchers with each other, with one who earned a voucher from H.U. trading it for a voucher to another college in the area. Further, the City of Boston tied certain salary increments to graduate study, which created an additional and perhaps extraneous incentive for teachers to volunteer to supervise Harris students.

In addition to philosophical dissatisfactions with the voucher plan, there were practical considerations of more immediate consequence which doomed the vouchers. Within the University budgeting system, the vouchers were charged to the SED budget and received no subsidy from the University. In the Fall of 1976, the SED encumberment for tuition vouchers, which had been accumulating over time, exceeded $250,000. One reason for the deficit was that the costs of supporting practice teachers exceeded the tuition income paid by the practice teachers. During a period of inflation and declining enrollments, economies of scale were not achievable, and further tuition increases seemed to promise disaster. The squeeze worsened because teachers could and did use their vouchers at other units of Harris where tuition costs were higher than at SED, and because teachers could and did use the vouchers two or three years after they were issued, thus inflating SED's cost 25% of more beyond the original estimate.

Primarily for these reasons, SED announced that it would discontinue issuing tuition vouchers and would instead provide credits for services to be rendered by SED. A key feature of the policy, and one which still sparks discussion in District A schools, is that the credits would be awarded to the school building, not to the individual who served as supervisor. One District A principal who serves on the Consortium Council said:

> There was resentment in the past, and it continues, on the part of teachers that they had to do the work to write a proposal which would be funded for the school and not for an individual. Criticism has abated over time because the projects were quite visible to teachers... Criticism is now in the satisfactory range.

Another simultaneous movement was the emergence of new state certification requirements which mandated more field-based educational experiences for teacher-trainees prior to student teaching. Not only were more activities required but they were to be directed toward the acquisition of specific competencies. The School of Education Dean had chaired the State Certification Committee, so SED acquired consciousness of the new regulations earlier than other institutions. Some faculty see the Consortium primarily as a channel for placing pre-practicum students when the new requirements are fully in force, in 1981-82.

In addition, some faculty and certainly the Dean, suspected that federal funding agencies favored "teacher center"-like operations involving close collaboration with the field, and that prospects for support from such sources would be enhanced by a structure like the Consortium. It was also felt that field-based programs would attract students to stabilize declining enrollments at SED.

The elimination of tuition vouchers, early adaptation to future certification requirements, and the commitment to field-based instruction resulted in the formation of the Consortium in the summer of 1977. The Consortium consisted of agreements for structured, continuing relationships with surrounding school districts. The arrangement was that SED would place its students exclusively in these districts and that these districts would give priority to Harris University students, and that SED would fund a limited number of school-generated improvement projects each year.

The structured and stabilized placement of Harris University students in District A through the Consortium penetrates both the schools and the University at several levels. The program does not directly involve the parents of the district but it constitutes a major alteration in organizational arrangements between the University and the schools. It is now firmly in place and will probably continue

in the forseeable future. Its useful features clearly outweigh its problematic ones, although both are appropriate to examine.

At both Collaborative Office and at the District A Office, the Clustering program brought advantages and disadvantages. From the Collaborative's perspective, the placement of a large number of Harris students ensured the continued presence of the University in the District in ways which are visible to all participants. As the Director said:

> If 636 were to go right away, we would still have the Clustering for the placements of students and (clustering) budget for some activities: ---- generate materials, workshops and things like that.

On the other hand, the Director feels the need to be constantly vigilant so that the priority once verbalized for urban education, but later weakened by the Clustering which included suburban placements, does not become further eroded:

> I think what happened was that the Clustering became inserted after the pairing and superceded Boston as a priority...In '76 and '77 the mandate went out from the Dean of the School which said... we will place two-thirds of our students in Boston. And so, in '76 and '77, Boston was the priority. In the summer of '77, the Clustering was set up and that then superceded Boston as the priority attention for faculty as to the placement of students.

In 1976-77, almost all Harris students were placed in District A (more than 300). At the inception of the Consortium in 1977-78, District A was allotted 75 students. After persuasive arguments by the Collaborative Director, the allotment was changed to 100. Since that time, because of the persistence of the Collaborative Office, the number has gradually increased to over 160.

Counter-pressure comes from faculty, at the Department level, according to the Director of the Collaborative:

> If the priority within the School becomes clustering, then those of the faculty who are in it...now have this clustering as their priority which they are attempting to legitimate within the School of Ed itself, and to maintain and hold its operation. So Boston really becomes a thorn in the side.

Furthermore, the Consortium Council which makes decisions for the Clustering is dominated by non-Boston interests. Vigorous advocacy by the Director on behalf of Boston is frequently required at points of decision by the Consortium Council.

This situation is complicated by the fact that the supply of Harris University students continues to decline, along with enrollments in the School of Education generally, while demand from the District increases. In 1979-80, District A received 30% of the students available, which figure suggests that further erosion of commitment to urban education has been successfully resisted. The Collaborative Director feels that Harris presence in the District has lessened over five years, but that the current level is adequate. The placements are in general positively received by the teachers and principals of the District, and since they come at no cost, the Consortium is endorsed at the District Office level also, especially by the District Reading Coordinator.

There is further burden on the Collaborative Office. The placement of 160 students in more than a dozen sites, under the sponsorship of more than a dozen University faculty members, requires planning, consistency, and mastery of logistical detail. The Collaborative Office uses $9000 (plus fringe benefits) of its precious 636 funds to employ a half-time Field Placement Coordinator to discharge these responsibilities.

The other function of the Consortium, the allocation of funds to the District for projects, includes both plusses and minuses for those at the policy level. Both the District Office and the Collaborative Office value the money because of its usefulness in stimulating planning. The rules require that a proposal be developed at the classroom level and submitted for review to the Allocations Subcommittee and to the Consortium Council. This process provides opportunities for rationalizing the needs of the district and forces consideration of the most efficient use of funds. Further, the planning can be more "local", since the proposals are not reviewed beyond the District level, as 636 funds are.

While proposals are reviewed by agents of the Consortium Council, these are people at the same organizational levels as the proposers (i.e., teachers and principals).

On the other hand, there are disadvantages for both offices. One is the burden of paperwork, cited by the Collaborative Director as "much more involved than 636." First, there is the sheer volume: each proposal is generated and evaluated individually, 35 or more proposals are processed each year, with format requirements as elaborate as those employed in the yearly 636 proposal for the District that includes all of the planned activities for the coming school year. The task of proposal writing usually also falls to the Collaborative Director. Second: there are requests from the Allocations Subcommittee or the full Consortium Council for further information, and for evaluation data at completion. The Director reports that, in her opinion, requests for more information and the pressure for evaluation are manifestations of the light regard in which Boston educators are held by non-Boston school people. In these and less formal ways, the Consortium Council exhibits a denigrating attitude and suspicion of motives. One incident is reported by the Director as an example:

> We tried to use up whatever money was remaining in order to fund the teachers during the summer for planning at (the) High School....(The District Coordinator) and I wrote the proposal...we submitted that and didn't have the Headmaster's signature on it and it came back to us.... I have gone back to (the District Coordinator) now four times. The amount of time I'm spending...to comply their requirement is absolutely absurd. I mean, I don't think I'm exaggerating the level of nonsense to meet pre-established standards which, to me, ought to be less. It's a basic distrust....Now, the procedures which are no problem at all for the suburban areas are a severe problem for us, and it's not because we don't intend to spend the money the way it's been spent; it's that certain situations make it untimely to do that. You add to that what I've found to be consistently over three years, a constant attitude from the former top-level administrator of the program, from the faculty associated with the program, from the staff people in the bureaucracy, and from the members of the Consortium from the suburbs, and attitudes of disdain, of belittling, of denigration of Boston.

Teachers, principals, and professors mention other positive and negative aspects of the program. For the most part, the teachers and principals of District A feel that they profit by having outside assistance in their work. They worked through an unorganized early period, and have now established procedures for maximizing the productivity of outsiders, while minimizing the burden of management. They profit from the Field Placement Coordinator's work and through her enjoy an additional communication with the University. They look forward to a complete structure of community resource persons at all schools, working with the Community Resources Coordinator at the District Office. Teachers and administrators still voice complaints about inadequate preparation and/or orientation of Harris students for work in city schools, but they acknowledge great improvement and do not advocate a special program at this time, except efforts to push students to honor their commitments. One teacher representative's comment was "H.U. should not pander to the wishes of their students so much."

There is also evidence that informal relationships have developed with educators from outside the city among those from Boston who serve on the Consortium Council. One elementary school principal, for instance, feels free to call principals in other districts with whom he has worked on the Council to seek advice on educational matters, and avails himself of the opportunity periodically. He also says:

> It is a very positive experience to sit on a committee with people from suburban cities and towns. I am surprised to find that many of their problems are similar. The urban problems are not as different as I once thought. I receive ideas which are workable and practical...for our school.

It remains true that some teachers still deeply resent the loss of personal compensation via tuition vouchers, and others deeply resent "the way it was handled", even though they do not seek personal reward. One principal said that he, and probably other principals, still need to nurture interest among some teachers in their buildings. All things being equal, projects which are most visible to the teachers (e.g., equipment for teachers' use, and "showy" student projects)

are favored in the continuing attempt to sell the concept of compensation to the building rather than to the individual. So far, it is accepted unevenly throughout the District. Teachers and principals yet to serve on the Consortium Council are still reluctant to share their ideas for projects with other buildings. They do, however, show some desire to contribute to the realization of the District-wide plan generated at the District Office. Teachers often attribute this last point to the trust and respect they hold for the District Curriculum Coordinator.

Finally, the Consortium provides an effective mechanism for the school people of the District, especially at the classroom level, to impact on the instructional program at the School of Education. First, as a direct outcome of the Consortium, the School of Education developed two new courses, each required as preparation for all students prior to practice teaching. These courses were developed with major input from the Consortium Council and much of the course content was dictated by them. The Council also evaluates the effectiveness of these courses at the end of each semester. Second, pressure for better orientation and better supervision of students emanates from the Council, which wishes to ensure consistency across clusters. For example, supervisors are required to visit weekly and to hold conferences with the sponsoring teacher and the student. Third, the Competency Committee of the Consortium dictates the content of the field experience by specifying the demonstrable learnings the student will acquire.

It is also likely that Consortium activities influence individual professors who participate in student placements. Two professors report feeling a higher level of consciousness about "the reality of teaching and the reality of urban schools" as a consequence of their visiting classrooms and of feedback from their students.

6. Project 5: Other Pairing Activities
Harris University - District A

From 1975 to the end of the 1979-80 school year, the District A/Harris University Pairing implemented a large number of activities providing direct and indirect services to students. These activities can be placed in three categories: Chapter 636 activities, Clustering Program (i.e., Consortium) activities, and other services.

Representative Chapter 636 activities are described in detail as Projects 1-4 of this case study. The major enterprise of the Clustering Program is included also as Project 4. This section will focus on the "other" activities, since they may significantly influence the long-term future of the pairing, and since they are less well documented in official reports than the other two classes of activities. Furthermore, the collaborative process may have greater impact and permanence if two or three of the sources of support, rather than one, are arrayed behind them.

One example of the blending of all three categories is the pairing's approach to improvement of reading skills: Chapter 636 monies purchase reading lab materials and diagnostic-prescriptive tests; Clustering funds provide a poet-in-resident at five schools and a materials/resource person to assist in criterion-referenced testing; and the University's core budget supplies reading consultants, access to the reading clinic, and preparation of students to tutor pupils for the criterion-referenced tests. The impact of any single contribution is limited, but their sustained focus has considerable impact on the teaching of reading in the schools in District A.

Because they bear directly on the provision of other services, two characteristics of the pairing's use of 636 funds deserve notice: 1) the initial targeting of five schools (High School, 2 middle, 2 elementary) as demonstration sites and then expanding the others in the District; and 2) the emphasis on "technical assistance" (especially to the five target schools in the early days),

for example, through the purchase with 636 funds of one-sixth of the faculty members (at a total cost of $11,723 in 1976-77, or 16% of the University's allocation), and commitment of an equal amount of time of two other faculty members at no 636 cost. Both of these policies underscore Harris' early and sustained commitment to District-wide, long-term planning. As 636 funds declined, the relative importance of services otherwise funded grew. Also, in 1979-80, almost all of the University's 636 allotment supported "technical assistance," rather than the operation of specific projects.

The "liaison faculty" appointed to provide technical assistance not only delivered advice and skills within their own areas of expertise, but also provided points of contact for identifying and recruiting no-cost "other services" from the University and, to a lesser extent, from the schools to the University.

"Other services" include a myriad of activities, many of them small in scope and with a low level of visibility. While participants do not formally categorize them, they are divided here into four types to aid the reader's understanding: 1) responses to individual requests; 2) placement of externally-funded, University-sponsored research and development activities; 3) inclusion of the schools in University-funded activities; and 4) gifts from the University.

Responses to Individual Requests

Because University representatives were frequently and regularly present in the schools, they became known as individuals and some thus emerged in the eyes of teachers and others as approachable about problems that the school people thought might be seen as trivial at higher echelons. Some inquiries involved only point-of-entry data about the University, which was regarded by school people as an exceedingly complex array of schools, divisions, departments, and other sub-units. Many of the resultant activities were small in scope, but they were important to participants and helped to bring overall credibility to the University's efforts. They were also useful in engaging the support and participation

of units and individuals throughout the University not otherwise included in the larger and more formal 636 and Clustering efforts.

One example of this type of activity is an assistant headmaster's request that the High School-University liaison person use his informal "connections" to clarify the perceived misassignment of ten students in the Court-ordered desegregation program. Another is a High School guidance counselor's communications with the University concerning admission for a boy whose formal transcript obviously did not include evidence of the depressing effects of his personal environment. A third is a request from an elementary school faculty for a speaker for a workshop.

Placement of R & D Projects

Another form of "other services" was the placement of University-sponsored research and demonstration projects in District A. For example, a special education professor conducted seminars for middle school parents and teachers on "Problem-Solving in the Classroom", through a Bureau of Educationally Handicapped (USOE) grant. Another example was a reading grant gained by two professors and the District Reading Coordinator which was conducted in District A.

The University also played a significant role in attracting to the District funded activities by agencies unaffiliated with Harris. A career counseling program for high school females is one example of such a venture. Also, a regional R & D center used District A as one of its sites to validate an elementary testing development, and a program in language development in which older students tutored younger ones is still another.

University-funded Activities

The third form of other services was the inclusion of District A in ongoing University activities. For example, the School for the Arts intends to collaborate with a High School drama class in dramatic presentations at the University, and its touring company has appeared at the High School. The

School for Public Communications now includes West High School students in its regional Scholastic Press Conference, and the Program in Artisanry conducts demonstrations at the High School. SED's Physical Education Department offers classes and facilities to District A elementary children as part of its teacher training program.

Another sub-type of University service is distribution of tickets to sports events by the Alumni Office to District students and faculty. The Admission Office staff assist students in the college application procedures, and meets with District guidance counselors on topics of common concern. The Student Union provides space for meetings of parents, teachers, and students. High School upperclassmen now have free access to courses at the University on an audit basis, on certain topics (e.g., calculus, psychology) not available at the High School. University library cards have been issued to all teachers and administrators in the District, and to all students who request them.

The University has also responded to explicit requests by creating new ventures at no cost to the schools. For example, the Law School has offered to teach a course in "Street Law" at the High School, the School of Nursing has already provided six seminars in medicine for High School students, and the School for the Arts gives large-scale musical instrument training (at partial cost for instruments) in one of the elementary schools.

Gifts

Finally, the University provides outright gifts to the District, with no obvious benefits to itself. They range from an electronic scoreboard for the High School gymnasium to summer course scholarships for ten parents and teachers who have given outstanding service to District A. The most costly gifts are four-year tuition scholarships to up to six high school students each year for the past five years.

Acting on behalf of the schools, the Collaborative Director reports that she presented background information about the city of Boston and the school system to University students prior to their placement in District schools. Services are also provided by the schools and the parents to the University. Teachers, administrators, students, and parents of District A frequently appear as panelists at University-sponsored symposia, guest-lecture in classes, and contribute advice to individuals.

Implementation

The provision of "other services" from and to the University is much less complex, organizationally, than is true for the other two categories. The two parties are freer to agree on strategies and implement them then they are with 636 or Clustering projects, which require more documentation, more levels of approval, more monitoring, and more accounting. For the msot part, an individual or a small group expresses a need and contacts are made through the Collaborative Office or the appropriate liaison faculty members, in the case of the University, and through the District Office or appointed liaison teachers/ administrators in the individual schools. Services are delivered by individuals or small groups, usually without official sanction and sometimes without official knowledge. According to the Collaborative Director:

> Individual directors, departments, and faculty have been very helpful in contributing a great deal...I have not approached any single person for assistance that was not forthcoming... the Admissions Office and the Advisory Resource Center are sitting there waiting to be helpful. Anytime I have contacted a place, they have shown appropriate activity, but they take it out of their hides.

Approval is not often sought from parents or parent groups and sometimes parents are not aware of an activity.

The operational style prevailing in the "other services" sector is illustrated in the following description of one small incident in the life of the pairing. A High School art teacher approached the School's liaison person

about a senior boy who was physically handicapped, showed artistic talent, but had no plans to attend college, since his single-parent home could not support him financially and would miss his potential income. His Hispanic mother did not understand college life well enough to be more than psychologically supportive. The art teacher arranged an interview between the Harris liaison person and the boy in which it emerged that the boy aspired to a career in the application of artistic forms of physical therapy and rehabilitation. The liaison faculty, after inquiries at the School for the Arts and the Physical Therapy Department, contacted a friend in the Psychology Department, who suggested a departmental colleague who might be particularly responsive to the boy's circumstances. A phone call from the liaison faculty, followed by a letter provided no-cost, no-credit access for the boy to a freshman psychology class and some special attention from the instructor. Meanwhile, the art teacher and the Headmaster of the High School arranged release time for the student, via the School's Extended Campus Program. The student attended the psychology class on a regular basis. Through it, he was able to explore possible career options, acquire a deeper understanding of the psychology of art, become clearer about the nature of college life, and begin investigation of sources of financial assistance.

In this case, and others like it, what does not appear on the surface is the enormous energy and time required for productive outcomes. The provision of "other services" occurs primarily through an informal network of personal relationships. It is often clear that the official organizational channels are not helpful and that timely delivery requires by-passing of them. The Collaborative Director illustrated the problem:

> (The High School liaison) and I visited the chairpersons in the Departments of Biology, Chemistry, and Science...it takes time to do that, but at first they were willing and eager and interested. The first feedback we had was that (a chairman) sent a memo, in January, to all his faculty and graduate students indicating that there were about seven different things and ways they could

> contribute to this pairing...Now, we'll wait for the responses, but it's been four months...But, the work it takes to make those contacts, explain the needs - it's an impossible burden when you don't have an adequate staff....It just means that so much of that developmental work of building those non-cost resources, which is the way the pairing is going to continue once the 636 money is gone, gets diverted to...the ad hoc, immediate one-on-one-things, and then you don't do the work that would make this a permanent and highly interactive relationship.

Other examples, like the provision of library cards, offers of space and facilities, distribution of tickets, etc., are arranged more formally, but still at a sub-organizational level. In these cases, the request often arises from a small group and then is logically extended to an entire population. This kind of service is most often operationalized through the District Office and the Collaborative Office. Within the University, the Director of the Collaborative contacts the appropriate University agency (e.g., Library, Alumni Office) directly, reminds them of the University's commitment to the pairing, and seeks cooperation. Usually, these negotiations are conducted verbally, with written verification, and publicized within the University and District as needed and possible. One could argue that these arrangements, too, materialize more out of personal connections than from formal interorganizational relationships.

A third example of the process out of which these small projects arise is a service that emerged as a by-product of another more formal activity. A social psychology professor had completed a small 636-funded project designed to help Chinese-speaking bilingual students to perform better college admissions and job interviews. As a consequence of this work, a very strong affiliation developed between Chinese-American university students and Chinese-American high school students who had been associated in the 636 work. The college students took their younger friends bowling, exposed them to American customs in other ways, entertained them in the University dormitories, and involved them in other aspects of college social life. These unplanned outcomes are recognized by

the Collaborative Director, who said in response to a question about a later vocational education program for Chinese bilingual students, "You have to trace it back...because in some ways it goes back to the volunteer work that (the social psychology professor) did that first year or so."

There are other examples of this kind of "spin-off" activity, also based on personal networks. A typical comment which was made by several teachers and the Reading Coordinator is summarized by the Collaborative Director: "The reason (the District Curriculum Coordinator) gets so much from the Reading and Language Department is not interorganizational. It is because she feels she can pick up the phone and call (the Reading Department Chairman) and vice versa."

Analysis

"Other services" constitute a kind of collaboration between the University and the schools of District A in addition to the projects previously described. In some cases, other services provide an important supplement to activities funded under 636 money or Clustering auspices. Other services are sometimes also independent of 636 and Clustering projects.

In all cases, other activities operate through an informal interpersonal style, at suborganizational levels, with a minimum of hindrance from formal requirements of review and approval. This procedural directness provides the obvious advantage of quick response, but also brings two disadvantages: lack of stability and lack of visibility. Since the procedures do not require scrutiny at a number of levels, only rarely do people who are not direct participants acknowledge the existence of a given activity. For example, both CDAC members and District teachers who were interviewed were unaware of some activities (e.g., college admissions assistance). Some "other services" are listed in official publications but were acknowledged by teachers, parents, and University faculty only when reminded by the interviewer. Even when acknowledged, they were not perceived as important except by the parties directly involved. There was, for instance, little interest

in the process of the criteria for selection of recipients of University scholarships, except by one CDAC member whose daughter was a potential candidate. Even then, this member was interested as a parent, not as a CDAC member. It is surprising that there was so little interest in the scholarship program, since it involved a dollar contribution in excess of $100,000, and since the University encouraged application to it.

Many "other service" activities are ad hoc, "one-shot deals." A few are repeated each year, but were still defined by interviewees as temporary. In a very few cases, "other activities" were pilot tests that later blossomed into funded projects (e.g., the Chinese vocational education effort).

Even with the disadvantages of low visibility and lack of permanence, other services made and make a valuable contribution to the pairing program. They are seen at minimum by all parties as gestures of good will and solidarity. Most teachers and parents who were interviewed knew that a University representative was frequently present in their schools and that he/she was doing something helpful, even if they were unclear about the precise details. Most University faculty were vaguely aware that school people do things that are useful to the University, and that parents and community leaders do not refuse invitations to contribute to the University's mission.

7. Cross Project Analysis
Harris University - District A

Chronological Development

Phase I - Planning and Organizing (Summer 1975 and early 1975-76)

When the pairing began in 1975 the parties to the collaboration engaged heavily in needs assessment and problem identification. At the summer workshop of 1975, parents and community leaders, teachers and administrators, professors and university administrators met daily for three weeks. Participants had been selected by their constituencies and paid to attend. The University personnel who participated were a mix of persons experienced in field work in schools, including Boston schools; some were interested in Boston, but not particularly in schools; and others are strongly committed to desegregation. The parents included those who quietly supported the Court Order and a larger number who openly opposed it, but wanted to protect their own and their children's interests. None of the participating school people would admit to supporting the Court Order even privately, and a few had publicly and strongly opposed it. In short, participants' positions toward the Court Order and desegregation were important but covert influences at collaboration. Sparring and seeking understanding of varying perspectives consumed much time during the three weeks.

Group leaders from the University sector helped partipants break up into smaller groups around special interests (e.g., reading, physical education). Each group undertook the collective task of proposal development. Each screened and synthesized members' ideas, converted ideas into projects, and translated projects to dollars. Project proposals were collected and summarized and, as might be expected, returned for revision since the total amount of money requested far exceeded the allocation. Finally, an overall proposal for the pairing emerged around those projects which had the broadest base of support

among school, University, and community representatives.

Participants in the workshop departed with high hopes. They had accomplished several things: increased understanding of each other, both within and between groups; momentum towards project implementation; and a shift of concern away from the Court Order. The pairing had gotten off to a good start. There were, however, two features of the early days which affected the Collaborative negatively for some time after: a focus on "projects", which were relatively uncoordinated with each other and with a true master plan, and a partial role for the University as a vendor of services. A style of operation quickly evolved in which teachers produced lists of problems and the University tried to respond to the lists. There were few occasions when the University challenged the teachers' specifications or suggested directions.

Phase II - Pilot Testing (1975-76)

One decision made during the workshop and incorporated into the planning and the first proposal for funding was that five schools were to be targeted for early and intensive implementation of pairing activities. The High School, two middle schools, and two elementary schools thus became the pairing's demonstration centers. In each a School Liaison person was designated, and the University Collaborative Office also seleoted a faculty member from the School of Education as University Liaison to each of the schools. Projects were first implemented in these schools. Further, District and University officials sought to advance collaboration in general by focusing the provision of "other services" in and from them, so far as possible.

During this period the University Liaison was physically present in the school building at least one day per week. The standard practice was to monitor ongoing projects (at least one in each of the target schools) and begin planning future projeots. Project funding cycles were short; and with little time to develop new projects, often a decision to continue a first-year project into the

second school year was the only practicable possibility. For example, in addition to continuing and expanding the High School Developmental Reading Program (see Project 2, above), the formal proposal for the second part of 1975-76 included a component in the High School with the objective of preparing "a reliable profile of the unique problems of Chinese bilingual students", at the small cost of $2500 for stipends for two graduate assistants. This sort of pattern was followed in the other target schools as well: continuation of the original projects to give them time to work, and initiation of new projects of a modest nature that crystallized during the process of problem identification during the first part of the school year.

The other major activity of this period was the expansion of informal contacts by both the School Liaison and the University Liaison. The partners were conscious that only a small percentage of teachers and University faculty had participated in the summer workshop, so a deliberate attempt was made to seek out additional individuals and groups (e.g., departments) to elicit their involvement or at least their support. "Doing favors" was the dominant style, and "other services," outside the formal structure used for proposal development, was the dominant delivery system.

For example, a High School guidance counselor approached the University Liaison for help for a senior boy who had become an alcoholic while a high school sophomore and who subsequently had "gone dry" by virtue of his own efforts and determination. He expressed a strong desire to attend college, but his excessive absences and poor academic work during his sophomore and junior years negatively affected his grade-point average and obscured his good grades as a senior. After meeting several times with the boy and contacting his parents, the University Liaison eventually arranged his admission to the University with a full tuition scholarship.

Parents and parent groups were largely inactive during this phase, but University and school personnel came to respect the intentions of each other. From the University's point of view there was a shift from attributing evil motives, apathy, or ignorance to teachers and administrators, to understanding of the situations that school people face. For example, one professor involved in the development of the High School Reading Laboratory said that he learned a great deal from results of the diagnostic test. He had been appalled at the results and he observed that the teachers were equally upset. It became clear that high school teachers could not be blamed for students' low achievement at entrance to high school. This professor and others became sympathetic to the plight of the teachers who faced overwhelming problems with little material or human resources.

Furthermore, professors began to perceive that teachers were working within an unwieldy and unresponsive bureaucracy. One professor attempted to help history teachers develop plans for a ninth grade social studies curriculum, but found that "regulations" confined the teachers to teaching history, rather than social studies, and that no history materials or texts were available for the teachers to use. He began to sympathize with the teachers and to see them as well-intentioned and capable of planning, but powerless.

Phase III - Expansion (1976-77)

As the second full year of implementation began, evidence began to emerge of mutual respect and understanding among school and University personnel. Each group had become more realistic about the other and had tested their own organization's capacities to respond. The scope of their work had narrowed to those areas that seemed important. Both parties were anxious for success so they focused on projects for which success was most likely.

Parent groups had by now gotten themselves organized, especially at the CDAC level, and some REPC's became operational. Parents were aware that they had lacked the collective voice that they perceived school people and University people to exercise. They were also pushed toward cohesiveness by repeated requests to review funding proposals, and especially in CDAC, by pressure from the University Coordinator to exercise the prerogatives accorded them by the Court Order. Parents also hoped to promote mutual understanding and respect among the disparate ethnic and racial groups that they represented. They arranged meetings among various components of the community, especially among white and black/Hispanic elements, and between community representatives and members of larger, city-wide groups. They began to act collectively as a critical audience, and sometimes as watchdogs, to the activities of the University and the schools.

Both University and school people felt that progress had been made and that further achievements were possible. Parents heartily endorsed the High School Reading Project which became the first example of an activity that satisfied the needs of all three parties. Important to this sense of progress was the fact that clear criteria for evaluation ----students' scores on reading tests---- were available and utilized.

Phase IV - Trust (1977-78)

The third year constituted the phase of trust. At this point both teachers and professors had identified individuals and work units with whom they could collaborate, even if they still did not completely trust each others' total organizations. For example, the teachers greatly respected the University's Reading Department, especially one professor. When they formed their "Reading Support Team" (see Project 3), they called on this professor for his knowledge. He responded generously because he believed in the motives and competency of the Reading Coordinator and the teachers.

Other examples of the results of mutual trust appear among the "Other Activities" discussed in Project 5. The successful placement of many University-sponsored research operations in the District may be attributed to the teachers' growing willingness to participate in knowledge generation and to the professors' increasing recognition of the craft knowledge possessed by the teachers.

In general, the roles of the partners shifted in this phase. The schools began to initiate their own projects, rather than reacting to the University's initiatives, proceeding then to seek the help of the University. The University shifted from a project to a technical assistance orientation. It became more difficult to distinguish the activities of the Collaborative from the ongoing business of the schools. The two parties sought to influence larger numbers of students in a wider variety of settings, and became less interested in cleanly designed projects that served the needs of a delimited population.

Roles also shifted in another way: the number of school people collaborating with the University increased, while the number of University people declined, becoming concentrated in fewer hands.

Phase V - Independence from 636 (1978-80)

These two years were characterized by less reliance on 636 funding, with projects funded from a variety of sources. The 636 budget allocation to the University directly reflected the previously described movement from "projects" to technical assistance. During this phase, the University made many small contributions to the schools at no cost to the schools or to the 636 budget. The biggest single contribution to the Collaborative was the money and human resources supplied by the Clustering Consortium out of University funds.

The leaders of the Collaborative became increasingly aware that 636 money was declining, in relative terms, and planning proceeded under the

assumption that 636 funds would continue to decrease and soon disappear. Over the five years covered by the study, 636 allocations declined and in a period of double digit inflation the remainder did not stretch as far. It is a tribute to careful planning and the spirit of collaboration that services expanded as 636 funds declined. By 1980, the schools were improving their basic programs, expanding into new ventures, and building themselves into an authentic District-wide network, and the University's presence was felt everywhere. When this study began, it was impossible for most participants, other than the Reading Coordinator and the Collaborative Director, to identify the precise forms of University assistance. It was expected that the University would be involved in virtually anything and everything.

At this phase, and since, a much larger number of University administrators, faculty and students became involved in the District schools, while only a few devoted a major proportion of their efforts to the Collaborative.

ROLE ANALYSIS

Introduction

This was, and is, a successful pairing. Some of the success can be attributed to the roles that were fashioned and the ways that persons shaped these roles.

The Schools

The District Office generally played a policy role in the pairing, by fitting operations and activities into a District plan and adopting the plans in light of emerging activities. The District Office also reconciled District policy with school system priorities.

While other District Office personnel (e.g., Bilingual Coordinator, Special Education Coordinator) touched on the pairing at appropriate points, the key actors were District Superintendent and the Curriculum Coordinator. The District Superintendent appointed and supported the Curriculum Coordinator, was directly involved with CDAC and other parents' groups, and represented the District in its dealings with the Central Office when called upon. She was kept very busy with activities other than the pairing, however, and largely delegated the management of the pairing to the Curriculum Coordinator.

The Curriculum Coordinator, originally named as Reading Coordinator, set the direction of the District's collaboration, planned and often wrote projects and activities, assured implementation of activities, and monitored progress. In some ways, the success of the pairing can be attributed to the fact that in the Coordinator a single point of contact existed and that the role was continuous throughout the five year history of the pairing. In other ways, however, success can be attributed to the person who played the role. Much of the power and influence of the role grew out of respect and trust that Ruth Palmer earned in her interaction with teachers, University personnel, and city school administrators. Most often cited by other participants are her dedication to

educational ideals, her loyalty to the District and the school system, and her willingness to work hard and meet deadlines. One might conclude that the following ingredients are important to a successful pairing: 1) a staff structure that includes a central point of contact, thereby providing clarity; 2) continuity over time for such administrative arrangements, thereby assuring stability; 3) personal attributes in the incumbent coordinator that supply earned power and influence to the role; and 4) the unqualified support of the District Superintendent.

School building administrators (principals, headmasters, assistant principals/ headmasters) played roles as gatekeepers in this pairing. With a few notable exceptions, administrators either narrowed or widened opportunities for communication between teachers or departments/grade levels and University faculty or departments; there were practically no cases of gate-closing, probably because all feared being described as defiant of the Court Order. The one important exception, at the High School, will be discussed later. Neither were there many cases of completely opening a school as a laboratory for the University, probably because administrators feared being described as weak and disloyal. The usual strategy was to receive a proposal from the teachers, the University or the District Office, and then proceed cautiously until the parties to it were in substantial agreement before granting permission.

School administrators beyond the District level were not influential in the pairing, except the individual in the Central Office, who coordinated and managed and 636 proposal process. His positive influence was cited by the University Coordinator, the District Curriculum Coordinator, the District Superintendent and members of CDAC. His willingness to listen, his patience, and his skill at translating ideas into proposal language were very helpful, especially in the confusing days early in the pairing.

The School Superintendent's influence was felt indirectly in the District's curriculum planning: "Superintendent's Circular #33" was frequently cited as

support for District planning. Subject matter Directors, operating out of the Central Office, were of varying influence in the secondary schools. At least in the early days, some High School teachers felt a tension between the District's curriculum plan and the city-wide curriculum for a given subject, and were consequently confused as how to proceed.

The central actors in the pairing at the operational level were undoubtedly the teachers. No projects could be launched by the University, no matter how well-conceived, without the active support and internal advocacy of one or more teachers. The unconscious strategy of the University became standardized: get access to and then persuade teachers. The success of the pairing may be partly due to the capacities of the various Liaison's to arrange technical assistance that in turn facilitated access by University persons who "did favors" in anticipation of future returns.

While the evidence is not compelling, the data suggest a set of stages of teacher involvement. In the first year or so teachers acted collectively and were approached as such. Interest groups within a school formed during the summer workshop. In the late second, third, and early fourth years, contact with teachers became highly individualized and persuasion and negotiation occurred with one teacher at a time. In the late fourth and all of the fifth year, contact again became collective, but at the interschool level as a consequence of District planning. The School Planning Teams, which were multi-subject extensions of the School Reading Support Teams (see Project 1) became crucial elements in the pairing, since through them one or more advocates of a project or of collaboration in general could be located in a building.

There were only a few times that teachers' Union loyalties affected the pairing. On one occasion, the High School faculty became sensitive about a "massive invasion" of University student teachers, and the effects it could have on teacher layoffs. Also, on a few occasions it became difficult to work with teachers after school hours when the Union objected to this apparent extension

of the school day.

Teacher aides were of some importance, also. Many aides were local parents and connected to the parent networks. While they resisted controversy and avoided spying on the schools, they publicly supported "good" programs, projects, and people; when they were mute on a project, their silence was taken as a negative sign. Some aides also delivered valuable services to the children, especially in reading programs.

The University

The University's administrators played an indirect role in the pairing. The President's public verbal support gave impetus in the early days, but the institution's failure to fund the salaries of the Collaborative Director and secretary strained the 636 budget and increasingly restricted expansion. Sub-units of the University administration consistently made facilities available, and the Alumni Office, the Financial Aid Office, and the Admissions Office gave their services generously.

The college deans were supportive but offered no aggressive assistance, except for the Dean of Education who urged his faculty, collectively and individually, to support the pairing. Since this Dean and his assistant were also two of the four Court-appointed experts in the desegregation case, his exhortations were received skeptically, if not negatively, by some teachers and parents, but there is no evidence of negative impact on University personnel. Most of the other deans functioned only as gate-keepers for faculty involvement in the Collaborative.

Most faculty participation was individual, but a few departments developed corporate involvement. The departments most engaged were those in which collaboration among individuals had a previous history. The pairing did not stimulate or create collaboration within departments where none previously existed. Very indirectly, the pairing enhanced collaboration among individuals across

department lines. Also, the increase in student field placements led to an informal "team teaching" pattern among a small group of faculty and graduate students in the teacher education program.

By far, the most influential role in the University was played by the Pairing Coordinator and by extension, her staff. One reason for the success of this pairing was that this role was centralized and continuous. While the incumbent belonged to the School of Education and used SED space, the Office and the role were formally all-University units that were to serve and be served by other schools and colleges. In a University as large and diverse as Harris, it was important to establish and maintain a central point of collaboration. Respondents from the University, the community, and the schools had little trouble identifying the Coordinator as this point of contact.

The Director operated with little pressure for direction from any unit of the University, exercising considerable autonomy within budget constraints. In this sense, the Office operated like a department or project. There were times when the Collaborative Office was overburdened with requests for data for use in public relations efforts on behalf of the pairing. The Director also felt caught at times between the expectations of the administrations of the School of Education and of the University.

As is true with the counterpart role in the schools, the fact that the same person operated continuously as Collaborative Director constituted an enormous advantage. The pairing, especially in the early days, was potentially confusing and frustrating, but the Director's permanence promoted feelings of stability and invigorated the planning at all levels. That the person in the position was respected for her earlier work with the Boston schools and for her scholarship were also positive influences on the collaboration.

The individual faculty member was the primary University protogonist in the schools. Some generalists were assigned as liaisons to indiyidual schools; others were generalists by function (e.g., bilingual specialists). Both tended to be good communicators who spoke both the language of the schools and that of the University, and could translate from one to the other. They were also knowledgeable about the University system and were able to locate resources within it. They were respectful of the schools' organizational structure, modest in their demands on schools, and cautious in their politics.

However, most faculty encountered the schools episodically, for special purposes, and were engaged in only one or two projects or requests for assistance at a time. A significant number of specialists came from units other than the School of Education, perhaps even a slight majority. For almost all of the specialist faculty, pairing activities were minor and/or temporary components of their assignments as professors and instructors. The University faculty role ultimately crystalized as a supplier of technical assistance when requests were made. In only a few instances did a unit or a professor volunteer its/his/her services or ideas in the absence of a request from the schools through the Collaborative Office.

Parents

The formally organized parent groups at the school building level, the REPC's were not directly influential in the pairing, with a few exceptions. At best, REPC's stimulated action and monitored implementation. There were variations, but most were only reactive to projects developed by the schools and the University.

CDAC, the community council at the District level, consistently participated in the planning, development, and evaluation of programs funded by 636 money, and was involved or concerned to a lesser extent with non-636 activities.

Especially in the early years, parent members of CDAC focused on the equitable distribution of resources. The CDAC was proactive on only a few occasions. Its usual role was that of reviewer, interrogator, prioritizer, and finally supporter of project ideas presented by Ruth Palmer, or the University Coordinator. These two usually backed each other and appeared to plan together.

The above comments should not be interpreted to mean that CDAC played a weak role in the District. CDAC faced unprecedented problems in conforming to the Court Order and building cohesion in the artificial community created by the Judge. In the face of these and other problems, CDAC was usually willing to endorse the efforts of the schools and University.

The clearest example of CDAC's power also demonstrates the indirect connections with the pairing. After more than four years of trying, the University Coordinator became frustrated at the lack of meaningful impact in the High School. She sent a formal memo describing her feelings to the Headmaster, and requested his reaction. His response was to terminate formal relationships with the University. Shortly after, CDAC also expressed concern with the general effectiveness of the High School and asked for hard data in response to a series of questions (e.g., SAT scores, percent of failures in Grade Nine). This conflict culminated at the level of the School Superintendent, who publicly supported the Headmaster but ordered drastic changes in the organizational structure of the High School.

The Headmaster, and other school personnel at the High School, saw CDAC and the University (at least the University Coordinator) as indistinguishable allies. While not accurate, some perceived the Coordinator's letter and CDAC's request as two steps in a well-planned conspiracy.

CDAC's right to raise questions was verified in the process and its power to generate review at higher levels was affirmed. While this event has been recent, it appears that school people, especially administrators, now attribute power

to CDAC, and the threat of its use may affect the future actions of the schools.

Within CDAC, the most powerful role over time was that of the Community Coordinator, a paid staff position. The second Coordinator served only for six months, but had a powerful impact and strengthened the role in ways continued by the present incumbent. For the last three of the five years of this study, the influence of the Coordinator grew significantly, partly because the job became full-time and was occupied continuously by the same person. The CDAC Chairperson's role, on the other hand, remained weaker because it was part-time and temporary, by Court Order. Strong individuals served as Chairperson, but only for one-year terms.

The role of the parents in the pairing can best by described as person-centered. While the REPC's and CDAC's power was formally constrained, there were ten or more individuals from the community whose power and influence grew greatly as a result of serially occupying various formal roles. Tracing the "careers" of these figures reveals that they filled formal positions each year of the collaboration, moving from a seat on a REPC, to CDAC, back to another REPC, to a paid position as aide, monitor or coordinator, and to membership on CPAC or some other city-wide group. The opposite is not true: no powerful figure emerged who did not first occupy legitimate roles in a series of formally prescribed community organizations.

Incentives/Disincentives

Since the Court Order mandated inter-institutional collaboration, it might be inferred that University, school and parent groups came together mainly out of fear of contempt of court charges which might result from their refusal to participate. The University President, at least, proclaimed more positive motives agreeing to cooperate with the schools. There was no corresponding official expressions of commitment from school officials. Thus, with only minimal support

from their leaders, the three parties began the collaboration, motivated primarily by desires to avoid legal complications.

Disincentives to collaboration for participants surfaced immediately, during the summer-workshops. The partners had little first-hand experience with each other, and thus did not openly label each other as enemies, but covert feelings of this sort were clearly present. Some of the suspicion that the others were their enemies arose out of the positions attributed by each to the others concerning racial desegregation, rather than collaboration.

The teachers and other school people were uniform in opposing the desegregation provisions of the Court Order, but resigned to it. Parents' attitudes ranged much more widely, from strong support to strong opposition. Both teachers and parents perceived the University as liberal and overtly supportive of desegregation.

Beyond these contradictory attitudes toward desegregation, other perceptions were as one might expect. Teachers and parents defined University people as outsiders, some "liberal reformers" and others as persons who "meant well" but would blunder because "they don't understand the way we do things." A few parents suspected the motives of the University people. Even five years later, one parent recalled: "Going way back to the very beginning, I really had a great deal of negative input toward the University...A proposal was before us in which there was no mechanism by which we could check what they were doing because everything - salaries and everything - was so vague. It seems to me that they were using the kids to better their lot."

On the other hand, teachers and professors, especially professors of education, felt some affinity for each other and regarded parents as potentially hostile outsiders who didn't understand how education works and would be unrealistic in their demands. One teacher said, for instance, "These parents don't realize that this is a small group of parents who care. It's not their kids who are trouble. They don't know how tough it is with other kids." However, teachers also rejected

a strong alliance with parents because they did not share parents' commitment to the community. Originally, teachers and other school people felt primary allegiance to the city school system. They believed that they could transfer easily to another district, if they wished, and that their career prospects resided in the school system, not the community or District.

All three partners perceived the University as possessing immense power, but University representatives rejected this as a myth. Many University participants saw the summer workshop as an occasion to meet and get to know each other since they had rarely worked together before, especially the representatives from various schools and colleges within the University. Professors discovered that each was expert in a narrow field, and that even collectively, their power and their joint knowledge were fragmentary and not equal to the overwhelming task they faced. However, they would not publicly admit their lack of omniscience or their sense of the overwhelming dimensions of the problems facing the pairing. As the parent quoted above sensed, the professors were concerned with the salaries they would receive for their services to the District. Self-preservation dominated their thoughts, as it did the thoughts of parents and teachers.

Over time, the teachers began to see the usefulness of obtaining help, including materials and supplies, from a source other than their own organization, and possibilities of implementing ideas which they had been prevented from testing through useful channels. These factors remained incentives for teachers through the five year period. For the most part, teachers favored projects which provided them with released time. It is a tribute to the teachers that some of them attempted to help pupils through the pairing even though no apparent benefits came to them for their efforts.

The major disincentive for teachers was job insecurity. Since the pairing occurred simultaneously with declining enrollments, tighter economic conditions and reductions-in-force in the school system, teachers sometimes resisted the intrusion of the University, fearing that free services from that

source might cause further erosion of jobs in the District. There were times when the Teachers' Union acted as a disincentive for the teachers' participation in pairing. Because of the concern for job security, exacerbated during contract negotiations, the Union insisted on literal intepretations of contract terms. For example, for a period the teachers felt unable to stay at school one minute beyond the time specified in the contract. This behavior effectively limited meetings and workshops sponsored by the pairing.

The other key participants, the individual professors, had few incentives other than personal desires to be useful or to use the schools as laboratories for the field testing of his or her ideas. There were some attempts, usually rebuffed by the Collaborative Director, to exploit the District, its teachers, and its students by exaggerating the involvement of minorities in a project in order to be successful in grant proposals. However, no individual professor profited monetarily from involvement. Some were paid for their work, in order to compensate them for other paid activities foregone; their total paychecks remained the same but came from a wider variety of sources, with no financial gain for the individual.

The disincentives for the individual professor were greater than the inventives. There were no institutional rewards for participation, even non-monetarily. Service in the pairing did not reduce teaching or advising loads except for the few a portion of whose time was transferred to the Collaborative budget. Service in the pairing was of no special consequence in tenure, promotion, or merit pay decisions. Those who stayed in the ivory tower, taught, and published were those who were rewarded: pairing activities counted for little. For all but the very naive and the very secure, this was a powerful disincentive at a time when the faculty was shrinking due to declining enrollments and more rigorous tenure review. A less powerful disincentive was the difficulty of collaboration across units of the University. Such cooperation had been infrequent prior to the pairing.

Specialization and competition seemed to be the dominant values, rather than generalism and collaboration.

Knowledge Exchange

It is not easy to trace knowledge exchange in these projects, since this pairing was not "project"-oriented. It was characterized by a high degree of intermingling of sources, agencies, and people in each activity, and by a high reliance on technical assistance rather than the impact of specific sets of materials. But examining the pairing as a whole rather than looking separately at the individual projects, it becomes clear that important knowledge exchange did occur in two ways: at intergroup meetings and as criteria in judging individuals.

At all meetings of the three groups and in meetings attended only by school and University personnel, knowledge exchange occurred. Especially in the small groups during the summer workshop (the mode was twelve members, drawn equally from the three constituencies), University personnel offered research knowledge, school people contributed craft knowledge, and parents supplied situational knowledge. This knowledge transfer was helpful to all parties at the stage of proposal evaluation. Some proposals sere unanimously rejected by the three parties because they did not satisfy the knowledge criteria of one or more of them. Those that received approval met or approached the standards of all three partners.

The individual value of participants also depended in large part on their ability to exchange appropriate knowledge. For example, the ideal professor was characterized by informants as contributing 65% research knowledge, 26% craft knowledge, and 10% situational knowledge. All professors whose contributions were valued by school staff would roughly fit this profile. Those who did not fit the profile and failed did not continue in the pairing. Some professors possessed considerable research knowledge, but it was useless since their lack of craft knowledge made communication and translation to the classroom difficult. While only a little is needed, some situational knowledge helped

effective academics make appropriate assumptions about students and their environments and teachers and their environments. It is significant that some who understood the situation very well were not valued unless they also brought useful research or craft information. The same could be said if a professor's craft knowledge was similar in scope to the teachers'.

In a parallel way, professors found that their most successful interactions were with teachers who possessed considerable craft knowledge but also understood and valued research knowledge and could comprehend the University situation within which the professor was working.

Those parents were most valued who had situational knowledge, especially about selling ideas and gaining approval for projects in the community and in the school bureaucracy. It was also essential for successful collaboration that a parent know the craft of education at a gross level, and appreciate the value of research. As was true for professors and teachers, parents who were unidimensional, no matter how strong their base of knowledge of one type, were not continuously useful to the pairing.

Conclusion

This is an example of successful collaboration. The University, the schools, and the parents grew to respect each others' contributions. A collaborative mood now exists, as well as ease of access for all parties to each other. Many individuals, if not most, express frustration at the limited success they feel they have achieved, but if one examines the pairing span, the results are impressive. The schools are delivering programs more effectively, and problem identification and planning now occur in a vigorous and healthy manner. The best indication of successful collaboration is that the pairing is institutionalized and is therefore likely to continue even if 636 funds disappear.

B. DUNFEY UNIVERSITY AND DISTRICT B - COLLABORATION

1. Overview

During the first year of the Court-ordered school/university pairings, U.S. District Judge W. Arthur Garrity, Jr. wanted the paired universities to concentrate on magnet schools. As a result, Dunfey University gave its attention to Henry Reid High School. It was stated to be the biggest high school in Boston with a capacity of 2500 students. Henry Reid was under construction in 1975-76 in the Norwalk neighborhood, just south of the University campus. The school opened in temporary facilities in that first year. Dunfey's pairing, therefore, was initiated in a brand new school that faced significant challenges.

In the following year (1976-77) Dunfey began full collaborative activities with Boston's School District B. District B is unique among the City's school districts with respect to its communities' size and cultural/social heterogeneity. The District extends across a broad cross-section of the city from Norwalk, its southern border, to Hoover, its northernmost neighborhood. With respect to ethnic and social class composition, District B includes Norwalk (essentially black and low to middle socioeconomic class), Newtown (a densely populated and economically hard-pressed Chinese-American neighborhood), Hoover (mainly white and Italian), Light Hill (a wealthy, white enclave), Easton (with a large Latino and black population, and a sprinkling of white professionals returning to the City), and smaller groups of Greeks, Armenians, Cape Verdians, Irish, and Native Americans.

In the current year, 1979-80, the District has a total of 5,245 students. Of that total, 41% is black, 22% is white, 2-% is Asian, 17% Hispanic, and only a few are native Americans. The percentage of black students has increased slightly from a low of 39% since court-ordered desegregation in 1975-76. The percentage of white students, however, has steadily decreased since 1975.

In 1975, there were 2,365 white students, which was approximately 34% of the total number of students. In contrast to the decreasing percentage of white students, Asian and Hispanic students have increased proportionately. In 1976, the first year for which figures are available in these categories, there were 997 Asian students, or 15% of the District's pupil population. Today that figure is 20%. In 1976-77, there were 942 Hispanic students, roughly 14% of the population; today it is 17%.

Dunfey University

"Dunfey University is a community service institution which...tries to apply its energies and facilities to educational enterprises that will yield maximum advantages to the community," said Robert Marsten in a book entitled Origin and Development of Dunfey University. Dunfey was established in 1898 as the Evening Institute of the Boston YMCA in response to specific educational needs in Boston which were not being met by existing colleges. The Evening Institute accepted working male students, including those without high school diplomas. Though initially confronted by scepticism and resistance from New England's conservative educational thinkers, Dunfey continued to define its mission in terms of providing a practical education for Boston's working class students as well as providing services to its surrounding community.

Today, Dunfey is one of the largest private universities in the world, enrolling approximately 50,000 students. Located near the center of Boston, the University is comprised of nine colleges and professional schools offering degrees ranging from the Associate's to the Ph.D., in many disciplines. The University is best known for its program of cooperative education -- a program that combines alternate quarters of on-campus study with quarters of paid work in fields of the student's choice. Students participating in cooperative education are able to finance a substantial portion of their college education while gaining on-the-job training in the world of work. The cooperative education program also requires a concrete link between the University's educational program

and the economic life of the city.

Dunfey is primarily a teaching institution and only recently has grown with respect to research productivity. Currently, however, it places a great emphasis on the research productivity of its faculty and administrative staff. In the last twenty years, research contracts and grants have risen from a total of $1 million to $9.5 million annually.

Dunfey is unique among Boston's universities in terms of its location: it is adjacent to Boston's largest black community where over 100,000 black people reside in an area stretching for several miles to the east and south. Although the Boston Museum, Boston's Music Center, and several other educational and cultural institutions are in Dunfey's front yard, its back yard is black. Given the location, character, and size of Dunfey, it is not surprising that this University would feel the need to make a significant contribution to its surrounding community. In testimony given to a Congressional Committee, the President of Dunfey spoke optimistically about opportunities for collaboration among the city's government, its residents, and its urban universities. In supporting his claim to optimism the President cited a number of examples from Dunfey's history of collaboration with its surrounding community, including developing a course for housing development project residents, planning a system for storing and organizing police records, and working with police on a citizen participation program.

With respect to the court-ordered collaboration between Dunfey and District B, Dunfey established the Office of the City Schools Collaborative in August 1975. The City Schools Collaborative Office (CSCO) was established as an administrative office under the overall direction of the Senior Vice President for Administrative Services. In this manner, CSCO became a University-wide agency rather than a component of a single college or department. Also, by placing the new office under the aegis of the University's Administrative Services, the signal was given that it would draw upon human and physical resources

from a diverse range of academic and nonacademic departments. A professor of education, Dr. Tom Burns, previously a school superintendent in Michigan, was appointed the first Director of CSCO. Dr. Burns continues to serve in that capacity.

From the beginning of the Court-ordered school/university pairings, Dunfey personnel played important leadership roles. When the Masters of the Court invited the college presidents on March 14, 1975, to voice their reactions to the proposed pairings scheme, it was the then-President of Dunfey who called a follow-up meeting of his peers to discuss their responses. Dunfey's President was also the first Chairman of the Presidents' Steering Committee, and his successor at Dunfey, Philip Connor, became Chairman of that Committee two years later. Among the coordinators of the school/university pairings, Dunfey's Dr. Burns was continuously influential in the deliberations of the Coordinators' Group, and was its chairman during 1978-79.

The Dunfey-District B pairing operated within an administrative framework in which parallel administrative/personnel structures existed in the school and university sectors. The structure culminated in a collaborative relationship between the District Superintendent and the University Coordinator. The middle management levels consisted of the principals and District Office staff within the schools, and on the university side, the Assistant to the University Coordinator.

With respect to interorganizational communication, the two sides of middle management regularly interacted with each other. The University Coordinator also had much contact with the schools' middle managers, although mostly to the end of clarifying operations. Unlike his communication with the District Superintendent, it did not involve policy-making. The third tier of the arrangement consisted of direct service staff, including teachers and University consultants. University consultants usually had no managerial responsibility. Individual concerns regarding project functioning at the service delivery level were usually channeled upward from the individual's home-based institution and

shared at the middle management level between the two organizations. Middle managers were free to resolve their concerns with their counterparts in the other organization. The community/parent organization was disconnected from this parallel structure, interfacing with it cyclically, specifically during the proposal approval process in the late winter and early spring.

METHODOLOGY

This case study derives primarily from in-depth analyses of four pairing projects implemented over the past five years. These projects are a sample of pairing activities over that period of time. A number of factors influenced the selection of these particular projects. First, it was decided that the four selected should represent different specific content areas, to permit comparisons among different projects within each case as well as across the three cases comprising the overall study. The specified content areas included: a) a project designed to promote educational equity, b) a project designed to improve basic skills and, c) a physical education project. For the Dunfey pairing, the equity project selected was the Multicultural Curriculum Project; basic skills projects included the Basic Reading Skills Programs and the Student Publications Projects; and, the Physical Education Project at Henry Reid High School filled the final slot.

In addition to this criterion, projects selected also varied with respect to size and scope and their different points of origin in the pairing's history. With respect to project size and scope, the Basic Reading Skills Project and the Multicultural Curriculum Project are District-wide efforts, while the Student Publication Project is limited to five schools and the Physical Education Project involved only the High School. The Reading Project commenced in the pairing's first year while the Multicultural Project and the Student Publications began in the pairing's third year. The Physical Education Project is different in that it occurred with a school, Henry Reid, that is not part of District B, but assigned to District H, the city-side Magnet District. Dunfey-Magnet High School collaboration began one year before the University's pairing with District B. This particular project started in the fourth year of the pairing between the University and the High School.

In addition to these four projects, a fifth "project" is included. This

fifth project is a compilation of all school-University activities initiated during the pairing's five year history that were not directly supported by Chapter 636 funds. This fifth description appears to provide an indication of the full range of pairing activities, particularly those not formally mentioned under the aegis of Chapter 636.

With the exception of the fifth project, the primary means of data collection consisted of semi-structured interviews with a sample of project participants. In addition to these interviews, the case writer had access to project-related documents and attended project and policy meetings during the year in which the study was conducted. Data regarding the fifth project consisted primarily of documentary evidence and interviews with the University Coordinator.

Interviews with project participants focused on capturing their history of involvement with the specific project, their responsibilities within the project, and their perceptions of project goals, interorganizational arrangements, knowledge utilization processes, and project outcomes. Participants interviewed were selected from each of the three sectors of the pairing's interorganizational structure: University personnel, school personnel, and parents. In addition, several key respondents were selected who had a broader overview of the pairing's activities. These included the University Coordinator, the District Superintendent, the District 636 Facilitator, and the Associate Director of the parents and community group. As with project participants, these respondents represent the three sectors of the interorganizational arrangement. In most cases, interviews were tape recorded and transcribed. One participant did not wish to have the interview recorded, and in several cases information from interviews could be readily obtained without transcription.

A range of documents supplemented the interview data. These documents included draft and final project proposals, formal project evaluations, internal and inter-office memoranda, and minutes of policy group meetings. In

addition, the case writer attended Advisory Board and project meetings during the year of the study to provide for him a reality-based context for interpreting the documents.

2. Project 1: Multicultural Curriculum Project
Dunfey University - District B

The Multicultural Social Science Curriculum Project was a major component of the Dunfey-District B collaborative. It was funded for a total of $103,098 in the FY 79. Of this, the District B Office allocated $31,577, or half of the District's 636 budget for the year. During FY 79, Dunfey University received approximately an additional $45,000 to proceed with the Multicultural Project and several other smaller ones. BEEO approved these funds on the basis of a proposal submitted by the District B/Dunfey Advisory Board.

The Multicultural Project was intended to serve the District's professional staff of 249 teachers, assistant teachers, and aides. The project was also aimed at a total of 4,985 pupils in grades K-8. Of the students, 25% were white, 40% were black, and 35% were "other minority." No parallel figures are available concerning the professional staff.

The Multicultural Project aimed at revising the Boston Public School's 1970 Social Science Curriculum Guide. The 1970 Guide provided background information and lesson plans on seven ethnic groups residing in the Greater Boston area: Afro-Americans, Native Americans, Chinese, Irish, Italian, Jewish, and Puerto Rican. The revision was intended to provide updated information and contemporary resources and lessons for the study of these seven ethnic groups. For example, project staff rewrote and modernized the treatment of Native Americans' perceptions of Thanksgiving Day celebrations. From a Native American perspective, Thanksgiving is not a day of celebration, but of peaceful mourning. These newer perspectives about and from the seven ethnic groups were to be included in the teacher-oriented materials provided in a planned Curriculum Guide.

The work of this project was completed by a Curriculum Development Committee. Its tasks included:

1) hands-on construction of relevant materials for classroom use;
2) sharing of ideas among teachers for classroom activities;
3) demonstration classes;
4) techniques for the integration of basic skills in the social studies area;
5) development of social studies materials for individual needs, e.g., enrichment level materials and activities for average and above-average learners, including bilingual and special needs students;
6) full implementation of the present social studies curriculum;
7) development and dissemination of learning packets for teachers;
8) continuous involvement and dissemination of information;
9) printing and distribution of a supplementary guide to each District C teacher.

The Committee consisted of one teacher from each school in the District. In addition to having a majority of teachers as members, it included one elementary and one middle school principal, two parents participating on a rotating basis, two District B staff members, one Dunfey University staff member, and resource consultants as needed. This Curriculum Development Committee met monthly between September 1978 and May 1979. In these meetings, the Committee members were expected to:

A) participate in information-sharing sessions;
B) observe demonstrations of exemplary social science programs in the District B area;
C) develop social studies lesson plans at each grade level with assistance from technical advisors;
D) provide input for the further development of classroom and resource materials;
E) receive suggestions and assistance from advisors on the integration of multicultural, multiethnic themes into other instructional areas.

During 1978-79, the Curriculum Committee produced 85 lesson plans: 15 Native American, 15 Afro-American, 9 Jewish American, 13 Irish American, 10 Puerto Rican, 7 Italian American, 8 Chinese American, and 8 supplementary lessons. Each lesson plan contained specific activities and supplementary materials. The learning packets also included support materials for teachers' use, such as ditto masters and transparencies. The Curriculum Committee met once a month, for a full day, eight times over the academic year. During most of the meetings the group heard from an ethnic consultant who provided information relative to the

ethnic group under discussion that day. After an approximately 1½ hour lecture/ discussion, the group broke up into small workgroups according to grade level. They reconvened after lunch to write lessons related to the material discussed and presented in the morning. At the end of each day, the lessons were turned in to the co-chairpersons who gave them to a Curriculum Consultant for review and editorial revision. Two of the eight monthly sessions were primarily devoted to organizational issues and did not include ethnic consultant presentations.

The 1978-79 Project proposal referred to an October, 1977 District-wide needs assessment as the basis for initiating the Project itself. It is not immediately apparent, however, that this needs assessment documents any strong interest in multicultural curriculum development. The proposal states that 99% of teachers feel that social studies is an "important" area. However, the assessments document itself says that 58% of teachers feel that social studies is "very important," as compared to 99%, 96%, and 94% "very important" for reading, math, and English, respectively. Also the needs assessment shows that 73% of teachers and 70% of parents feel that social studies is taught successfully, and that they designate other subjects as requiring improvement.

In providing a rationale for the project the proposal states that 93.6% of the teachers and 80% of the parents surveyed feel that democratic values are very important but need to be taught more effectively. The proposal states also that 88% of the teachers and 70% of the parents advocate learning more about other peoples' customs. It concludes that inaccurate and unrealistic perceptions of ethnic and racial matters continues isolation and misunderstanding among groups in the District, and that the needs assessment demonstrates the community's concern over these conditions.

Most persons familiar with the origins of the project cite the needs assessment as the primary rationale for designing the social studies project. For example, Tom Burns, Director of the City Schools Collaborative, claimed that the survey indicated the need for multicultural curriculum development. However,

he also expressed some confusion about how this particular need had been selected for attention out of all the others identified in the needs assessment. Prior to the assessment, the Community District Superintendent had asked principals to brainstorm a list of needs. Mr. Burns recalled that among the list produced was one that called for increased multicultural awareness, and noted that state 636 guidelines identify priorities parallel to those the Multicultural Project was designed to address, including teacher training and curriculum development. The District 636 Coordinator felt that the idea for the project originated in the University, although she did not name Tom Burns as its protagonist. Two other District staff members felt that the idea evolved out of a consensus among members of the Advisory Committee.

Pairing Leaders' Perspectives on Project Goals

The original proposal provided enough range for different people to emphasize contrasting aspects of the project's intentions. Tom Burns saw it as a direct service to both teachers and students with respect to cultural awareness. He felt that the project would expand in waves, starting with a small cadre of involved teachers, then all of the teachers in District B, and finally all of the students of those teachers. He believed that cognitive information about cultural differences is a key to producing attitudinal change in the direction of intercultural and interracial understanding. Burns further believed that the project should emphasize the value of differences as a strategy for influencing attitudes favorably. He was especially mistrustful of approaches that highlighted only cultural similarities among divergent groups of people, although many teachers held this more assimilationist perspective. He tried to limit its role in the curriculum, although he was unable to eradicate it completely.

The teacher interviewed for this report expressed the similar belief that information given to students would help them to achieve intercultural and interracial understanding. But she was a little more cautious in her expectations of what teachers can do to influence deep-seated attitudes. She

felt that teachers could provide more intercultural understanding by themselves modeling respect for cultural differences, and that such modeling by the teacher makes it difficult for students to counter with negative feelings. She also felt that through skillfully led discussions of sensitive issues children can learn new patterns of positive interaction.

The Assistant Director of the City Schools Collaborative saw the project as a means of fostering better understanding among diverse ethnic groups. But she also wanted the curriculum to help reduce the disparity in academic achievement among students in the District. She noted that the curriculum guide would extend the old guide to grades seven and eight, which were not included in the original curriculum guide. She felt that the content should emphasize cultural similarities to help both teachers and students realize that there are things about people other than their ethnic group membership. She hoped the project would help teachers proceed beyond ethnicity in dealing with children, and help children see beyond ethnicity in dealing with each other. She also felt it was important that the curriculum make clear that broad differences exist among members of any one ethnic group.

The 636 Curriculum Coordinator felt that emphasis should be placed on encouraging teacher use of the updated multicultural curriculum guide that emerged. She felt that extensive writing and rewriting of lesson plans was unnecessary, because the old curriculum guide contained sufficient content and because the important need was for teachers to learn how to use the guide in their classrooms. The 636 Facilitator also felt that the curriculum guide would foster interethnic understanding.

The Curriculum and Ethnic Consultant to the Curriculum Development Committee, a University appointee, insisted that the primary objective of the project was to develop curriculum and to field test that curriculum as a step towards producing a usable guide for the District. He felt that the product of the group should be evaluated in terms of their use in the classrooms.

Participants' Perspectives on Project Operation

All participants interviewed agreed that the project suffered from lack of time. The Curriculum Consultant noted that there was not enough time to develop an effective curriculum package. To develop such a package, it is important to field test materials that are written by teachers. The Curriculum Consultant also felt that, while it was useful for parents to attend and participate, it was also very difficult for one parent to do so alone because it was not clear whom he/she was representing. He also noted some difficulties in administration of the project, including conflicts among project leaders over responsibilities. There were at least three designated leaders of this project: the Assistant Director of City Schools Collaborative; the 636 Coordinator, and the 636 Facilitator. The Consultant himself was perceived by others as part of the administrative leadership team, although he did not feel himself a part of that structure. Also, a staff member of the District B Office attended curriculum development meetings regularly. He was seen by the teachers as exercising leadership in these settings.

The Curriculum Consultant also felt that the proposal was very vague and contained only a broad outline with few specifics of what the group's task was. Not everyone agreed that the proposal is vague. Most, however, acknowledge that it is very, very ambitious, given the resources available to the Committee. The Curriculum Consultant reported that only a small number of teachers, perhaps 50%, participated regularly in meetings. He reported that the lessons produced by the group are very uneven in quality and that an extraordinary amoung of work was required of him to revise the drafts submitted to him. He was unconvinced about the quality of the Committee's work but felt this could be rectified through field testing of the materials and subsequent revision of the curriculum package.

The Assistant Director believed that the project's goals were overly ambitious, given the time and money available to the Committee, but that the Committee had been eventually able to develop lesson plans for each of the seven ethnic groups. She felt that practice was responsible for increasing the Committee's efficiency, and that this increased productivity directly influenced teacher motivation and morale and enthusiasm. According to her, the Curriculum Consultant was partially responsible for some of the Committee's initial difficulties because he did not get the materials revised and back in time for the teachers to do field testing. She also suspected that parents did not understand what they were supposed to provide. She noted that as time went on parents were more and more able to participate. However, this change did not occur as a result of an orientation for them, but as a result of improved selection of individuals prepared to participate in this work. Therefore, in the latter months of the project parents who had teaching and other professional experience were invited and soon participated almost as consultants to the group.

A teacher who participated in the project expressed particular alarm at the fact that there had been no orientation. The group's first meeting was a workshop on Native American history and culture. It was planned that teachers would immediately use the information presented to them in lessons that they were to develop. No format was established for writing the lesson plans at the end of their first day. The teacher further complained that the Committee's early progress suffered from the very emotional presentation of the Native American consultants. Apparently the first session departed from the agenda originally set between the consultants and the project administrators, developing into a very accusatory attack on teachers and schools. She was knowledgeable about Native American art, and she was aware of the superficiality of the coverage of that subject during the ethnic consultants' presentation. In addition to these initial difficulties, she noted that thorough curriculum writing could really not be done within the limits

established in the project. There simply was not enough time. She also felt that the lesson plan format finally adopted was very confusing.

The 636 Coordinator and Co-chairperson of the Curriculum Development Committee also had difficulty with the overall structure and format of the Curriculum Committee meetings. She felt that, given the constraints on time, the Committee spent too much time developing lesson plans and not enough identifying contemporary and good multicultural resource materials. She also felt that the teachers needed an established lesson plan format, which was not provided initially. She was encouraged during the second meeting when the Committee reviewed the lesson plan format used in the original Curriculum guide. She also noted that the University did not have access to the expertise that she expected it to have. Especially ethnic group consultants did not come from Dunfey University, but from other sources.

Knowledge Exchange and Transfer

It is easier to identify knowledge exchange and transfer during implementation than during the planning process. Almost all of the interviewees noted that the original idea of the project seems to have evolved from consensus among the different partipants. Despite this consensus, actual implementation necessitated the delineation of priorities among the tasks laid out in the proposal. This selection process highlighted four people's diverging and converging goals, as well as their sometimes conflicting efforts to influence that process.

In the earliest planning stages, attempts were made to contact external sources for information about curriculum design, specifically multicultural curriculum design. The Director indicated that an extensive effort occurred to contact school districts across the country that would send curriculum guides to the District B office. The Project currently has a library of much of the curriculum material eventually forwarded to them. It is not clear, however, how much of this material was actually used, although teachers could consult

it during the curriculum development workshops. In addition to curriculum materials the Project also owns several articles of a more theoretical nature published by ERIC. Again, it is not clear if these were used by project participants.

Tom Burns, the Director, feels that although the most significant amount of knowledge transferred flowed from ethnic consultants to participating teachers, knowledge was also exchanged between teachers and University personnel. For instance, much of the structure of the curriculum packet is a result of teacher input. He feels the tactic of placing prepared ditto masters and transparencies at teachers' fingertips evolved directly from interactions with the teachers as they expressed their needs. Personally, he would have given more attention to unit development in terms of ideas, permitting teachers to develop such themes further on their own. However, he feels he subordinated this preference to the one overwhelmingly expressed by teachers.

In addition to the cultural, historical, and social information about the ethnic groups provided by the ethnic consultants, the Curriculum Consultant feels that there was a need for a theoretical framework related to curriculum development that never clearly emerged. He feels that the Curriculum Committee should have examined interdisciplinary approaches to teaching social studies, and that it could have employed a "concept" approach, examining how ideas such as social protest, employment, immigration, etc., are related to a range of ethnic groups. In his view there are various disciplines -- history, geography, economics -- that are not being taught on certain grade levels and/or with respect to certain ethnic groups. The final units also avoid certain concepts: e.g., protest. He believes it would have been more valuable to develop model lessons for a few groups than full sets of mediocre units for all seven groups. He senses that he did not prevail because he was part-time and removed from the decision-making process. However, within the Curriculum Committee's activities, he was able to address some of his concerns. For example, he conducted a special session for the Committee members on problems related to

the theoretical and practical gaps in the curriculum packet. He also gave a presentation on lesson plan development, using Afro-American background for lessons.

However, as one of the teachers emphasized, due to the task orientation and the lack of time, participants often came to Committee meetings with pre-conceived activities. In that sense, as one of the teachers put it, the ethnic consultants were a partial intrusion. The Curriculum Consultant noted that the Committee had access to a variety of reference books, and that he himself provided reference material during his presentations. However, he didn't feel the teachers were exploiting these materials in an appropriate manner because they had not been thoroughly introduced to it, and because they had so much verbal material to assimilate from each ethnic consultant's presentation, and so much work to do in developing lesson plans on the basis of both sources of information.

In response to a question about his own teaching experience, the Consultant indicated that, although he had substantial teaching experience in multicultural education, he had felt it inappropriate to deal with that aspect of his background in his dealings with the Committee. He took the tack that as a consultant he should present a theoretical rather than a personal perspective. He also attempted to provide a model for all ethnic consultants to use in presenting to the Committee. However, his model was not adopted by the others.

The 636 Facilitator felt that she represented the school system's point of view. She had originally been concerned that this particular role would limit her perspective and ability to contribute, so at times she self-consciously devil's advocated vis a vis other school personnel, adopting what she thought would be the perspective of the University. She felt she was able to do this because she had worked closely with the University prior to becoming more involved with the pairing project. She was one of the teachers involved in the needs assessment project which received help from Tom Burn's office. Prior to that she

had also worked with the University enough to feel aware of how academic types think and behave. She felt that she learned quite a bit from the Curriculum Consultant.

One possible descriptor of the kind of knowledge both transferred and received in this project is "incomplete". The teachers on the Committee were not completely informed about their task although apparently the Assistant Director was supposed to have done this. She restricted herself to the transfer of logistical information, and given the requirements of that task, felt that the theoretical issues related to it would have to wait. She ways that she had gathered that kind of information, and that it was "at my finger tips, but we had too much trouble doing what we were doing". She felt that she could have used more assistance translating ethnic background material into lesson plans. She and others would often come to the workshops with preconceived notions of activities they wanted to develop and would continue to develop those regardless of input provided by the ethnic consultant for that day. She felt that this strategy was necessary because of the pressure on project members to produce materials in a short amount of time. She also believed that she was able to make a number of suggestions to the workshop organizers. For example, she informed them about a Native American consultant whom the Committee eventually used as a follow-up to their first session. She also recommended a parent as a consultant during the Irish-American presentation. Toward the end of the year, several parents began to serve as resource persons, supplementing the ethnic consultants. The Jewish-American, Chinese-American, and Italian-American parents all served in this capacity.

3. Project 2: Student Publication Project
Dunfey University - District B

The Dunfey-District B Student Publication Project is one of several sponsored by the Collaborative that are designed to promote better communications between home and school, among teachers, and among students. Although each of these projects had other primary objectives, improved communication was an important secondary goal. For example, the Collaborative sponsored a District Handbook for teachers and parents, a District B newsletter, and a series of anthologies showcasing student writing.

In 1978 six schools from the District agreed to purchase Dunfey University's services toward the publication of four issues of a school newspaper composed of students' writing. The cost for these services was $850 per school. The relatively small cost of this pairing activity is clear when contrasted with the $31,577 cost to the District for the Multicultural Curriculum Development Project (Project 1), or even the $16,023 expended in writing, printing, and distributing the District Handbook.

Staff for the student newspapers included one part-time Coordinator hired by the Collaborative Director and supervised by the Collaborative Assistant Director. At the rate of 11 hours per issue, and four issues per year, a total of less than 200 hours was allocated for this project. The Student Newspaper Coordinator worked with teacher volunteers in the schools that had purchased this service. The nature of the work varied greatly from school to school, a circumstance that will be discussed later.

The planners of this project intended to motivate students to write and read by seeing their own and other students' work in print. The needs assessment survey had indicated interest among teachers and parents of the District in student improvement in reading and writing. The planners intended that the development of reading and writing skills would occur in circumstances in

which meaningful end products were also being produced. They also hoped "to work intensively with other students in a variety of small group experiences, providing opportunities for student leadership, initiative, decision making, etc." The newspaper would be produced by students in work groups, with the assistance of a teacher volunteer.

The student newspaper was planned as an in-class activity. Anticipated project activities are described as follows:

> A class of students or a group of volunteers is selected based on interest, time, and commitment. In previous cases, a teacher volunteer used his/her own class time for writing and selection of materials. This structure made it possible for the teacher to help students individually with grammar and spelling mistakes. ...There will be a Halloween (October), Christmas (December), Valentine (February), and Spring (April) issue.... The articles will be chosen by a local student-teacher committee and a successful layout will be planned by each group. ...A part-time staff person...will oversee all publications and assist each school group with the set-up and operation of their particular publication.

In the (prior) 1977-78 school year, three schools in District B published student newspapers. Although this activity was not a formal collaborative undertaking, Dunfey did lend logistical support (printing and assistance in distribution) to the efforts. Tom Burns, Director of the Collaborative, had previous teaching experience using student materials in newspapers published by the schools. He believed that such projects motivate students to write more and to read the writing of their peers.

In the planning of the 1978-79 project, two groups strongly endorsed the idea of student publications: The District Advisory Committee (not the same as CDAC) and the principals' group, the latter composed of all the principals and headmasters of the schools in the District, meeting monthly at the District Office. The student newspaper idea built on several schools' current achievements and addressed the need for basic skill teaching articulated by the parents and teachers in the needs assessment and the emphasized 636 guidelines for the year. In these initial discussions (winter, 1978), the newspaper idea included the possibility that teachers would share their ideas with parents and that parents would be informed about the school through the paper.

Although the Advisory Committee (the group primarily responsible for honing ideas to be included in the final District proposal) developed consensus around these and other components, CDAC did not endorse the objectives of that group. Several Advisory Committee members noted that CDAC members did not attend Advisory Committee meetings although they had official standing on it.

When the first draft of the 1978-79 proposal was presented to CDAC they vetoed the School Publication component, approving instead a procedure whereby individual schools could buy into the program for the allocated costs ($850). This was the format included in the final proposal. Nonetheless, the CDAC Co-chair, Sue Tenney, did not approve this component of the 636 proposal in the final review at the District level.

CDAC's main difficulty with the Student Publication Project, from the beginning, has resolved around purported high staffing costs. CDAC is unenthusiastic about allocating money to be spent at the University's discretion to hire staff that do not seem to be delivering the quantity of services for the costs that CDAC expects. In this instance, Sue Tenney feels that the costs for buying Dunfey's services are too high. Indeed, the part-time Coordinator hired by the University to oversee the process agrees that the schools could do much better financially by publishing their paper outside Dunfey. A parent member of CDAC has suggested that the schools examine this possibility.

Although CDAC is suspicious about the costs to be charged by Dunfey for publishing the newspapers, it is even more wary of District-wide projects that channel large amounts of 636 money to the University while promising the District services of questionable quality. CDAC is in favor of the University offering services which individual schools would be free to buy or purchase elsewhere. CDAC members feel strongly that the 636 funds should be used primarily to redress inequities among the schools. That is, each school has a unique set of needs vis à vis the quantity and quality of specific

services its students require. Programs that supply resources uniformly across the District cannot satisfy the individual needs of each school. Further, programs receiving 636 funds are utilizing resources that might otherwise be directed toward the more important problems of the District. Basically, CDAC wants to expand the range of options the individual school can purchase with the 636 monies.

CDAC also sees the University as responsible for initiating and developing proposal ideas with input from the Advisory Committee, which includes only one CDAC member. CDAC felt that the Publication proposal was not as creative as it could have been. For example, one parent suggested that the newspapers be printed at the nearby Boston Technical High School, or by one of the vocational programs in graphic arts. She saw that as a tactic for getting more direct service to students for the money. This parent also noted that the proposal did not include provisions for the children to learn layout. In fact, this parent felt she could think of several more creative and cost-effective approaches for the Publications Project. For example, in addition to using the newspaper to promote reading and writing and to provide high school students with practical publishing experience, it could offer elementary and middle school students a range of career awareness experiences. She remarked also that the only chance she had to provide input was the final 636 review session. (Parents repeatedly complain that the red tape for becoming involved in pairing activities as a volunteer parent presents a challenge that often feels overwhelming. They feel they have neither the person-power nor the resources to operate on all the fronts expected of them.)

Program Implementation

Mary Hughes, the second and current Coordinator of the School Publications Project, expressed a number of concerns about the project's operation. During the 1978-79 year she felt a tendency of the University to try to impose

uniformity among the newspapers. There were several arguments over the inclusion/exclusion of photographs, the number of student drawings, the number of pages, etc. Hughes feels that the budget contains enough funds to accommodate the options requested by the individual schools. She is now given more latitude by the current Assistant Director, which she extends to the individual schools.

Hughes has tried to assist schools in using the newspaper. However, during the project's first year (1978-79), her role was more that of a facilities coordinator than a resource person to teachers and students. Still, she feels she managed to help several teachers solicit student materials. Where the teacher volunteers did not have layout skills, she would do the layout herself. Hughes also found that she could help to disseminate interesting ideas attempted with their students by one or two especially creative teacher volunteers. (For example, having student "reporters" cover an in-school softball game in gym, or juxtaposing student poetry with student art inspired by the poetry.) She discovered several designated "volunteers" who spent the year trying to work themselves out of the job. In these instances, there was little exchange of ideas.

The CDAC Co-chair, Sue Tenney, feels that a University should capitalize on its presumed expertise in staff development so that the school personnel become increasingly independent. Her perception of the University's operation of the student publications is that it promotes dependence. The Newspaper Coordinator agrees. She suggested conducting a workshop for teacher volunteers at the beginning of the second year. This did take place, and teachers had the opportunity to share experiences and ideas regarding soliciting materials and layout. Also, for the program's third year of operation, Hughes recommended that the proposal budget decrease time for her involvement in layout and increase responsibility for the school volunteers in this area.

Although there is significant sentiment for increased training and independence from the University for the teachers, the voluntary nature of the staff's involvement poses structural impediments to these promising ideas. To increase the time allocated to teachers' (and students') training, significant changes in the project's design and level of funding would be required. These changes do not appear likely given the numerous educational priorities to be addressed by a reduced level of 636 funding.

4. Project 3: Basic Skills Reading Program
Dunfey University - District B

The Basic Reading Skills Program began in the first year (1976-77) of the District B Collaborative and, with significant modifications, extended into the Collaborative's second year. During the first year the program consisted of a teacher training component and a Reading Clinic and tutorial outreach service to students. The teacher training component included a graduate course planned for 48 teachers from the District's thirteen schools and twenty hours of inservice workshops for teachers in the District. The second component involved direct service to approximately 600 selected students, including remedial reading instruction by Dunfey University reading clinicians and Dunfey undergraduate tutors. The Basic Reading Skills Program was significantly reduced during the second year of the collaborative and consisted of Reading Clinic and tutorial outreach to students from three of the District's schools.

The planning for the Basic Reading Skills Program in the winter and spring of the 1975-76 school year proceeded as a direct service to teachers and students without extensive input from the needs assessment that occurred during the same months. The eventual proposal summarized several pressing goals for the District to which the project was addressed, such as strengthening average students' basic reading skills, attending to the particular reading problems of bilingual and special needs students, and integrating achievement in reading with achievement in content areas (e.g., science, mathematics, and social studies).

Tom Burns, University Coordinator, asked Professor John Leary to shape a general programmatic response to these needs. Planning proceeded through successive drafts of alternatives and presentation of these to the University Pairing Planning Committee throughout the late winter and early spring of 1976. Throughout this process several program components that enjoyed broad and general

support among Committee members began to emerge: a graduate reading course, inservice workshops in reading, and direct remedial services to students.

Throughout this planning process the committee members could direct their attention to only the most general aspects of the proposal. Attention also had to be given to the other initiatives under consideration (i.e., workshops, newsletter, and needs assessment), as well as their relative merits, given the uncertain level of funding. For example, a specific concern raised by school personnel was how this new initiative in reading would mesh with other reading programs available on the schools (e.g., Title I, bilingual and ESL programs, 766 or special needs programs).

The Planning Committee was unable to specify how these various reading programs would be integrated but deferred this and other decisions by creating several ad hoc committees to address these problems during the implementation year. For example, a student selection committee of five reading specialists from District B, two members of the University Reading Department staff, and two parents would decide which students would be served by the Dunfey Program. The selection policy agreed upon would in effect determine the distribution of reading services for the District's students.

When the level of funding was determined, the specific content of the Program took shape. Funds were allocated for tuition for 48 teachers for a one-term-graduate course in reading to be taught by John Leary at the James school. The design for the inservice workshops for teachers was influenced by competing programmatic demands for available 636 funds. The original plan slated the Dunfey Reading Clinic staff to lead the workshops. However, the final decision called for the teachers in the graduate course to conduct the workshops for their colleagues back in the schools. This arrangement was less costly and minimally acceptable to the clinic staff, due to the high costs of the reading course ($12,810 in tuition alone) and clinician/tutorial services (to be discussed shortly) and their interest in establishing a cooperative, working relationship with the

District. The compromise cannot be directly associated with any particular interest group (e.g., school personnel, parents, or CDAC) but seemed to emerge as the planning group's response to competing claims for financial resources.

Finally, a clinical program was planned in which 600 students from the District would receive remedial reading instruction at the University's Reading Clinic. Seven or eight part-time clinicians from the Reading Clinic were scheduled to work approximately twenty hours per week, and Dunfey undergraduates on work-study were budgeted for 844 hours, at the total cost of approximately $66,000.

Implementation of the Basic Reading Skills Program encountered serious difficulties, although tremendous effort was devoted by all participants to remedy them. The University Pairing Committee was temporarily replaced by two committees that assumed responsibility for monitoring the program. There was a Teacher Training Committee, made up of elementary and middle school teachers, principals, representatives from the District B Office, and Dunfey University persons (Reading Clinic and CSCO staff). This Committee was responsible for continued planning and implementation of the teacher training components of the program. Second, there was a Clinic-Tutorial Service Committee with similar representation that was responsible for overseeing the direct service component of the program. The additional ad hoc committees envisioned in the original proposal were subsumed under one of these two.

TEACHER TRAINING COMPONENT: GRADUATE READING COURSE

Teachers enrolled in this course from all thirteen schools in the District. Although the budget allowed for 48 teachers in the course only 43 teachers signed up. Participants' initial expectations regarding the course were generally vague, but high when specific to their individual concerns and needs. The course was intended to be a programmatic response to a variety of the training needs of reading instructors, including bilingual, ESL, specific content areas, and special

needs reading teachers.

The course did not address this variety of needs as separate areas of study, but instead presented a general approach to reading instruction that teachers were expected to adapt to their specific concerns. The course was intended to help teachers learn how to diagnose, informally and individually, the strengths and weaknesses of the reading performance of each student; to form small instructional groups for reading/writing activities; to integrate reading instruction with content area subjects; and to collect and maintain individualized evaluative records.

The course's approach was perceived by the course instructor and the participating teachers as a specific model for reading instruction. The course instructor felt that his use of informal and individualized diagnosis and teaching reflects a unique psychology/philosophy of learning that is especially applicable to students who experience persistent difficulties in reading. He felt that Title I, controlled reading machines, and other so-called innovative reading methods are simply new packages of old programs that have proven ineffective in the past. He felt from the beginning that his approach would significantly challenge the teachers' assumptions about reading instruction, and that his style of teaching would reinforce this message. He viewed himself as a crusader who has had remarkable success when allowed to implement his program on his own terms. He is also aware, however, that he had not had much success in implementing his approach within the context of the Boston School Department's normal instructional operations. Still, he hoped that he might prevail within this new program and that, with support from principals and key administrative personnel, he might be able to initiate instructional changes in reading.

From the beginning of the course, teachers expressed doubt about its relevance to their needs and their situations. The 636 Facilitator who was enrolled in the course heard these reactions. She made two responses to

the comments: she appointed a committee to monitor the course and influence its content, and she established a written mechanism for the evaluation of the course session each week.

However, the teachers would not express their negative opinions on the feedback form. Informally, they reported that course content was not appropriate to their circumstances, particularly that the degree of individualized and small group instruction advocated by the professor left little room for what they felt were the required aspects of instruction (e.g., standardized testing of reading, ascertaining students' reading levels, etc.). However, the teachers' formal evaluations of the course were very high. With few exceptions, teachers rated the course content and the course leader's presentation as "good" to "excellent." The one aspect of the course that received less than positive feedback was "participant's involvement."

In retrospect, there are several possible reasons for the difference between teachers' formal and informal feedback. The first is the recipient of the informal feedback: the 636 Facilitor, Barbara Dunn, who was perceived as a colleague and whom they perhaps hoped would exert her political influence to institute changes vs. the course instructor, who was perceived as an "immovable object." Also, the teachers may have been unwilling to confront the authority of the course instructor, even anonymously, when they had so few answers to their difficulties themselves. The request for feedback at the end of each course session may have produced a halo effect through which the teachers felt more positive about what they had learned in the class but which was offset when they returned to their classrooms and encountered serious difficulties in application. Finally, the teachers may have felt that the formal feedback would concretize negative assessments not only of the course, but of the pairing itself and that the repercussions might extend beyond their original intentions.

Throughout the course, the instructor was ambivalent about the progress he and the group were making. The formal evaluations were generally positive,

teachers appeared to be learning a new and complex instructional system, and several teachers actually began to implement aspects of the reading program in their classrooms. Still, he was aware that a majority of teachers was unable to use the course's content in their classroom situations. When he felt teachers were skeptical of his program's capacity to produce the results they wanted, he would demonstrate (live and with videotape) the program in operation. Being familiar with the structural barriers to implementing his approach, he provided suggestions for how teachers might adapt features of their schools and classes to facilitate implementation.

Ultimately, he felt that there were two additional requirements for implementation that were not available to the 1976 group. The first was more time. Another quarter would give an opportunity to move beyond learning the system to the challenges of adapting it to their varying circumstances. Second, his theory of instructional changes depended heavily on administrative fiat. Although he was willing to rationalize and persuade, he was convinced that only an administrative order would lead to implementation on a large scale. He felt that he might reach a few teachers through the course, but even then its generalized and broad nature would prevent him from thoroughly supporting these teachers' initiatives.

This component of the Basic Reading Skills Program was not proposed for inclusion in the 1977-78 proposal. The 636 guidelines for 1977-78 did not allow for tuition payment with 636 funds. However, even before the guidelines appeared there was a general consensus among the University Pairing Planning Committee that this component could not compete with the other program options that were emerging.

TEACHER TRAINING: INSERVICE WORKSHOPS

The inservice workshop component of the Basic Reading Skills Program called for participants in the graduate course to conduct in-service reading workshops in their respective schools. The series occurred in all thirteen

schools in the District; 55 teachers completed the series, each receiving one inservice credit from the school system. Because the teachers who conducted the inservice workshops were themselves simultaneously learning the content in the course, significant difficulties emerged in transferring knowledge from the first setting to the second. It is not clear why the in-service workshops and the graduate course were conducted concurrently. Nevertheless, a few special provisions were made to facilitate knowledge transfer under these difficult circumstances. In-service workshop leaders received a detailed course guide which they were urged to use to structure the workshop sessions. Workshop leaders designed their own methods of presentation, however. Leaders could also request assistance from the Reading Clinic Staff although the nature of such requests had to be based on the overall design and content of the workshop series.

Evaluative data, compiled by the outside firm contracted to assess District B's 636 programs during the first year, suggest that the content and format of the inservice workshops varied widely from school to school. Some workshop leaders attempted to recreate the lectures given in the course. Others abandoned the course material entirely and held informal discussions in which teachers shared their ideas and approaches to the teaching of reading. A few workshop leaders invited Reading Clinic staff to their schools to demonstrate various aspects of the Clinic's program (e.g., informal diagnostic testing). Only a few teachers felt well prepared for the role they assumed as workshop leaders. The Teacher Training Committee, aware of the structural difficulties of implementing this component of the program and unable to resolve them, provided only moral support to the workshop leaders.

Teachers attending the inservice workshops felt that the greatest benefit of them was the opportunity to gather with peers to discuss general educational problems and programs in their schools. Most felt that the workshops did not make any difference in the way they taught reading. They felt that the

content was too general to be applied to their particular circumstances. Others were reluctant to accept the knowledge presented by peers who probably had not mastered the concepts, in theory or in practice. Also, many workshop leaders were not committed to implementation of the concepts, and this was communicated to the teachers.

As with the graduate course in reading, the inservice component of the Basic Reading Skills Program was not included in the 1977-78 following year's 636 proposal. School personnel (teachers and principals) felt that neither the course nor the inservice workshop series had any impact on teaching practice.

CLINIC/TUTORIAL SERVICES

In comparison with the teacher training components of the Basic Skills Reading Program, the Clinic/Tutorial Service component experienced significantly greater structural impediments to its operation. These structural impediments affected not only knowledge exchange, but also basic service delivery.

Because of an oversight in planning, money was not allocated to transport students to Dunfey's Reading Clinic. This oversight required an immediate response, and the Clinic/Tutorial Services Committee was formed to shape it. After initial efforts to obtain additional funding failed, the committee decided to conduct clinic/tutorial service in the schools.

For some committee members, this arrangement was preferable to busing students to Dunfey because they wanted to minimize the time students spent out of the classroom. They also felt that it would be useful for clinicians and tutors to observe and work with students in their normal learning environments. However, the adjustment created significant difficulties for the seven part-time clinicians. (Tutors were less affected because they worked fewer hours per week with students.) The seven clinicians averaged twenty hours per week and traveled to four or five different schools during the course of the week. The resulting accumulation of travel time reduced the hours they could devote to planning as well as to interacting with teachers and reading specialists

in the schools. Also, certain instructional materials available at the Reading Clinic were not available in the schools. Thus, the Clinic/Tutorial Services component encountered significant problems in the first stage of implementation.

The intent of the program, as interpreted by the Reading Clinic staff, was to use the clinicians to provide diagnostic and small group reading instruction to students with severe reading problems who were not being served by Title I, bilingual, or Chapter 766 resources. The student population included bilingual and special needs students, but services already available to individual students would not be duplicated. The tutors (Dunfey University juniors and seniors who had taken several clinical courses in reading) were to provide remedial instruction in small groups to students with less severe difficulties. However, the Dunfey staff and the school people did not reach concensus on these matters during program planning. Decisions were deferred until program implementation, and the Program,s operating principles turned out to be quite different than originally conceived by the Dunfey clinicians.

The Clinic/Tutorial Services Committee established a policy whereby local school personnel (classroom teachers, Title I teachers, 766 resource teachers) could recommend students for services from this program. Guidelines for student selection developed by the Committee gave classroom staff a great deal of authority in selecting students. Thus, although students who already received supplementary reading instruction were to receive lower priority, it was still possible to include some of them in the Reading Program.

Of the 400 students selected to receive clinical services, about 50% were also receiving supplementary reading instruction from Title 1, bilingual, or Chapter 766 reading programs. To the dismay of the Reading Clinic Director, many children experienced as many as three types of remedial reading services per week. School personnel, on the other hand, felt that provision of additional assistance to students with severe reading difficulties was an

appropriate role for the Dunfey Reading Program. The Reading Clinic staff acceded to the wishes of the school personnel on this issue.

The policy for assigning students to clinicians and tutors was intended to provide more intensive service to students with greater needs. This policy, however, was not operationalized as intended. The breakdown seemed to occur in the assignment of students to tutorials. After the clinicians had accumulated their case loads, the next batch of students was assigned tutors. However, the clinicians also referred some of their clients to tutors. These latter referrals were stemmed from the clinicians' diagnoses that students with less than severe reading difficulties had been "incorrectly" assigned to them. The result of the two-track referral system was that tutorials often grew beyond an effective size. Several tutors saw as many as forty students per week in groups as large as seven and eight.

These difficulties highlight one of the most perplexing problems of the Reading Program during its first year, namely, communication and coordination between school and University participants. These difficulties persisted despite the involvement of key participants in structures that were designed to alleviate them (e.g., Clinical/Tutorial Services Committee, Executive Committee, District B Principals and Headmasters Committee). These groups could not keep up with the number of personal and organizational interfaces generated by this new program (e.g., tutor-clinician, teacher-clinician, teacher-tutor, etc.). Difficulties were also evident in the scheduling process. For example, tutors and clinicians reported instances in which they arrived at schools only to find that students had gone on field trips or were involved in special adtivities that could not be interrupted. Also, the turnover of tutors between University terms and the differences between schools and University calendars often left classroom teachers without the tutors they expected to be assisting them. Because of these difficulties, three schools dropped the tutorial service from their reading program during the second half of the school year.

Finally, in response to the interorganizational problems encountered during the first four months of operation, the 636 Proposal was amended in January, 1977, to reduce the number of clinicians from seven part-time to four full-time. Each clinician was assigned to three schools. This change did not alter budget allocations, but it significantly decreased travel time and produced more sustained contact between the clinician and a stable group of teachers. The reorganization was proposed by the Reading Clinic staff and accepted by the Clinical/Tutorial Services Committee. It went into effect during the second half of the school year.

Despite this revamping, the Clinic/Tutorial Services Program was not very favorable when evaluated after its first year of operation. On the positive side, a total of 684 students received services, 84 more than projected in the proposal. Pre-test and post-test data revealed that students who received the clinic/tutorial services gained an average of one-half year in reading, as measured by an individual diagnostic analysis. Approximately 35% of students who received services gained one year or more, 42% gained one-half year, and 30% showed no gain. The average length of time which students spent in the program was 5.3 months. Informal observations of the clinic and tutorial sessions and feedback from clinicians, tutors, and teachers (compiled by the external evaluator) suggest that the sessions were beneficial to the students.

Still, approximately half of the persons involved in operating the program recommended that it not be continued. The primary reason for this negative recommendation was the tremendous logistical problems experienced throughout the year. It also became clear toward the end of the year that many teachers were unaware of the broad objectives of the reading program and how these were to be integrated with their school's ongoing programs. Several teachers were disappointed that the program did not include techniques such as the use of the controlled readers. The Reading Clinic staff, however, did

not perceive controlled readers as an innovative approach. It appears the assumptions and foundations of the University's approach to reading instruction had not been communicated to teachers.

Also, many teachers and principals became convinced throughout the year that the Dunfey Program was a duplication of existing reading services, and that the cost of that duplication in planning time was not worth the outcome in student gains. Their experiences also began to suggest that students were out of class too often and that students' reading instruction was becoming too fragmented.

Although most teachers felt that the clinicians and tutors were well prepared academically to teach reading, they were not favorably impressed with the clinicians' and tutors' ability to manage students' occasionally disruptive behavior. Clinicians and tutors would sometimes send unruly students back to their regular classes. Clinicians and tutors felt, however, that their time could be more profitable spent with students who were willing to learn. Again, there seems to have been a communication gap between teachers and University staff regarding fundamental aspects of the program's operation.

These logistical difficulties led to a significant reduction in the number of the District schools that chose to participate in the Dunfey clinic/tutorial program during the following year. Only three of the District's twelve schools exercised the option to participate a second time.

CLINICAL/TUTORIAL SERVICES: SECOND YEAR (1977-78)

The money allocated for 636 collaborative activities during the second year of the pairing was less than that allocated for the first year ($91,537 vs. $125,000). Correspondingly, fewer collaborative-sponsored programs transpired during the second year of operation. Still, the drop-off in pairing activities was disproportionate to the decrease in the level of funds available. In the second year, only five of the District's thirteen schools participated in the two programs sponsored by the collaborative. Furthermore, one of them

the SEED Math Program, was pre-packaged (i.e., not designed by the collaborative), and only three schools chose to use it. The other was the clinic/tutorial component of the Basic Skills Reading Program, which was also chosen by three schools (one school contracted for both programs). In sum, most of the District's schools were not involved in collaborative activities during this second year.

The stated rationale for including basic reading and math programs in the 636 proposal was the District-wide needs assessment completed in the first year of the Collaborative. Specific data from that needs assessment, however, does not appear in the second year proposal because it was still being analyzed when the proposal was written. As in the first year, the proposal was written by the Assistant Director of CSCO, in consultation with the University Pairing Planning Committee.

Because only three schools had signed up, the scope of the program was reduced from the previous year. Only 420 students were targeted for services, vs. 600 the previous year. Although the number of school participating was down 75%, the number of students expected to be served was pared only 30% Staff included two full-time clinicians, two full-time tutors, and one part-time Liaison/Supervisor, plus consultant services from the Reading Lab Director (Dr. Leary). The inclusion of a Liaison/Supervisor was a new feature of program staffing. Also, upgrading the tutorial role from part-time to full-time brought these staff members into parallel with the clinicians who had become full-time at the mid-point of the previous year.

A specific policy regarding student referrals was established, aimed at avoiding duplication of services which by consenses became a target for reduction after the planning group's assessment of the first year's operation. Also, the proposal explicitly stated the intention of the clinicians and tutors to integrate subject matter from content areas (e.g., history, geography, science, etc.) with reading instruction.

During year two the Reading Program served fewer students that intended (361 vs. 420), although the average gain in reading scores seemed to be higher than the previous year's (.83 years vs. .50). However, these results come from only 1/3 of the participating students and may be inflated due to the likely exclusion from the testing of less successful students.

The group addressed the following logistical problems during the year: a) student testing and referrals; b) allocation of space for clinical/tutorial sessions; c) establishment of communication networks among teachers and clinician/tutors; d) obtaining instructional materials for clinicians and tutors. Each of these problems had been signaled during the program's first year of operation and were only partially resolved during the second year.

Although the planners sought to avoid duplicate provision of reading services, approximately 20% of the students involved in the Dunfey program also received instruction under Title 1, bilingual, and Chapter 766 programs. This was a reduction from the 50% figure of the previous year, but still higher than intended. The Reading Center staff, more than school personnel, were concerned about this overlap. The roots of the problem lay in the decentralized process for student referrals, by which both teachers and reading specialists could avoid the strict referral guidelines developed by Reading Center staff. The consensus among school personnel on the Monitoring Committee was that this amount of duplication was acceptable. The Reading Center Staff abided by this consensus.

Allocation of instructional space for clinicians and tutors was a problem in the beginning of the year (as it had been the previous year). Because school principals were responsible for assigning space and because they were not members of the Monitoring Committee, the Committee could not address this problem conclusively. Specific difficulties were solved on an ad hoc basis with cooperation from teacher representatives. However, problems with space plagued the program throughout the year.

Communication among teachers and clinician/tutors remained a problem. The

The teachers wanted to know what clinicians/tutors were doing with their students. They requested monthly reports from clinicians/tutors but they were not willing to formalize conference times for such reporting. Therefore, the problem continued despite ad hoc meetings among teachers and clinicians/tutors before and after school, during lunch periods, recess, etc. Clinicians/tutors followed the teachers' recommendations to maintain "on-site" records (in addition to the records kept at the Reading Clinic), which included test data and lesson plans. Although the proposal suggested that there would be coordination between teachers and clinicians/tutors to integrate subject matter and reading instruction, clinician/tutors planned their lessons apart from the teachers' classroom instruction.

Finally, clinicians/tutors continued to have difficulty obtaining instructional materials for their sessions. There was no budget for such materials. The Monitoring Committee could not solve this problem although they did try to assist clinician/tutors to locate materials in the individual schools. Still, the latter spent considerable time searching in the schools and at the Reading Clinic. Ultimately, most obtained the needed supplies but the prevailing feeling was that these conditions reduced their instructional efficiency.

The 636 Monitoring Committee attempted to supplement the Reading Program throughout the year. For example, the District B Reading Coordinator suggested that clinicians and/or tutors co-teach with the regular classroom teachers. The Reading Clinic Director and the Liaison/Supervisor vigorously supported this idea. The Liaison/Supervisor approached the staff members of each school with the idea, but there was little support for it. Basically teachers felt arguments against the idea outweighed arguments for it.

But the proposal was not dropped altogether. It was suggested, for example, that a series of videotapes be produced that demonstrated the University's approach to reading instruction and the integration of reading/language teaching with various content subjects. The particular shaping of this proposal suggests that one force behind it as well as the co-teaching idea was to demonstrate the "Dunfey

approach" to reading instruction. The proposal for videotaping received more support than the co-teaching notion, probably because it required fewer changes in the participants' normal activities. The University agreed to provide the necessary financial support for the project.

Despite minimal requirements for this project to proceed, the principal of the school involved objected and the idea died in committee. Apparently, she had not been adequately consulted in devising procedures for implementation (e.g., student transportation to the Dunfey TV studio, parental permission slips, etc.,) nor was she convinced of the project's value. Despite the University's willingness to videotape at the school and re-write the parents' permission slips, the project did not get started.

The notion of demonstration teaching was revived yet again when the SEED Math Program was more fully described to the Monitoring Committee in March of 1978. The Reading Clinic Director asked the SEED Project Director how SEED 's discovery teaching approach was being integrated into the regular math curriculum. In SEED, regular teachers observe SEED teachers using project materials in the class and are encouraged to use the observed methods in their own teaching while they are observed by SEED teachers. Also, SEED builds weekly meetings with teachers into its operations. However, the response received by Dr. Leary to his question was not directly related to it. Instead, he was told about various strategies for disseminating the SEED approach, including the videotaping of a SEED class at Dunfey.

At this point Professor Leary suggested that the Reading Program sponsor a six-week pilot program based on the SEED Model and include videotaping of the demonstration classes. His objectives were three-fold. First, he wanted to conduct a mini-experiment that would demonstrate the impact of Dunfey's reading program vis a vis other reading programs in the schools. Second, he was interested in pursuing the idea of demonstration videotapes which had been proposed earlier, but had not received much operational support. Third, he wanted to exploit the

SEED model to disseminate the Dunfey reading approach, by means of which the participating teachers would be immersed in the Dunfey system through observation and practice teaching.

This proposal did not receive the immediate support it needed for implementation because the Monitoring Committee was beginning to look to program development for the following year and the position of the Reading Program was becoming tenuous with respect to those plans.

The Advisory Committee and the Principal's Group, with the benefit of data from the previous year's needs assessment, had focused on three program-options: revision/implementation of the multicultural social studies curriculum (see Project 1), a District-wide handbook for teachers and parents, and student publications (newspapers and anthologies; see Project 2). The Monitoring Committee began to think of ways of incorporating Reading Program ideas into the social studies program. The resulting project would serve as a pilot for the Multicultural Social Studies Project in the proposal for the following year.

Dr. Leary now suggested using components of the emerging social studies project as vehicles for creating an interdisciplinary curriculum guide, with a team of teachers, reading clinicians, and ethnic consultants revising the existing multicultural social studies curriculum over a twelve-week period. Teachers would receive graduate credit from Dunfey for their participation, thereby rescuscitating the graduate course format employed in the first year of the Reading Program.

He also proposed an orientation period during which the curriculum guide would be introduced by reading clinicians to teacher volunteers. This would be followed by a "teaching component" very similar to that utilized in Project SEED. The reading clinician would use the curriculum guide and be observed by teachers who had volunteered to participate. One feature of the SEED Project that was

absent from his proposal was the opportunity for the teacher volunteers to use the materials while being observed by the clinicians. However, the classes conducted by the clinicians would be videotaped.

This proposal was not adopted by the Advisory Committee. The Multicultural Social Studies Project that was eventually approved concentrated mainly on the curriculum revision. It did not include graduate course credit, teacher training (via demonstration or videotape), or field testing of the revised curriculum. Perhaps the training in multicultural understanding emphasized in the proposal finally accepted seemed more urgent to the Committee.

5. Project 4: Henry Reid High School Physical Education Project
Dunfey University - District B

During the summer of 1976, the Director of CSCO at Dunfey convened several meetings at the Dunfey School of Education that included faculty from that college and department heads from Henry Reid High School. The focus of these meetings was the determination of pairing activities to be undertaken during the coming year. A major need at Henry Reid was physical education facilities. At this time the new Reid facility was under construction, and students and staff were housed in several temporary locations in the city. Dr. Ken Hurd, head of the University's Physical Education Department, agreed to accommodate Henry Reid students in the University's physical education facilities. For two years (1976-77, 1977-78) the major thrust of the Physical Education Project was providing facilities for Henry Reid staff and students.

Because Reid did not have a physical education plant, the head of the Physical Education Department at the High School located his program in a range of other facilities, such as public playgrounds, the YMCA, the YWCA, and Dunfey buildings. His responsibilities included scheduling classes and planning transportation for students to and from those classes. The logistical obstacles encountered were considerable, one of the unfortunate outcomes being a serious decline in student attendance and the subsequent failure of a large percentage of students enrolled in gym classes. For example, during the first two marking periods of the 1977-78 school year, 76% of Henry Reid's students failed their required physical education courses. The school's administration and its REPC began to pressure the P.E. Department to improve student attendance and success within those classes.

Dunfey made its facilities available to Henry Reid without cost. Although community service is an established tradition at the University, acts of providing such service receive negligible attention when the University considers the tenure, promotion, and merit pay applications of participating faculty. Still, as can best be determined, Dunfey faculty were willing to donate their time to facilitate these early arrangements between Dunfey and Henry Reid.

The scheduling of High School activities at Dunfey encountered serious initial difficulties. Adequate transportation for students and staff between Henry Reid and Dunfey could not be arranged until the winter of 1977. Even then, the lack of correspondence between Dunfey's quarter system and the High School's semesters caused further confusion. Also, the schedules stabilized, Henry Reid students began to use Dunfey facilities on their own, outside of school time, producing conflicts between University and High School students.

There were also incidents of vandalism by Henry Reid students in the Dunfey gymnasium. All of these problems were eventually solved via a series of strategy meetings between the Reid P.E. Chairman and University staff.

None of these arrangements for the use of Dunfey facilities were included in the 636 proposals for the 1976-77 or 1977-78 school years. Some preliminary meetings on curriculum development in physical education took place in the fall of 1976, but they were broken off in order to give attention to the more immediate issue of finding adequate athletic facilities for the current group of Reid students. During the 1977-78 year, the school moved into its new facility, creating a new impetus for meetings on curriculum development and on ways of making maximum use of the new building.

The curriculum development meetings were initiated by Joe Payne, who was the new Chairman of the High School Physical Education Department and previously responsible for scheduling school basketball practice sessions at Dunfey. They were an informal outgrowth of his continuing meetings with Ken Hurd. Payne requested consultation from Hurd and his staff regarding the most effective use of the prospective Henry Reid facilities. Hurd, his colleagues, and the High School physical education teachers toured the new plant and brainstormed ideas for using it. During these informal visits, the High School teachers presented their philosophies and priorities regarding physical education instruction, and the University consultants developed instructional options within that context.

The High School staff had very clear priorities regarding physical education instruction, intending to offer a program attractive to a broad cross-section of students. They hoped thereby to increase student attendance and involvement in physical education; break down student stereotypes regarding particular activities (e.g., blacks play basketball, whites ice hockey, and girls field hockey); help students develop lifelong recreational interests (e.g., tennis, archery, outdoor recreation, etc.); minimize regimentation as a theme in physical education (e.g., marching); and deemphasize physical contact sports (e.g., touch football) that might lead to interracial strife in gym classes.

These priorities emerged during the informal meetings between High School staff and the University professors. The Dunfey professors made several suggestions regarding the use of the new facilities: using outdoor areas for outdoor education (e.g., climbing activities); icing over small courtyards for recreational skating; playing paddle tennis in isolated hall spaces; and creating diversified activity stations within the large gymnasium.

The teachers praised and appreciated the professors' ideas, although in retrospect the professors felt that they had offered more suggestions than were used by the school's staff. The professors' disappointment was related

to their fear that the new school's excellent facilities would not be utilized to the fullest. The physical education teachers, on the other hand, felt close to overwhelmed by the multitudinous opportunities they would soon have and, consequently that they could follow up only a small percentage of them.

These informal discussions also established a working relationship between the professors and the teachers that served as background for the more formal work of the 1978-79 school year. Prior to the 1977-78 school year, only the Department Chairmen and a few coaches had continuous contact (and Dunfey), that limited to discussions of scheduling.

During the tours of the new building, the staff of each organization tested and revised their initial assumptions regarding each other. For example, the High School teachers originally suspected that University faculty members were primarily interested in the money they could gain through work in the pairing. However, because none of the pairing activities in physical education during the first two years received 636 funds, this suspicion dissipated. The teachers also predicted that the professors would not be able to relate to their immediate problems, but this, too, did not eventuate. Dunfey faculty were not certain that the High School staff would be willing to work to make maximum use of the new facilities and the expertise the professors felt they had to offer. What they found, however, was that a significant number of the teachers were willing to devote extra time to develop the new program. They also came to understand the logistical constraints under which the teachers operated, and, although they did not often accept the limits on innovation observed by the teachers, they did come to appreciate the seriousness of intent of most members of the Department.

During the spring of 1978, at the request of Tom Burns, the Director of CSCO, Dr. Hurd drafted a proposal for a project to develop a comprehensive physical education program at Henry Reid. This activity was to be included in the 636 program for the 1978-79 school year.

With other collaborative-sponsored projects involving Dunfey, the first draft was more ambitious than the version eventually approved and implemented with 636 funding. Dr. Hurd's plan contained three elements: a curriculum planning and development committee, an intramural sports component employing University students on cooperative assignment, and a High School faculty development component. The cost was approximately $60,000.

Dr. Hurd proposed that a committee consisting of Reid students, faculty, and administrators, and Dunfey physical education professors, meet for four weeks, five days per week, during the summer of 1978, to develop a curriculum guide for the required and the magnet physical education programs. A career-oriented physical education program was planned for Reid, consistent with its designation as a magnet school. The committee would also plan and schedule intramural activities for the 1978-79 school year. Finally, the committee would identify staff development needs to be addressed during the 1978-79 school year.

Dr. Hurd's proposal also included provisions for the employment of University co-op students to work with High School faculty in the intramural activities scheduled for the 1978-79 school year. Finally, the faculty development section of his proposal outlined a series of inservice workshops, demonstrations, and courses to be conducted by University faculty and attended by Reid teachers.

The 636 Advisory Committee cut back these plans significantly. It dropped the intramural component, thereby eliminating the chief direct benefit the proposal offered to the University via employment for its students. The Reid faculty recognized that the Dunfey students might provide useful services to the High School population but were not ready to think beyond planning and implementing the required physical education program for the school. In fact, they only accepted the provision for developing the magnet program because this work would be undertaken after the general physical education program

was in place.

Also, developing the curriculum guide for the required and the magnet programs was shifted from the summer months to the academic year. This timing was more consistent with the award of 636 funds. Instead of one committee to handle both programs, two committees were created to work on one each. This decision increased the total amount of time devoted to curriculum development, with each committee meeting fifteen times during the year. Two Dunfey faculty members were to serve as consultants to the committees, with overall management of them assumed by a Henry Reid teacher.

The staff development component was also decreased in scope from a broad array of workshops, demonstrations, and courses to a more specific concentration on two areas of particular concern to the High School staff: training in gymnastics and outdoor recreation. Resources for training in these areas were identified outside of Dunfey. The teachers explained this shift as recognition that more appropriate resources for these concerns existed outside Dunfey, not as a negative reflection on the University. Thus, four teachers were scheduled to participate in intensive training in gymnastics at the Gymnasium Coop in Stamford, Massachusetts, and a selected group of teachers and students was designated to participate in an intensive, one-week residential program in outdoor recreation in the spring of 1979.

The Physical Education Curriculum Committee

During the 1978-79 school year, the two curriculum committees completed the curriculum guides for the required and magnet physical education programs. The school's physical education program prior to this had been a hodgepodge of activities originally shaped by the need to offer it in four widely separated locations in the Norwalk area. The new curriculum guide establishes a deliberate sequence of activities throughout the year in the new facility. The magnet program provides an option for students to concentrate in physical education by taking several courses in it throughout the year.

When asked about the curriculum development process, the teachers described the University consultants as extremely helpful in classifying the philosophies and values of the teachers and helping them to translate those perspectives into specific activities and place them in developmental sequences throughout the year. Several new components were added to the education program that grew out of this process: outdoor recreation, corrective and adaptive physical education (for special needs students), student leadership training (to promote integrated physical education), and boating. Also, the committee on the required program designed (e.g., scuba diving, modern dance, long distance running) that helped to diversify the Department's offerings.

It appears that the primary function of the committees, including the University consultants, was organizational and not exchange of new information, although this did occur incidentally in the course of planning. For example, the University consultants provided information on how to train students in the School's crew tank, with which the High School staff was unfamiliar, and arranged for the staff to have contact with even more expert sources regarding use of the tank. Still, knowledge exchange seemed of less concern than melding the expertise and competencies of the MPHS staff into a coherent physical education program for the new school.

Staff Training in Gymnastics and Outdoor Recreation

A great deal more knowledge transfer took place in the direct training in gymnastics and outdoor recreation provided by the Gymnastics Coop and Stowe Village, an outdoor recreation center. Reid teachers described their prior training in each of these fields as very superficial, and were unfamiliar with the newest apparatus and techniques in these fields. In the intensive gymnastics training, four teachers learned the latest coaching techniques and gymnastics routines for all the apparatus available at Henry Reid, plus ways of providing gymnastic instruction for co-ed classes. This information was both research- and craft-based, the medium of exchange being primarily demonstration, although

written materials were distributed to the teachers as well. Staff members who received this intensive training transmitted their new knowledge to their colleagues, first in scheduled sessions at the school and later informally among the staff when time was available. This shift occurred as the result of the generally overcrowded agenda of inservice meetings. The consensus among the teachers was that the training provided by their colleagues was excellent and that it provided concrete information they needed and valued. It also helped to boost their morale as a group. The teachers felt that this was one of their most valuable training experiences at the High School.

A similar teacher training and knowledge transfer design developed out of the outdoor recreation program at Stowe Village. A selected group of teachers and students spent one week in the spring of 1979 participating in structured outdoor recreational activities organized by the Stowe Village staff. Teachers and students worked together in teams to accomplish tasks requiring skills in areas such as orienteering, canoeing, rock climbing, cave exploration, etc. These experiences are designed to confront with both participants with their individual strengths and weaknesses in an unfamiliar arena. In this sense, the objectives of the program are both recreational-instruction and social-affective. Participants are encouraged to share with each other what they feel and learn during the activities. As with the gymnastics trainees, participating teachers transferred their knowledge to their colleagues in informal meetings back at the High School. The knowledge transferred was limited to the recreational skills that could be incorporated into the Reid physical education program; the social/affective components of the program were omitted, since these require facilities and scheduling not easily available at the school. The teachers valued these training experiences highly.

636 Physical Education Programs: 1979-80 and 1980-81

The major thrust of the 636 proposals for the 1979-80 and the 1980-81 school years was to continue and augment an intramural program started through an ESEA pilot program during the 1978-79 school year. The basic objectives

of the intramural program are to 1) supplement the required physical education program; 2) increase participation in physical education of males and females of all races, including students with special needs, and 3) provide an environment that promotes social interaction among a diverse student population. The direct teacher training and curriculum development components of the previous year's 636 proposal were dropped: the funding level reflects this shift ($6800 for 78-79; $3000 for 79-80 and for 80-81). During those years, teachers' interests in training and curriculum development activities seem to have decreased, although the teachers interviewed expressed interest in obtaining more training in subsequent years. With respect to curriculum development, teachers felt they had accomplished their original objectives and were very satisfied with the impetus provided by 636 funding, Dunfey's involvement, and the results of their joint effort. There appears to be little enthusiasm for refinement or expansion of the curriculum guide, however.

6. Project 5: Other Pairing Activities
Dunfey University - District B

The project report that follows is a description of activities undertaken in the Dunfey-District B pairing that were not funded by Chapter 636. Those described do not include all of the partners' projects of this type, but they provide an overview of the kind of involvement Dunfey has sought to maintain with the Boston Schools and other supportive agencies. Dunfey's work with the schools and these agencies falls under four major headings: 1) hosting various planning efforts and forums for information exchange; 2) directly assisting the public schools, especially students within the Districts and High School to which it is paired; 3) establishing mutually beneficial/reciprocal arrangements with the schools; and 4) serving as a broker in directing external resources to the schools.

The University's participation in these areas increased steadily during the first three years of collaboration, at which point it assumed a more even level. Hosting activities were more prominent during the first two years and have decreased slightly in recent years. In most instances, Dunfey assumed the initiative in all four of these categories, whereas the schools originated most ideas leading to formal 636 funding. Parents of school children were seldom the direct or targeted beneficiaries of Dunfey's initiatives, although many activities were undertaken for the benefit of the community. The Director of CSCO at Dunfey was most often involved in initiating non-636 funded activities although several of them originate with other administrators and faculty at the University. All activities required the partners to engage in some degree of joint planning and implementation, though the extent of interorganizational contacts varied.

Dunfey University as Host

Soon after the pairings were established, the concept of collaboration between the universities and schools received significant public support from the presidents of the universities. Barbara Wright, the outgoing President of Dunfey, and Philip Comer, the newly appointed President, played active roles in communicating their support for the pairings both to the public at large and within the University. A continuing demonstration of that support occurred in the cost-free use of facilities extended by the University to various groups concerned with desegregation and the improvement of race relations and opportunities for minorities.

In June of 1976, for example, Dunfey hosted an "Ad-hoc Assembly on Desegregation in Boston," at the University Faculty Center. The structure of the assembly was a series of workshops on "options and strategies for achieving educational equality under desegregation in Boston." The series was sponsored by Community House, a non-profit action agency in Norwalk, and co-chaired by its Executive Director and the Executive Director of Norwalk Service Center. Several Dunfey University administrators, including the CSCO Director, participated. The workshops produced a report dedicated to an administrator at Community House, who was later appointed the Affirmative Action Officer at Dunfey.

Several months following Dunfey hosted a city-wide workshop for all school, university, and cultural institution personnel involved in the Court-ordered pairings. The workshop was sponsored by the State Department's Bureau of Equal Educational Opportunity and included the State Education Commissioner and the Boston School Superintendent. Dunfey organized the program and provided hospitality, while city and state officials outlined policy and the intentions of state policymakers regarding interorganizational collaboration and the expenditure of state funds.

Later the same year, Dunfey hosted a planning conference for the

coordinators of the school-university collaboratives. Dunfey's CSCO Director, Tom Burns, served as Chairperson of the conference's coordinating committee. The conference reviewed the roles played by the universities in the collaboratives and produced a position paper that addressed key issues in the collaboratives' history and future. That evolved into a published document in which the coordinators analyzed various models for university collaboration with schools. Their major concern, which surfaced at the conference and later appeared in the document was the need for the universities to resist pressures from the schools and communities to provide short-term and short-lived resources and facilities, and instead, to concentrate their efforts on long-term planning and development and provision of expertise in curriculum and school organization. These, they felt, would make better use of what the universities had to offer. The conference greatly facilitated the process through which the coordinators developed consensus regarding policies for collaboration with the schools.

In October, 1978, Dunfey hosted a luncheon meeting for the university, business and cultural affiliates of Henry Reid High School. The meeting was attended by President Comer, and was convened to provide a forum at which representatives from the organizations affiliated with Reid could share information regarding current and anticipated activities, and to encourage coordination of sponsored activities and maximize the impact of 636 resources within the High School. This initial meeting launched a series of such sessions held throughout the academic year. The diversity of 636-sponsored activities among the groups represented was such that few joint efforts were undertaken, but the information shared contributed to the partners' awareness and support of activities sponsored by each other.

In addition to assisting with meetings and conferences directly related to school desegregation and 636 activities, Dunfey provided assistance to organizations concerned about improving student welfare more generally. For example, the members of a working seminar in May, 1978, shared information and attempted to improve the coordination of agencies concerned with youth employment in Boston. This conference was attended by approximately fifty Boston leaders.

Dunfey also hosted two conferences of the National Scholarship Service and Fund for Negro Students (NSSFNS) and a Black Respect Day sponsored by the METCO program. These conferences and meetings were planned by Dunfey's Office of Community Development, but were attended and promoted by the CSCO as well. Their primary purpose was to provide minority students with information about financial assistance for college, career opportunities, and strategies for achieving professional goals after high school. In each instance, the meetings required coordination among various offices within the University (e.g., Office of Community Development, Admissions and Financial Aid, CSCO), and various external agencies (METCO, NSSFNS).

Dunfey has also sponsored smaller meetings that concern emerging and ongoing programs in the schools with which it is affiliated. For example, President Comer hosted a luncheon honoring an Area I Commander of the ROTC, at the request of a High School math teacher who had initiated an application for an Army ROTC Junior Program at the High School. A professor of military science at Dunfey University attended and subsequently volunteered in his assistance in the application process. The University loaned its stage for plays sponsored by Theater Arts Department of the High School, contributed space for a student council workshop for Henry Reid students, and annually invites children from all of Boston schools to art exhibits sponsored by the University's Afro-American Artists in Residence Program (AMARP). Although none of these benefit from 636 funds, the CSCO Office coordinates and promotes them, and

consistently looks for similar ventures to assist.

Dunfey's direct assistance to the public schools

In addition to hosting meetings, the University provides direct assistance to Boston Public School students within and outside the districts with which it is affiliated. Although some of these activities have either evolved from or led to support under 636 funding, at some point in the history of each the University sponsored them through its own resources.

Two years before the court-ordered pairing, Dunfey established an open campus program for high school seniors. Under the direction of the Dean of Admissions, the University offered 39 courses from seventeen departments on a tuition free basis to Boston public school seniors interested in obtaining college experience before graduating from high school. After the implementation of the pairing with Henry Reid, the open campus program continued to be open to all Boston seniors, but a concerted effort was made to attract Reid's students. A coordinator was assigned from within the High School and served as liaison between Reid and Dunfey's Assistant Director of Admissions, who coordinated the University's end. In the second year of Dunfey's affiliation with Reid (1976-77), fifteen seniors enrolled in nine freshmen courses. It was expected that some of the students would have problems in the college courses, and undergraduate tutors were made available. This effort was most successful in a general biology where the Reid Science Department Chairman and a Dunfey professor coordinated the tutoring. This program developed into a 636 activity (the Biology "Buddy" Program) that paired Reid seniors with Dunfey biology majors when the high school students attended Dunfey classes in biology.

As a part of the Dunfey-Reid pairing, Dunfey provided information to students regarding financial aid and scholarships. The Reid Guidance Office offered annual sessions at which personnel from Dunfey's Financial Aid Office described sources of financial aid and procedures for applying and distributed

relevant literature. One year Dunfey's Vice-President for Administration spoke to Reid seniors at a college preparatory program organized by the Reid Assistant Headmaster. In addition to providing aid information, Dunfey annually awards approximately fifty scholarships to Boston high school seniors.

In February of 1977, the CSCO Director joined a city-wide committee formed to design educational programs in conjunction with the celebration of Boston's 350th Anniversary. This Boston 350 Committee was composed of representatives of public and private agencies, private citizens, public school personnel, and faculty from several Boston area colleges and universities. Its first project, planned without the benefit of outside funding, was the restoration of two 18th century frame buildings in Norwalk. Recruited high school students (were recruited who) learned preservation and restoration skills (carpentry, masonry, etc.) while simultaneously improving their community. Funds from local foundations and the Massachusetts Department of Education's Division of Occupational and Vocational Education were eventually secured with the assistance of Dunfey's Development Office. Fifteen students from a Boston vocational high school worked on the restoration project during the 1977-78 school year, and a number of these later participated in an archeological dig in Norwalk sponsored and supervised by the Museum of Afro-American History.

In 1978, under the federally-funded Youth Employment and Demonstration Projects Act (Y.E.S.) seventeen Dunfey departments employed 25 Reid students who constituted the first group of high school students served by this program to be employed at a Boston college or university. Under the program, eligible students receive part-time employment during the school year and full-time employment during vacations in a variety of jobs at the University. Salaries are paid by federal funds. The program is a major attempt to reduce youth unemployment, provide marketable skills, and keep students in school.

On a much more limited basis, Dunfey has provided direct assistance to school personnel without the support of 636 funds. Dunfey's Director of Public Safety, at the request of CSCO Director, included five new Henry Reid security officers in a training program organized for Dunfey security officers. This arrangement required collaboration between Dunfey's Director of Public Safety and the Boston School Department's Personnel Office. The Dunfey Psychology Department Chairman helped a Reid psychology teacher establish the Eastern Massachusetts High School Psychology Teachers Cooperative as an outgrowth of an open house for metropolitan Boston high school psychology teachers sponsored by the University's Psychology Department and the CSCO Office.

Finally, Dunfey University professors have donated new and old books to various departments at Henry Reid. These books are used in the Reid Career Resource Library and in several academic departments. Cartons of laboratory instruments and apparatus have also been donated to the Reid Physics Department. Special arrangements exist for Reid music students to use Dunfey's Learning Resource Center on a regular basis and for music teachers to borrow from Dunfey's record collection for classroom teaching.

Mutually beneficial arrangements

The schools as learning laboratories, a third category of non-636 funded activities, is the rubric under which Dunfey places it students in schools as learning laboratories and in return delivers services to these schools. From the beginning of the pairing, Dunfey attempted to assign student teachers to schools in the pairing. In the second year, six assisted District B schools and three in Henry Reid; several speech and hearing majors also had clinical placements in District B. The following year, eleven student teachers taught in two District B Schools.

In addition to student teacher placement, Dunfey assigned work-study students to schools in other districts and to Henry Reid High School. The Physical Education Department is the only one to place co-op students in the

schools on a regular basis, working in several high schools' intramural programs. Their placement requires continuous collaboration among the University's Physical Education and Recreation Co-op Coordinator and the physical education department chairpersons in the various schools.

In numerous instances, classes conducted by Dunfey professors include fieldwork in the District B/Henry Reid pairing, as either a course requirement or as a supplementary learning activity. Regularly a staff member from the School Volunteers for Boston recruits undergraduates from these classes to assist in District B schools.

Dunfey has attempted to recruit graduate students from the Henry Reid staff. In February of 1979 a seminar was held at Henry Reid to acquaint staff with graduate programs and courses at Dunfey's College of Education. The idea for the seminar arose in a discussion among Dunfey's CSCO Director and the High School Headmaster and Administrative Assistant. The Dean of the College of Education and a professor summarized the graduate program, admission procedures, and financial aid opportunities.

These are some instances of mutually helpful activities involving Dunfey and District B/Henry Reid. The two Dunfey units most clearly involved in these arrangements are the College of Education and the College of Physical Education and Recreation. Typically, the CSCO Director, who is a faculty member in the College of Education, plays a key role in getting potentially interested parties together, and, in all instances, promotes and publicizes the resulting arrangements.

Dunfey University as broker

Dunfey has also played an active role in locating external resources for the schools. In the winter of 1979 the Perry Corporation of Darien approached a Dunfey official in an initial effort to recruit minority applicants to the company. In addition to directing the personnel officers to Dunfey's Placement Office, the Dunfey official directed company officials to the CSCO

Director who then initiated a corporate recruitment program at Henry Reid. The recruitment program was coordinated by Reid guidance counselors who selected eight seniors to participate in a new employee orientation session, student-employee relations sessions, tours, and work rotations. These students were then placed in entry level positions in the summer. The program is now in its second year.

In another instance a professor of cooperative education assisted the Reid Guidance Office in securing a grant from the Division of Occupational Education to establish a computer-based occupational information counseling system for the school. Also, two District B schools are included in a Teacher Corps Project at Dunfey. The Teacher Corps proposal originated with the Dean of the College of Education, whose faculty committee included the CSCO Director. The schools consented to participate in a five-year project but were not actitively involved in proposal development.

A Teacher Center proposal, initiated with Dunfey by a teacher, from a high school not paired with Dunfey, was submitted to HEW in 1979. If funded, the program will serve teachers from the two high schools.

Finally, in two instances, 636 projects have also received ESAA funds. The Physical Education Project (Project 4 of this case) is one example. Also, a media magnet program, funded by 636 and ESAA funds operates at Henry Reid. Students are producing feature stories which are broadcast to the student body during homeroom and lunch periods. Several Dunfey staff associated with the University's Office of Learning Resources serve as consultants to Reid media faculty and have provided direct assistance in the broadcasting.

7. Cross-Project Analysis
Dunfey University - District B

Chronology - Changes Over Time

The First Year: 1976-1977

Although the participants were initially uncertain of their partners' intentions, strengths, and weaknesses, as well as their abilities to maintain their own organization's interest and commitment, they commenced collaboration in the first year with the resolve to be conspicuously ambitious and successful. This determination arose not only from the Court mandate and the glare of publicity, but also from a feeling of competiveness with other pairings. The consensus among key respondents was that participants wanted to prove themselves to the general public, and that such proof would consist of immediate, visible, and large-scale programs.

The need for success was perhaps greater in this pairing because Dunfey had become a highly visible proponent of the pairing concept. Dunfey's two presidents, sequentially, emerged as leaders in the Presidents' Steering Committee. Also, Dunfey affiliated with Henry Reid, one of the largest magnet high schools in the city. Many assumed that Dunfey would be especially able to address the problems of urban schools due to its location in the inner city and its image as a service-oriented university. Given these conditions, it would have been surprising for the pairing to settle for an initial small-scale effort. In addition, many felt that underspending Chapter 636 funds allocated to the pairing would jeopardize the pairing's funding in the future.

In November of 1975, a University Pairing Planning Committee was formed that included several District B CDAC representatives, District Office personnel, the District Superintendent, parent representatives from each school's

REPC, several teacher representatives from District schools, and the Pairing Coordinator (later, CSCO Director) and his assistant. University faculty members periodically attended, at the invitation of the Pairing Coordinator. University faculty were requested to assist in program development in their areas of expertise. This committee met 15 times throughout the 1975-76 school year. According to all key respondents, the first year was characterized by vigorous efforts by all participants to establish and utilize intra- and inter-organizational communication networks to achieve consensus regarding programmatic priorities.

The outcome of the planning was an ambitious array of projects to be implemented in the 1976-77 school year. The projects addressed two broad problem areas identified by school administrators: 1) improving basic reading skills, and 2) improving communication between parents and teachers. The Basic Skills Reading Project examined as Project 1 in this Case, began at this time. Included among the parent-teacher communication projects was a District-wide needs assessment intended to serve as a guide for future planning.

It was assumed from the beginning by all that the school and, to the extent possible, the District's parents would establish pairing priorities that the University would help address. The first year was characterized by agenda-driven meetings in which University personnel responded to school requests with increasing specificity. According to most participants' recollections, the major block was lack of time. Interorganization stress was minimal. Participants felt a great sense of accomplishment when their first proposal for pairing activities received relatively quick approval from the central administration, School Committee, and BEEO.

The Second Year: 1977-78

Planning during the pairing's second year was different than the first. School personnel and CDAC representatives began to hear of the

many logistical difficulties encountered in the Reading Project. Questions were raised, first by teachers and later among the District principals, about the compatibility of the University's approach to reading instruction with the reading programs in the schools. Also, CDAC representatives became increasingly dissatisfied with the limited amount of 636 funds available for direct assistance to their children. While CDAC members felt that teacher training was important, the costs of mounting a District-wide project to re-train reading teachers left less than they had hoped for the individual school's discretionary use. Competing with this view, however, was the University's emerging interest in maintaining a District-wide teacher training focus. Thus, instead of the convergence of interests postulated in the proposal for this research, a divergence began to emerge.

Due to pressures from several district principals and, especially, from CDAC representatives, the Pairing Advisory Committee (formerly, the University Pairing Planning Committee) shifted its emphasis from designing district-wide efforts to offering District schools the option to participate in programs designed by the committee. That only three of the District's twelve schools chose to participate in the instructional component of the Reading Program is indicative of the District's dissatisfaction with the Program's first year of operation. Although the scope of the pairing's second year projects was significantly smaller than the first year, the level of funding was reduced by only 25%, indicating a greater concentration of financial resources. With respect to the Reading Project, this should have increased the project's effectiveness and thus general support for it.

Events did not proceed in this fashion, however. Although the Reading Project encountered significantly fewer logistical difficulties in its second year, there was increasing skepticism about the relative value of the Program given its financial costs and the time required for coordination. In addition, those who felt the project was valuable had no means of disseminating

information regarding its efficacy. Finally, there was increased concern in the schools over duplication of remedial reading services. During the planning process of the second year the Reading Program gradually lost support and was not included in the pairing's subsequent proposal.

Planning during the second year was facilitated by the completion of the analysis of the District-wide needs assessment. The needs assessment was interpreted as having identified a need for initiating and/or improving multicultural education throughout the District. Similarly, a needs assessment among the District's principals and headmasters identified multicultural education as a District-wide priority. The Pairing Advisory Committee designed a project to revise the official Boston Public Schools Social Studies Curriculum. The Planning Committee also decided to write an informational handbook for the District's parents and distribute it throughout the District. Finally, the Committee agreed to extend a pilot student newspaper project undertaken in two schools the previous year to the five schools that had elected to participate in it. This proposal, for year three, included both the district-wide and selective participation models of the first and second years of operation, respectively.

Although less ambitious than the second year of pairing, projects planned for the third year were intended to involve more parents and teachers than the second year projects. Several factors contributed to this determination. First, the District-wide needs assessment had emphasized grass-roots participation, which the District administrators endorsed in their own needs assessment. Second, the success of efforts to achieve logistical improvements in the Reading Project produced collective satisfaction, despite the eventual demise of the project. Third, the Pairing Coordinator (CSCO Director) was engaged in extensive and visible networking efforts within the University.

Finally, there was general encouragement over the fact that the leaders of the pairing had been able to negotiate a solution to a potential

conflict over the distribution of 636 funds. The Pairing Coordinator agreed to allocate a portion of 636 funds originally earmarked for planned pairing projects to the District's schools for their discretionary use. This reallocation, initially proposed and strongly supported by CDAC, was an attempt by CDAC to increase the programmatic options available to individual schools. The result, however, was less financial support for projects designed by the Advisory Committee. The ability of the pairing's leadership to negotiate this conflict amicably, however, provided some evidence that tough interorganizational bargaining could be successful. Thus, after two years of planning experience the pairing reached a stage of interorganizational development that had been predicted to occur somewhat earlier.

The Third Year: 1978-79

The programs designed for the pairing's third year operated with varying degrees of success with respect to their objectives. The Social Studies Curriculum Revision Project encountered serious operational obstacles but delivered much of what had been originally proposed. It became apparent, however, that the project's initial plan to promote the curriculum's use among the District's teachers would have to be postponed to the following year. Similarly, the project's goal to review and recommend the purchase of new multicultural curriculum materials would have to be postponed. These remaining tasks, however, were soon selected by the Advisory Committee as appropriate for funding the following year. In addition, the Project was expanded to include the production of slide-tapes and videotapes that were expected to promote the teachers' use of the revised curriculum.

The Student Newspaper Project also encountered some procedural difficulties but it, too, produced the number of publications earlier anticipated. Those schools that participated in this project reported satisfaction with it and planned to oontinue their involvement if the project were offered the following year. The Advisory Committee decided to offer this program

again to those schools that elected to use it.

Although neither of these projects were new initiatives by the Advisory Committee and the scope of pairing activity was reduced from the previous year, there were several indications that the pairing had reached a new stage of development. The use of videotapes to disseminate the multicultural curriculum was the pairing's first attempt to promote knowledge utilization with respect to information generated in a pairing sponsored activity. Furthermore, the production of the videotapes required the Pairing Coordinator to enlist the University's Media Production Department. Not since the pairing's initial networking with the University Reading Clinic had a University department been formally involved with a pairing-sponsored program. The involvement of the Media Department reflected the Coordinator's willingness and ability to influence a subunit of the University to further the aims of the pairing. In this respect, the pairing's development was increasingly consistent with the developmental scheme initially postulated.

The Social Studies Project became a symbol of success recognized by most pairing participants. First, it addressed a unique characteristic of the District, namely, the district's cultural/ethnic diversity. Second, it represented a program model that many pairing participants felt especially likely of achieving success. It was a District-wide program that appeared to utilize the strengths of personnel from both the schools and the university. Finally, the program's product, a curriculum package, seemed to offer the prospect of institutionalization, an achievement that many participants felt would be a true indicator of the pairing's authenticity. Thus, as the pairing entered its fourth year, participants had some reason to feel encouraged.

The Fourth Year: 1979-80

The Social Studies Curriculum Revision Committee, although smaller than the group assembled during the previous year, continued to supplement the Multicultural Curriculum with new materials and lessons throughout the

year. A Resource Selection Committee was convened: it reviewed and recommended $250 worth of educational materials for each of the District's schools. The videotape production, however, was slowed by a reconceptualization of the task which ultimately led to cost over-runs and production delays. Only two of the seven videotapes that were proposed for production were completed. However, given the overall support for this project and the high quality of the videotapes that were produced, there was support from the Advisory Committee to extend the project into yet another year.

The State Department of Education and the Boston Public Schools announced a new proposal development policy during 1979-80 that had serious consequences for the Advisory Committee's planning for 1980-81. Under these regulations, each pairing is required to direct several projects towards topics on a system-wide list of priorities and allocate at least minimum amounts of 636 funding to those priorities. Specifically, each pairing must assign a) a minimum of 10% of the District's allocation to programs designed to promote the integration of bilingual students and the development of integrated student leadership programs in all middle and high schools; and b) a minimum of 10% of the District's allocation to one or more of the following areas: reducing disparity in academic achievement among students, promoting sex equity, recruiting students for ongoing programs, and providing programs for talented and gifted students.

These new priorities were viewed as substantially reducing the programmatic options available to the District's schools. To increase the total of unemcumbered 636 funds allocated to a district, they would be sufficient to cover all of the mandated activities and increase the District's capacity for originating programs of its own. This approach continued CDAC's long-standing effort to achieve autonomy for the District in proposing and implementing 636-funded projects.

The three whose universities are associated with this District met and agreed to allocate their 636 funds to mandated priorities. Dunfey agreed to work with the District B Office to develop a program to integrate bilingual students. In addition, Dunfey agreed to address two additional priorities underscored in the District-wide needs assessment: a) reducing the disparity in academic achievement among students involved in desegregation; and b) developing programs for talented and gifted students in the District. A portion of the academic disparity funds were allotted to completing the videotapes underway as a part of the Multicultural Curriculum. The assumption here was that the Curriculum would assist in reducing academic disparity among students.

It is difficult to assess the impact of the new policy on the pairing at this stage of its history. On one level, the policy served to bring the three sectors closer together as they dealt with this threat to their collective autonomy. Their cohesiveness was demonstrated in the relative ease with which they were able to reapportion activities and funding. Of course, the previous experience of the pairing had established a foundation for collective problem-solving.

The new policy also reduced program options for the pairing which, in turn, cut into the time required for planning and debating competing proposals for 636 funds. Instead, the Advisory Council and coordinators directed their attention to designing projects in the areas of the priorities established by the new policy and the District survey. Debates over "means" were usually less complex than debates over "ends," because "means" questions were usually delegated to sub-committees or individual planners. The new policy could be viewed, therefore, as reducing interorganizational conflict.

From another perspective, however, it can be argued that the pairing's allocation of mandated priorities to the universities may not have stimulated formation of the most productive interorganizational networks within

the pairing. The developmental model present in the proposal suggests that productive interorganizational networks match the best available institutional resources with consensually identified problems, but under the new policy, the matching of resources and needs departed from that model. The consequences for the pairing's development and the efficacy of its projects remain to be seen.

Incentives and Disincentives

Incentives and disincentives for participation in collaborative activities are evident at many different levels.

Incentives operating at the District level were:

a. the genuine interest of the District Superintendent in mobilizing additional resources (financial and human) for the District to upgrade quality of education;

b. the competitive spirit engendered in the District vis-a-vis other pairings focused on maximizing the number of successful projects and minimizing failures; the Superintendent, in particular, expected to benefit professionally from the successes, given his temporary appointment and the positive weight of successes in reviews of his performance;

c. the expectation that the establishment and the maintenance of good working relationships with the University would yield future benefits for the District in the form of non-636 funded activities.

There were also several disincentives to participation in the pairing, from the District Office point of view:

a. the overall increase in managerial time and energy required to maintain partnership activities (e.g., planning, operationalizing, monitoring); this disincentive was overshadowed by the previously mentioned incentives and by the 636 funds available to purchase additional staff and resources for the District Office;

b. the expansion of the arena of potential conflict between the schools and CDAC; however, because District-CDAC disputes were not new to these administrators, this disincentive was more a continuation than a wholly new problem.

Incentives for school staff in the buildings were:

a. for principals, the availability of new resources to upgrade their schools even though such resources were usually distributed on a district-wide basis and not to specific schools;

b. for principals again, the possibility of pleasing the District Superintendent and thus assisting their own careers;

c. the attractiveness to some principals of specific "buy in" projects (e.g., Student Newspapers, Project SEED, and the Reading Project in its second year.)

d. for teachers, personal/professional self-development through involvement in many of the projects; often, self-development was supplemented by inservice or graduate credits;

e. the opportunity to comply with their principal's orders, for many teachers who did not volunteer to work in a project.

Disincentives for school staff centered around the increased managerial time required of them for participation in activities such as the Reading Project.

Role Analyses

University Administrators

The University administrator most influential in providing support for the Pairing Office within the University was the President. In addition to establishing the Office centrally as previously described, the President encouraged all University departments, both academic and support services, to focus cost-free programs in the schools with which the University was paired

(e.g., student teacher placements internships, use of facilities, hospitality for meetings, etc.). During the early years of the pairing, the University President chaired and attended numerous planning and policy meetings of District and city-wide groups (see Project 5).

University administrators with specific expertise also served as resource persons to pairing activities. For example, the Vice President of Administration spoke to high school juniors and seniors about financial aid and scholarship opportunities. Representatives of the Financial Aid Office made similar presentations to high school students. Requests for such services were usually received by the Pairing Coordinator and relayed to a high official in the appropriate University office.

University administrators were relatively removed from the project planning and approval process. The Pairing Coordinator represented the administration in these matters, keeping his superiors informed of progress and problems via regular meetings between the Coordinator and the Vice President for Administration. Similarly, the University administrators did not participate in knowledge utilization processes other than sharing with the Coordinator situational information about the University's resources and constraints related to proposed or operating pairing projects.

University Pairing Coordinator

The University Pairing Coordinator played the most prominent role in establishing and maintaining relationships within the pairing. With respect to the four projects examined in this case, the Pairing Coordinator received and solicited input from District personnel. Further, the Coordinator usually took initiative to explore the University's resources for and interest in responding to the needs surfaced by school personnel. In all projects the Coordinator served as liaison between District and University the shaping of the program and in most served in this capacity throughout the life of the project.

The Coordinator was particular well suited to serve in this capacity by virtue of his extensive experience as a former public school teacher and a superintendent of three public school districts, including a small city school that had undergone court-ordered desegregation. His move to Boston marked a return to his home area for what he referred to as the "latter stage" of his professional career, during which he hoped to utilize his educational and administrative experiences in a less pressured context. He chose the University as such a context. When Dunfey became involved in the Court's deliberations regarding the school-university pairings, the Coordinator, then a professor who was an outspoken advocate for school-university collaboration, was the most likely choice for leading the University's new efforts.

The Coordinator's appointment also defused a potential difficulty within the College of Education's Department of Educational Administration. During the year prior to this appointment, the Coordinator had been denied tenure. The Coordinator position, however, was not a tenure track job and therefore permitted him to continue at the University and remain eligible for other kinds of career advancements. These circumstances may have increased the Coordinator's incentives to maintain the viability of the pairing, beyond his previously mentioned partisanship for collaboration. There is no evidence, however, that the nature of his appointment isolated him from other faculty members who had more orthodox academic affiliations.

In establishing the University Pairing Office (later CSCO), the University President sought to place the Coordinator in a position that would facilitate his contacts with all sectors of the University. The President wanted to emphasize that collaboration with the schools at Dunfey would be a University-wide enterprise, not restricted only to the College of Education. Thus, the Pairing Office and the University's Community Development Office received (initially) common space. Further, the Pairing Coordinator was encouraged to work

closely with the Development Office, a central unit of the University. Finally, the Pairing Coordinator reported directly to the Vice President of Administration and received a limited budget to supplement 636 funds. All of these efforts were attempts to stabilize the Pairing Office and secure it access to all departments of the University. The Coordinator's proximity to the President also served to enhance his influence when making requests of individuals within the University. This power was readily perceived by University personnel, and the Coordinator appreciated its benefits. The Coordinator's requests of University personnel to respond to the District's needs were usually taken seriously.

His experience as a public school administrator disposed the Coordinator to adhere to the administrative chain of command within the District with respect to all activities. He maintained direct and continuous contact with the District Superintendent, administrators, and principals. He attended the monthly principals' meetings conducted by the District Superintendent. He was, therefore, aware of the issues and concerns in the District and the overall context in which pairing activities operated. In addition to formal networking with school officials, the Coordinator enjoyed a close, informal relationship with the District Superintendent, providing him with access to the informal agenda of the District. When he felt information was pertinent to the operation of any pairing project, he would discretely share it with appropriate University personnel. In addition, access to such information allowed the Coordinator to avoid pitfalls to project operations.

The Coordinator and the District Superintendent also shared a sense of the importance of the pairing. They both felt that the essential mission of the pairing was to design and implement programs to benefit all the schools in the District. This sense of the mission contrasted with that held by many CDAC representatives, who placed individual schools' needs first, with pairing resources to be allocated accordingly. The alliance between the District

Superintendent and the Pairing Coordinator was important in maintaining the district-wide projects implemented throughout the pairing's history (e.g., the Reading Project and the Multicultural Curriculum Project), but their alliance was formidable enough to keep their conception at the forefront within all planning arenas. Of course, the Coordinator's emphasis on District-wide activities placed him in direct conflict with CDAC representatives and produced a strained and tenuous relationship between him and CDAC; it also served to decrease his Office's involvement with the REPC's at the individual schools. However, with up to fourteen schools paired with Dunfey, a close relationship with each would not have been possible under any circumstances.

Finally, the Pairing Coordinator played a major role as publicist for all pairing-sponsored activities. The ultimate project outcome for the Coordinator was not merely the delivery of services and school improvement, but also an increase in the public's awareness and appreciation of the enterprise. His previous administrative experiences led him to believe that "good works" alone would not justify their own continuation and that supportive constituencies had to be established to retain the resources required for continued efforts. Thus, "public relations" ranked quite high among his administrative priorities. His effectiveness with this role and task served to decrease the flow of negative yet constructively intended feedback, especially when these arose in public arenas. Thus, formal and informal evaluations were often not as critical as they might have been, and mediocre or moderately successful efforts could be touted as exemplary. Some project participants viewed this outcome as beneficial. Others claimed it led to relaxed standards which were ultimately detrimental to the quality of projects. Available evidence does not indicate how effective this stance toward public relations was in developing the constituencies towards whom it was aimed.

University Faculty

Given the size of Dunfey University and its faculty, it is surprising that so few professors have been directly involved in pairing activities. Faculty members have participated in the following projects: Basic Reading Skills, the District-wide needs assessment, parent-teacher workshops on helping children with school work at home, the Physical Education Project, and (to a limited extent) the Multicultural Curriculum Project. In most of these instances, the Pairing Advisory Committee selected the project area, after which the University Coordinator identified and invited to participate specific professors whose interests and training seemed appropriate to him. The small number of faculty involved is more a reflection of the frequency of the invitations than the general willingness of the faculty to respond.

Upon accepting an invitation, the faculty member wrote a preliminary proposal including a budget to which the Coordinator responded. The proposal was then either redrafted by the faculty member or forwarded to the Advisory Committee for additional input. When consensus was obtained among the Advisory Committee, usually with the faculty member in attendance and with the agreement of the faculty member, the Coordinator's Office rewrote the proposal for incorporation into the District's annual proposal for the following school year. In almost all such instances, the scope of the professor's initial proposal was pared down in order to accommodate other activities within the pairing's budget. Faculty members witnessed and accepted this negotiation process, although they were often disappointed by the reductions. Their disappointment related not only to shrinkage in their own roles and correspondingly in their remuneration, but also to the impact that could be expected from the reduced effort. The Coordinator often convinced faculty that initial, small successes might lead to more intensive future efforts, although this hope was usually not realized (see, for example, the Basic Reading Skills Project). Faculty members accepted the limited leverage of their roles as a fact of interorganizational life.

Given the relatively few number of faculty involved and the selective manner through which they were invited to participate, it is difficult to identify a particular type of faculty member who proved to be particularly effective in the schools. The Coordinator usually contacted colleagues who had previous experience in the public schools, in order to minimize the possible conflicts between faculty and school staff. Still, a frequent remark by school personnel was that University faculty tended to overemphasize the importance of their project in relation to everything else going on in the school. As one teacher expressed it: "I guess it's difficult for them (University faculty) to get a perspective of where their program fits into the big picture. From their point of view, everything should revolve around their program. But in reality, they're just one small piece of the puzzle, life goes on here before they came and after they leave." Teachers felt that this was true of most University faculty they worked with, although it was not, by itself, sufficient cause for poor working relationships.

The District Superintendent

Among all school personnel, the District Superintendent exerted the most influence on the direction taken by the pairing. Although he advocated and implemented a participatory model for project and proposal development, all participants, school and University alike, acknowledged that his approval was required for implementing a pairing project. Still, there were significant limits to his influence, especially with respect to the use of 636 funds, which required CDAC School Committee, and BEEO approval. Thus, he could exercise his veto power over specific projects, but he could not always obtain the level of funding he desired for specific projects.

The District Superintendent was surrounded by controversy stemming from a particular segment of the community within the District. He had been appointed to lead this geographically and culturally diverse District after thirty years of experience in the Boston Schools. During the years just prior to

his appointment, the central administration had come to value his mediating role in defusing a conflict between parents and the principal of a school in the "old" District B in which he was the superintendent (prior to the Court's reorganization of the school system). His success was an important reason for his appointment to head the new District B which was considered potentially problematic due to its diversity. His appointment, however, was subject to review under procedures established by the Court to encourage community input regarding such appointments. They opened the way for a struggle over his appointment with representatives of the community served by the District.

As he perceived it, support from the community was offered conditionally, tied to his willingness to acquiesce to the demands of the community. A particularly vocal group persisted in pursuing this strategy in order to obtain greater control over one school in particular and the District in general. Initially the struggle between the Superintendent and the group was not related to the pairing. Their antagonisms were soon reflected in the 636 pairing arena, however.

Despite the controversy with the community, the Superintendent enjoyed strong support from his administrative and instructional staff. Further, he had a strong and positive relationship with the University Coordinator, stemming, in part, from collaborative work they had done prior to the pairing. When he was superintendent of the old District B he had requested the University to provide voluntary, on-site tutoring and guidance services in one of his schools. Also, he shared with the University Coordinator a belief in District-wide projects, a position also endorsed by the principals, many of whom feared their schools would lose if projects were funded on other than an across-the-board basis. Finally, aside from specific subgroups within CDAC, the Superintendent had fairly good relationships with parents throughout the District.

With respect to project development, the Superintendent strongly advocated practitioner input and was the prime mover of needs assessment surveys among

the principals and administrator and teacher input during project implementation. He was equally interested in increasing citizen input, although for different reasons: he felt that citizen involvement would create a political constituency actively committed to school improvement and insistent that the city government support such improvement.

The Superintendent was a particular advocate for projects that promoted interethnic understanding and those that developed students' basic skills. He saw these as District-wide priorities and attempted to have projects dealing with them implemented in all District schools. He encountered significant resistance from CDAC in promoting District-wide projects in reading and student publications. Ultimately, however, he was satisfied with the compromise of a few District-wide projects running simultaneously with several that individual schools could choose to participate in. His willingness to compromise was enhanced by his familiarity with the operational difficulties several projects had encountered in the early years of the pairing.

The Superintendent was very supportive of the basic thrust of the pairing although removed from details of project operation and the specific content of the projects. He was in continuous contact with the University Coordinator to whom he entrusted the task of monitoring projects' progress. He felt that the pairing resources significantly increased the morale of his instructional staff and that the pairing opened the schools to new ideas and public attention, which in turn promoted an increased sense of accountability among his administrators.

School Administrators

Because the school principals were involved from the beginning in articulating the needs of their schools and were regularly briefed on the progress of planning in response to those needs, most were publicly supportive of the projects that developed. Privately, however, many principals had reservations about projects' benefit to cost ratios. Most were aware of the Superintendent's support of the pairing and thus reluctant to voice their complaints openly.

They sought to solve the logistical problems that increased costs as best they could. However, several principals, with the support of their instructional staffs, exercised their options to drop out of the non-mandatory projects during the later years of the pairing.

Principals were expected to ensure their school's participation in District-wide projects (e.g., the first year of the Reading Project and the Multicultural Project). The quality of a school's participation, however, ran the gamut from enthusiasm to minimal compliance. For example, several principals appointed faculty members to the Multicultural Project team who could not be expected to benefit from or contribute to the project, from which it can be inferred that the school's involvement was essentially pro forma. Minimal compliance, however, was difficult to criticize because administrative procedures to promote substantive involvement did not exist. For example, while some principals provided time during inservice meetings to disseminate the products of pairing projects, there was no organizational requirement that they do so. Aside from complying with the requirement that he/she appoint a school representative, a principal had great latitude in deciding the support to be extended to a particular project.

The principals supported a majority of the pairing projects, although this support did not always result in a maximally facilitative structure for project implementation. Even supportive principals encountered inter- and intro-organizational difficulties that neither they nor the pairing in general could resolve. Several principals stood out as exceptionally creative in resolving implementation difficulties, although they did not transmit their solutions to like-minded colleagues, perhaps because their techniques were not generalizable. Among principals not especially supportive of District-wide projects, those principals not especially supportive of District-wide projects acted in this manner mainly for their schools' administrative convenience. They did not intend their actions, or lack thereof, to thwart the projects' progress in other schools.

The 636 Facilitator

A very important role among pairing participants was that of the 636 Facilitator who served in a liaison capacity among parents, teachers, and District administrators and the University's Pairing Office. Officially, this individual worked part-time on pairing activities and part-time as a classroom teacher. In actuality, she spent most of her time working on pairing business. The responsibilities she held as a teacher, in addition to her previous work in the classroom and with the Teachers Union, contributed to the ease with which teachers approached her with their problems, concerns, and recommendations regarding the pairing. Her well-established network among school personnel was a primary qualification for her selection for this role. Her involvement in the pairing gave it legitimacy among some teachers who had been mistrustful of the University. Finally, she and the University Coordinator had worked together prior to the pairing; this history enhanced their working relationship and their sharing of situational information about their respective organizations.

From a structural point of view, the facilitator viewed her role as an advocate for the school system's perspective regarding any ongoing or planned pairing activity. In this capacity, she signaled school-related concerns that might not have otherwise been considered. For example, she warned planners that teachers would not attend after-school inservice sessions without pay. Her warnings often avoided implementation problems University personnel had not envisioned.

Because her role required continuous contact with both school and University people, her adherence to official school procedures became somewhat attenuated over the course of her involvement with the pairing. Input from the University sector contained alternatives that seemed reasonable to her although they departed from school practice. She became increasingly willing to consider and sometimes to advocate such departures. As she expressed it, she felt more able to distinguish between "alterable and unalterable

variables" operating in the schools. In this sense, her experiences in her role as Facilitator changed the way she perceived school issues.

Like so many pairing participants, the 636 Facilitator did not enjoy good relationships with CDAC representatives, although many respondents cited her good connections with parents involved in pairing sponsored activities. In fact, several teachers perceived her as a model for initiating productive teacher-parent relationships. She perceived her role as encouraging parents to attend and participate in meetings, and on an interpersonal level she did her best to achieve this.

The Facilitator's influence on projects was primarily to fill in the details of the project outlines contained in proposals. Although she contributed to the advisory group's thinking during proposal development, her singular influence was far greater during project implementation. A great deal of her influence was a function of the time and effort she put into developing a sound organizational structure for each project. In doing this, she tried to delegate responsibilities to all interested in completing some of the large number of tasks associated with each project.

636 Coordinator

The 636 Coordinator supervised all 636 projects including those that did not involve the school/university pairing. A division of labor emerged whereby the 636 Facilitator assumed major responsibility for the pairing projects, while the 636 Coordinator worked primarily with the school-based 636 projects. Thus, the role of 636 Coordinator was limited with respect to the pairing.

The Coordinator's role was most prominent in the multi-cultural project where she served as one of its three managers. She was asked to serve in this capacity because she had been one of the authors of the city-wide curriculum guide that the project sought to revise, because she possessed

curriculum writing expertise, and because involving her would (theoretically) reduce formal resistance to curriculum change. Her influence in the project was weakened by the many and diverse sources of expertise utilized in it. Most often, other project participants did not support her suggestions, although they made every effort to maintain her involvement. It is not clear whether her relative isolation from the views of other participants was a cause for, or a consequence of, her low estimation of the University's ability to contribute to school improvement in the District. Nevertheless, she remained skeptical of the University's intentions which resulted in a degree of strain in her relationships with those who supported the pairing.

Among all of the pairing participants, the 636 Coordinator had best access to the CDAC representatives, most of whom shared her skepticism regarding the University's intentions and its capabilities for improving school programs. Although she received CDAC complaints and concerns, she had difficulty communicating these to either school or University personnel. This was due perhaps, to the tendency of these others to discount her concerns and those of CDAC as simple repetitions of their generalized disaffection with the pairing and their frustration with their inability to influence it.

Instructional Staff

Several teachers volunteered to serve on the Advisory Board of the pairing and contributed to planning annually at that level. Because the Board delegated actual proposal writing to the University Coordinator's office, teachers and other members did not originate details of project designs but responded to them as they were presented to the Board. The teachers on the Board represent different schools, subject areas, and grade levels, and communicate among themselves very little outside of the Board's formal meetings. All teachers in the District, as well as administrators, parents, and students, could express their views of their schools' needs through the District-wide needs assessment conducted in the second year of the pairing. However, the

instructional staff as a formal group do not generate specific proposals. Proposals that the pairing sends forward are tailored to conform to Teachers' Union guidelines and contractual restrictions regarding teachers' hours.

In most projects teachers participate through a released time or in a few instances, fees for service. Teachers who participate under either arrangement are usually committed to the goals of a particular project, although they feel free to express reservations about the project's procedures. Teachers thus exert most of their influence on projects during the stage of implementation.

In the Basic Skills Reading Project, however, teachers were expected to participate regardless of their opinions about the project, by referring students for tutorial or remedial instruction by University students and staff. Although they complied with these stipulations, many voiced their concerns and problems with the project through project monitoring channels. In a large number of schools teachers' negative evaluations (in conjunction with the concerns of the principals and CDAC) led to the withdrawal of the school from the project in the second year. Also, individual teachers responsible for disseminating knowledge about reading instruction initially presented in the reading course selectively chose the information they transmitted and often contradicted or ignored that knowledge with which they disagreed.

In several instances principals appointed specific teachers to participate in projects and allowed released time to do so. In most of these instances, the quality of teacher participation was quite low. One teacher appointed to coordinate her school's student publication seemingly chose to do a poor job in order to avoid reappointment the following year.

Due to the relatively self-selective nature of most teachers' involvement in projects, it is not surprising that those involved in them in the later years of pairing's history held fairly positive views toward the University. In most cases, teachers' networking with the University was restricted to

their involvement in training efforts orchestrated by University personnel; they had very little contact with the University outside these arenas. Teachers' networking with parents around project-related issues was limited and restricted to those specific arenas. With the exception of the few teachers on the Advisory Board, instructional staff had little significant contact with CDAC members.

CDAC

Although CDAC is officially composed of equal numbers of parent and community representatives, the parent representatives appear to exert more influence on the schools in general and in the pairing in particular. This is true for several reasons. First, parents have a clearer vested interest in providing direction for the pairing, especially in channeling pairing resources to the schools in which their children are enrolled. Also, parents serving on CDAC are elected from each school's REPC. These elected representatives tend to be the most politically active and astute members of the schools' Parent Group. Moreover, within this District, the parent representatives from one specific sub-neighborhood have emerged as especially influential in city and District school politics. This group of parents has benefited from relatively stable leadership over the pairing's brief history. This group also shares the unique advantage of association with the only true "neighborhood" school among the District's schools because the building exists in a residentially integrated neighborhood and the Court chose not to require any busing of students either to or from it. School and University officials also suspect that this school's exemption is due, in part, to the sub-neighborhood's political connections. In any event, the enclave possesses political power within the District and within CDAC, and frequently CDAC's stance in the pairing was shaped by parents from this community.

CDAC has served in the pairing as a consumer advocate. Each member's primary interest has been to channel the pairing's resources into direct assistance

to the children in his or her school. For example, CDAC representatives complained bitterly when the Advisory Committee decided to use 636 funds to publish a District Handbook for parents. They wanted the school system to finance any such handbook and use 636 funds for direct classroom assistance. Although they lost on this particular issue, it exemplifies the stands CDAC usually took with respect to the allocation of 636 funds.

Unlike the schools or the University, very little of the pairing's resources accrued to CDAC as an organization. Therefore, if CDAC members felt a proposal would not benefit their children or their children's school, they had little to lose by withholding support for that or other pairing proposals. Although they seldom exercised this power, they threatened to use it in their negotiations with the Advisory Committee during the proposal review process.

This strategy was not as effective as it might have been had CDAC been more involved in proposal planning and development. Except for the first year or pairing, CDAC representatives did not actively participate in this process. CDAC members claimed that they did not attend Advisory Board proposal planning meetings because of inconvenient times the meetings were held. They also felt that the number of tasks assigned to them by the Court overextended their largely voluntary work force. Ironically, the Court's effort to maximize community and input may have decreased the quantity and quality of CDAC contributions to the overall enterprise. Often, CDAC's review of pairing proposals toward the end of the academic year proved to be members' first exposure to the pairing's intentions. Thus, CDAC's strategy of threatening to withdraw support for the pairing proposal could not be used to influence proposal development but only to block the entire enterprise at the eleventh hour. While the use of the threat did produce numerous last minute changes in details of planned programs, the basic components of more projects usually remained unchanged despite CDAC's subtantive objections.

For example, in the third year a basic component of the pairing proposal was publication of student newspapers, a project originally designed for all of the District's schools. CDAC representatives questioned the relative value of this project and especially the use of 636 funds to pay the University to publish the newspapers. One representative wanted a vocational high school to publish the newspapers. However, due to the late date on which these concerns were raised, substantive changes were not made. All of the proposal's components were by now interdependent and scaled to the total amount of funds available to the pairing. The Board compromised by allowing the individual schools to elect to participate in this program and arranging to redistribute any resulting unused funds from this project among the others included in the year's program.

CDAC consistently favored decentralizing the District's pairing programs and permitting each school to develop a unique agenda for use of pairing funds. Many school and University officials saw CDAC's position as serving the interests of the small but politically active group within CDAC that purportedly desired greater control over more funds than they had under District-wide programs. CDAC members, on the other hand, felt that its policy would increase the amount of funds available to all schools, albeit at the expense of the District and University bureaucracies required to administer District-wide proposals.

Another preoccupation of CDAC that school and university officials took less seriously was the total allocation of 636 funds to the District, compared to other school districts in Boston. Although it received the same per pupil 636 allotment as other Boston districts, a much higher percentage of this District's funds was earmarked for the university pairings. This occurred because three universities were paired with schools within it, more than with any other district.

From CDAC's point of view, this circumstance had two negative consequences. First, it reduced the amount of funds available for the District's discretionary

use. Discretionary funds mattered to CDAC in that they were usually distributed to the schools for the latter to use according to their own priorities. District B received $26,383 for its discretionary use. This compared unfavorable with $92,256 and $296,259 allocated for discretionary uses in the districts of the two other cases examined in the present study. On the other hand, a total of $170,556 was assigned to District B's university pairings, compared to the $83,330 allocated to the universities in each of the other two cases. CDAC's second concern was that most of the university funds were distributed to the high school pairings in the District. This reduced the university funds available for the elementary and junior high school students in the District, especially in comparison with other districts. Since CDAC's most active members were and are parents of pre-secondary students, their concern over the consequences of the 636 allocation formula is understandable.

District school and university officials responded to these circumstances by emphasizing District-wide projects. They insisted on the impracticality of developing school-specific programs with the discretionary funds available for these schools. CDAC, on the other hand, went directly to the central administration office and challenged the funding allocation formula. Neither the District Office nor the University was willing to pursue this strategy. The University may have felt that it was beyond its power to influence the school system's central office; the Superintendent may have been reluctant to challenge the central office in light of his upcoming review for permanent appointment.

Although CDAC was unable to change the allocation formula, its representatives devised strategies that slightly increased the amount of funds allocated to the District's discretionary use. For example, for the 1978-79 fiscal year CDAC convinced the University to divert some of its 636 money to the District's discretionary fund. The University accepted this compromise in response to strong arguments put forth by CDAC, and implicitly, in exchange for CDAC's support of the District pairing proposal for that year. It is

important that of the three partners, only CDAC was willing to challenge directly the city-and state-level pairing bureaucracies, and to some extent the Court itself, on the matter of the allocation formula. CDAC members were, of course, protesting a regulation that appeared to disadvantage the individual schools their own children attended.

Knowledge Exchange

Contextual Factors

Several contextual factors influenced the development and design of pairing-sponsored projects, and the degree of knowledge utilization within those projects throughout the pairing's history. The first of these was the very high expectations of the pairings held by the Boston community. At the very least, this factor contributed to the ambitious proposals initiated in the first year. Second, pairing participants operated as if proposals constituted contractual obligations to deliver whatever had been specified in the proposals regardless of the revealed inadequacies of the original documents. In only a few instances, did participants formally modify the initial proposals approved by state and city authorities, and throughout the five years they remained in doubt as to the appropriate procedures to follow to do so. Finally, the pairing operated under an egalitarian ethic whereby all 636 resources were expected to be distributed equally among all schools, regardless of variations in need among those schools. Each of these factors will be considered further with respect to their impact on project development and knowledge utilization.

The strategy of pairing universities with Boston schools developed after Boston had experienced racial violence and tensions accompanying the city's first phase of desegregation. Although many of the college and university presidents were initially reluctant to plunge their institutions into the midst of the turmoil, they ultimately acknowledged that their institutions would be best served by responding favorably to the challenge the Court

presented to them. For Dunfey University, this response conformed to its public stance as an urban university committed to Boston and to prospective students from the city's schools. Dunfey, like the other universities, soon became committed to demonstrating the viability or the Court's model and especially its own creativity and productivity. Also, the Dunfey/District B pairing received $125,000 of state 636 funds the first year and the partners felt a need to demonstrate their ability to use this amount constructively in order to assure similar levels of funding in subsequent years. These circumstances set the stage for generation of the pairing's initial projects, which proved to be the most ambitious undertaken by the pairing in its history.

The intensity of the pairing's initial efforts is especially noteworthy when juxtaposed to the logistical difficulties encountered in that first year. Essentially, the ambitiousness of the projects exceeded the capacity of coordinating structures within the newly-formed pairing. The creation of three committees to oversee the Reading Project was one of the pairing's responses to the absence of coordinating structures; however, these groups proved relatively inefficient considering the amount of person-hours invested in their operation. This resulted in a reassessment, primarily among school personnel, of the relative costs and benefits of participation in the pairing. It must be noted that coordinating responsibilities for the pairing assumed by school personnel constituted a significant addition to their ongoing instructional and/or administrative responsibilities. University personnel, on the other hand, had more leeway in adjusting other professional responsibilities to accomodate the increased demands of coordination. The outcome of the school participants' reevaluation of participation in the pairing was a significant cutback in pairing-sponsored activities during the second year. Furthermore, still participants committed to the pairing faced the challenge of renewing the pairing's initial momentum.

The initially high expectations for the pairing also served to reduce the critical perspective on the pairing of those involved in its operations. Pairing participants appear to have had dual and sometimes conflicting roles trouble-shooting problems in the functioning of the pairings while maintaining a public posture that all was going smoothly. For example, in the Multicultural Curriculum Project, greater effort was made to promote the curriculum package ultimately produced than to correct the inadequacies of the curriculum development model which continued throughout the project's second year.

A second contextual factor that influenced project implementation was the assumption of many participants that once a pairing proposal had been approved, it had to be implemented as specified in the proposal. Although the proposal approval process was quite formal, it contained few directions for revising projects during implementation. In only one of the activities studied, the Reading Project, did participants attempt to modify their original plans by submitting an amendment to the initial proposal. It was impolitic for one party to make unilateral in-process changes in the design of a project, yet repeating all of the steps taken with the original proposal process seemed a high price to pay for modest modifications. More expedient was to hold all parties accountable to a project's initial design, although this strategy often prevented participants from applying what they were learning from their experience in an enterprise new to them.

The Multicultural Curriculum Project provides an excellent illustration of the difficulties that are inherent in this stance toward project modification. Not long after the curriculum development workshops had begun, most participants agreed that the workshop model required significant modifications and that the original specifications of outcomes might be modified to obtain a higher quality product. Numerous suggestions from teachers, consultants, and evaluators were made along these lines, including a recurring one to abandon the proposal's

objective of lessons for all seven of the ethnic groups covered in the curriculum guide and concentrate instead on higher quality lessons about fewer ethnic groups. Despite the difficulties encountered in implementing these initial objectives, the project managers decided to adhere to the initial plan. An important consideration in this decision was consensus among the managers that the project was committed to deliver what had been initially specified.

Another important influence on the decision to retain the project's initial objectives was the managers' desire to provide equal coverage for all of the ethnic groups included in the original curriculum guide. These leaders did not want to slight any ethnic group, even though it was possible to rank them in importance according to their numbers in the District. This desire for equal coverage demonstrates a general leaning within the pairing to maintain an egalitarian ethic in the distribution of 636 resources, despite variation in need for the resources.

There are several instances in which this egalitarian ethic may have interfered with the most productive distribution of 636 resources. For example, in the first year of the Student Newspaper Publication Project, the University Coordinator and his assistant made a concerted effort to keep each school's newspaper similar in length and layout. One of the more creative teacher coordinators wanted the choice of more expensive photograph reproductions and reduced length, or more pages and a smaller budget for reproduction. This option was not permitted. Further, each participating school received equal funds for producing its publication despite variations in student population. One consequence of these policies was a cynical attitude toward the project among several teacher coordinators. Ultimately, the policy skewed the matching of resources to needs among the participating schools.

In the second year of the Multicultural Project provision each school could purchase $250 worth of updated multicultural educational materials. This approach prevailed despite the fact that a few schools had extensive multicultural resource collections, while others had few of these materials. This policy simplified

decision-making and nullified struggles over differential allocations, but again it prevented matching resources to school needs.

The contextual factors considered in this section appear to bear more upon project implementation than knowledge utilization per se. These factors did have an impact on participants' views of the rationality of the pairing's operation and of pairing managers' willingness to confront tough decisions. In a few instances, the cynicism spawned made constructive relationships between school and University personnel more difficult to achieve. These factors thus negatively influenced the climate of the interorganizational network through which knowledge was to be exchanged and utilized.

Sources of Educational Knowledge

It had been initially hypothesized that educational research knowledge would be transferred primarily from University personnel participating in the projects to teachers and parents. Given the discovery of the relatively low profile of parental involvement in the pairing activities, this hypotheses was revised informally to apply more clearly to knowledge transfer between university and school personnel. Secondly, it was expected that school personnel would be more involved in transmitting craft and situational knowledge to University personnel. Continuity in this two-way flow of knowledge was expected to contribute to overall knowledge utilization within the pairing. That is, craft and situational knowledge, melded with research knowledge, was expected to produce a composite of all three that would improve the educational program in the areas in which it was exchanged. The study's initial assumptions regarding the sources of specific categories of knowledge are supported by the data in this case. However, the secondary assumptions regarding the synergistic relationships between the several categories of knowledge were not in evidence among the projects studied.

In three of the four 636 projects, educational research knowledge most often originated in the university sector. The one project where this was

not the case, the Student Newspaper Publication Project, did not utilize educational research knowledge as defined in the present study. In the Reading, Multicultural, and Physical Education Projects research knowledge most often originated within the University sector and comprised the major category of knowledge transferred by this sector.

For example, although the reading course included in-class demonstrations in which the course instructor employed his craft-based skills in reading instruction, the bulk of the content was general theoretical principles derived from systematic inquiry in the teaching of reading. The Multicultural Project employed ethnic and curriculum consultants to transfer systematic information regarding specific groups and models of curriculum to the teachers on the curriculum writing committee. Many of the ethnic consultants were not teachers and had little craft knowledge to draw upon. Among ethnic consultants who had taught, the majority attempted to transfer information regarding their specific ethnic group, assuming that teachers would be able to translate this data into viable lessons for their students. Of the three projects, the Physical Education Project came closest to channeling equal amounts of craft and research knowledge from the trainers to the school people, but here, too, research knowledge predominated. In this Project it was more difficult to identify research as the source of the trainers' activities, due to the prevalence of demonstrations and enactments in their instructional programs. The Project stands out as unique in its integration of research and craft knowledge in the delivery of training.

In referring to the University as the source of most research knowledge, we must remember that in all but one project, the University served as a broker for the expertise utilized not as its prime source. All of the ethnic and curriculum consultants in the Multicultural Project were not University staff, although the University used its contacts to recruit them. Similarly, the University identified and contracted with the gymnastics and outdoor recreation trainers employed in the Physical Education project. The Reading Project was

the only one that utilized University personnel directly in transmitting educational research knowledge.

Within the training arenas of all four projects, school personnel most often transferred craft and situational knowledge among themselves, and less visibly to the trainers/consultants with whom they worked. The teachers in the graduate reading course transmitted information regarding their teaching practices and circumstances to the course instructor. Several school-based participants, especially reading specialists in school and federally-sponsored reading programs, transmitted research knowledge in the graduate course and in other components of the project. Still, the predominant categories transferred by teachers in this project were craft and situational knowledge.

The teachers involved in curriculum development in the Multicultural Project had fewer opportunities to transfer their craft and situational knowledge directly to the consultants, although they did share it with the project managers. For example, the middle school teachers voiced concerns over the applicability of a multicultural curriculum within Boston's standard social studies curriculum. This situational knowledge was transmitted to the project managers who would attempt to relay it and other teacher concerns to the consultants. Most often, however, the consultants were relatively unaware of the teachers' situational or experiential resources or constraints. Typically, the teachers developed lessons by utilizing information provided by consultants, but in light of their individual teaching experiences and circumstances. Several school-based personnel possessed research knowledge in ethnic studies and multicultural education from which to draw, though this accounted for a small proportion of the knowledge transferred in this group.

Teachers participating in the gymnastics and outdoor recreational components of the Physical Education Project were relatively inexperienced in either of these fields and had little craft knowledge to transfer. They did, however, transfer situational knowledge regarding the availability of apparatus and facilities for including these components in the physical education curriculum.

C. MASSACHUSETTS COLLEGE AND DISTRICT C - COLLABORATIVE

1. Overview
Massachusetts College - District C

As part of the Federal Court's effort to improve the quality of education in the Boston Public Schools, Massachusetts College was paired with Community District C. Massachusetts College was bound by the judicial mandate to "support, assist, and participate in the development of educational excellence" in the District C schools and, more specifically, to "share in the direction and development of curriculum and instruction." Members of the community, especially parents of children enrolled in District C schools, were also guaranteed an official role in the collaborative through a system of organizations created by the Court. The pairing joined together a century-old college, newly established parents' groups, and a collection of elementary, middle, and secondary schools only recently formed into a district. The resources of the participants, both personal and institutional, basically determined the role of each in the functioning of the pairing.

The largest of the nine community districts created by the Court in the initial phase of the desegregation process, District C includes: two high schools, four middle schools, and sixteen elementary schools. The current enrollment totals 10,379 students: 2,425 whites, 6,813 blacks, 32 orientals, 1,074 Hispanics, and 35 native Americans. The District employs 692 teachers of whom 512 are white, 138 are black, and 42 belong to other minorities.

The Court's purpose in reorganizing the school system into community districts was to decentralize decision-making (previously focused almost entirely in the School Committee), and thereby make the schools more responsive to parents and to the communities in which they are located. In District C, as in the other districts, the chain of authority extends from the principal or headmaster of each school in the district, to the District Superintendent, to the School Department, to the School Committee. The District Superintendent has been

the dominant figure in District C and in the pairing. Emil Jones had worked his way up through the school system to become the first black to be appointed a District Superintendent; he consequently had the overwhelming support of black parents and community members. Upon his death continuity of development in the District and in the pairing relationship was maintained by Grace Jones, who succeeded her husband as District Superintendent.

Grace Jones works closely with the College Coordinator, suggesting projects, reviewing project proposals, and monitoring funded projects. She has a policy of meeting at least once during the school year with each project director. She discusses the pairing projects with principals and headmasters. Along with the College Coordinator, she deals with the Boston School Department and the State Department of Education on issues relating to project budgets. The District Superintendent discusses the pairing projects with the CDAC leadership, whose meetings she attends. She also serves on the policy boards of the Teacher Corps and the Teacher Center, two federally funded projects which developed out of the pairing relationship.

District C has several district-wide coordinators in charge of specific curriculum areas, such as the bilingual program. Many of these district-wide positions have only recently been filled. The five year history of the pairing has been marked by a high level of turnover among administrative staff who have been moved from one position to another and from one district to another. The Staff Developer, new to the District when the pairing began, claims to be one of only a few members of District Office staff who has been involved with the pairing in District C since its inception.

The teaching staff of District C has also been unstable. The problem of teachers being transferred out of a particular school or out of the District was most acute in the first months of the pairing. Since then, the transferring has occurred on a much smaller scale, but the loss of newly trained teachers to other districts has continued to plague the pairing.

Teachers are the participants in, rather than the initiators of, most of the projects. In the initial planning stage of the pairing, surveys of teachers' needs and desires were conducted and became the basis for most of the projects. In some cases the teachers participate in projects on their own time; in others, they give up a free period or take advantage of released time to work on a project.

Principals and headmasters review project proposals and decide whether a particular project will operate in their school. They conduct any negotiations with the District Office or with the School Department which might be required for a particular project. They may be responsible for recruiting project participants from their teachers.

Unlike some of the other community districts created by the Court, District C's schools are (with one exception) located in a single large neighborhood, Bayside. Bayside, however, is not a tightly-knit community: in fact, it is Boston's largest neighborhood, larger in population than all but a few of the cities in the Commonwealth. It is made up of a multitude of neighborhoods and districts which vary considerably by family income, racial composition, age of residents, and quality and type of housing. During the past fifteen years, the transformation of many areas of Bayside from white to black has resulted in racial tension and conflict.

The parents of District C students are predominantly black, with incomes ranging from poverty level to middle incomes. They have access to the school administration through the Racial and Ethnic Parent Councils (REPCs) which have been formed in each school; and through the Community District Advisory Council (CDAC), the membership of which, as specified in the Court Order, must include a representative from each REPC as well as a teacher, a principal, and representatives from various community agencies and institutions.

CDAC has found it difficult to arouse parents to become involved in the schools. Although the organization has been active in the District, most of its work has been carried out by a small paid staff rather than by parents or community members. The CDAC Coordinator describes the relationship between CDAC and the District Superintendent as extremely close and built upon mutual respect. The Coordinator counts the appointment of Mrs. Jones as Superintendent, for which the CDAC lobbied, as a victory for the local group. The involvement of CDAC in the pairing, with the above exception, has focused on the review proposals for 636 funds.

The third partner in the pairing is Massachusetts College, whose history and prior involvement with the public schools profoundly shaped its role in the pairing. In 1852, the Boston City Council established the Massachusetts Normal School to train young women to teach in the city's schools. In the 1920's, the school's name was changed to the Teachers College of the City of Boston, and the College was granted the right to award bachelor's and master's degrees in education. The College later became part of the State College System, although its primary focus remained teacher training until the 1970's. Drawing 40% of its 5,200 students each year from Boston, the College over the years educated thousands of graduates of the city school system, many of whom returned to teach there.

In addition, the College's low tuition and central location make it extremely attractive to teachers seeking a Master's degree or Certificate of Advanced Graduate Study. Each year Massachusetts College awards more than four hundred graduate degrees in education, many to Boston Public School teachers.

Thus, when Massachusetts College was ordered by the Court to work with District C, the College was not moving into foreign territory. A large number of its faculty had already been involved with the public schools, through their contact with current teachers in graduate courses and their supervision of undergraduate practice teachers. In many pairing activities,

faculty members worked with former students. Further, faculty members came to Massachusetts College after years of teaching or administrative experience in the Boston Public Schools.

Massachusetts College's 5,200 undergraduates come mainly from working class families; most are the first in their families to go to college. The students have a low opinion of the College, which they refer to as "Tremont High School." In the perceptions of faculty as well, Massachusetts College rests in the lower echelons of higher education. The emphasis of the College is on teaching, and the faculty are not required to engage in research; about half of the faculty members have a doctorate. Because a large proportion of the College's freshmen arrive ill-prepared for college work, the College has been forced to develop remedial programs in basic skills. Thus, faculty members have confronted some of the same problems that District C teachers must deal with.

The order to work with the Bayside Schools could not have come at a more opportune time for Massachusetts College. Faced with a decline in the number of education majors, as well as a general drop in enrollment, the College must develop a new identity. Challenged by the Governor and the Legislature to justify its continued existence, Massachusetts College has begun to define itself as an urban institution with a special mission to serve minorities, disadvantaged students, and working people. Its minority enrollment has risen to 14%, it has expanded its full-time evening program, and it has turned its attention to those not yet ready for college by offering G.E.D. courses, a pre-college remedial program guaranteeing admission to Massachusetts College, and a non-degree program in allied health fields all through a new Urban Learning Center. Besides providing funds for release time for tenured but underutilized education faculty, the pairing offered Massachusetts College a chance to act upon its motto, "Education for Service," and an opportunity to validate its new image as a "city college."

An unanticipated and still unacknowledged benefit of the pairing may

be improvement in grant writing skills and an increased awareness of outside funding sources on the part of both the College Coordinator and individual faculty members. Since the pairing was established, the amount of grant money which Massachusetts College has won has increased significantly.

The President of the College appointed the Director of Program Development and Research to serve as the College Coordinator of the pairing. Because he enjoys a close personal relationship with the President, the College Coordinator has been free to exercise a strong degree of control over the College's participation in the pairing.

At the start of the planning stage of the Collaborative in 1975, the College Coordinator prepared the following description of his responsibilities:

Coordinator: Responsible to the President for all aspects of involvement. More specifically, the Coordinator:

1. Represents the project to the College as a whole, to the Court and other colleges and universities, to the School Committee and Superintendent of Schools, to the business community, to the residential community, to the State Department of Education.
2. Connects the members of the planning network and insures that connections between planning groups, experts, college and public school people are working at all times.
3. Obtains resource materials for Planning Teams' use.
4. Assures development of written statements by individuals, teams and the planning network as a whole.
5. Guides the recommendations of the planning network through the various levels which must approve such recommendations.
6. Performs those planning activities which, for any reason, a planning team fails to perform.

If "pairing" is substituted for "planning network" and "consultants" for "planning group" and "Planning Team," this description shows the extent of the responsibility with which the College Coordinator was entrusted.

The District Superintendent and the College Coordinator share equally in the power to approve or veto a proposed project and to continue or curtail a project in operation. The College Coordinator, however, has a policy of

deferring to the wishes of the District Superintendent. Supervision of day-to-day aspects of the pairing arrangement has been the responsibility solely of the College Coordinator, who has always delegated to one or two assistants such tasks as arranging for the transportation of students, hiring security guards, and assisting faculty members and school personnel in the preparation of grant proposals. Moreover, the College Coordinator has been a member of CDAC for several years, and has been helpful to it in several instances. For example, the CDAC Coordinator credited the College Coordinator with obtaining typewriters for the CDAC office.

Thus, the role of the College Coordinator is to facilitate the College's role in the pairing, which is to initiate and join in collaborative projects with District C schools. The most important function of the College Coordinator's role has been easing the process of application for the funding of projects. In order to obtain a share of the funds allocated to pairing activities under Chapter 636, each pairing must develop a comprehensive yearly proposal for collaborative projects which meet the criteria specified for that year by the Bureau of Equal Educational Opportunity (BEEO) of the Massachusetts Department of Education. The proposals are then subjected to an elaborate review procedure.

Structures

The formal structures through which projects are initiated, screened, and approved, like the roles of those involved in the pairing, have been located at both Massachusetts College and in District C. At Massachusetts College, all pairing activities are concentrated in the Office of Program Development and Research, the office which generates and administers the College's externally funded projects and also handles institutional research. The Director of Program Development and Research is the College Coordinator; serving under him are an Associate Coordinator (1975-77 only), assistants, accountants, and a secretary. No other administrative or academic department of the College has had any formal or ongoing involvement in the pairing, with the exception, in 1979-80, of

the Program of Continuing Education, the Director of which serves on the Policy Board of the Teacher Center. Faculty members have participated in the pairing as individuals rather than as department members.

The facilitating structures in District C have been equally centralized, but the nature of the committees and the burden of the work have led to an alteration in the process of submitting proposals. Project proposals are first reviewed by the District Superintendent, who then passes them on to a District Screening Committee composed of CDAC representatives, teachers, and school and district administrators. In the first years of the pairing, Massachusetts College submitted a very large number of proposals to this committee, which then selected only a few for submission to the state for funding. To eliminate this waste of effort, the District Superintendent after the second year redesigned the proposal screening process. Now, the process requires that project abstracts be jointly submitted, so that initiators from the College must find cooperating individuals in the District, and initiators from the District must find partners within the College. These abstracts are screened and only the initiators of the projects that the Committee intends to recommend for funding are asked to write full proposals. Thus, the District C decision-making structure took on a more streamlined form, one that has since been fairly successful.

As the process of developing proposals became smoother every year, the College Coordinator's role has lessened. The Coordinator estimated that in the first two years of the pairing, Massachusetts College's in-kind contribution, mostly through the salaries of the Coordinator and his secretary, amounted to $50,000. Since then, the process has become simpler, the direct involvement of the College Coordinator has decreased and the College's in-kind contribution has proportionately lessened. In the first two years of the pairing a much larger number of proposals was written than could possible be funded, a situation frustrating to the proposal writers as well as to the principals and CDAC members who reviewed them at very short notice. The College Coordinator at that time had the task of

establishing liaison between school and College faculty members, a task which has understandably lessened since.

Another factor in the gradually decreasing scope of the Coordinator's role was the large number of projects begun in the early stages of the pairing. Many projects over the past five years developed out of a large scale planning effort begun in the summer of 1975 soon after the pairings were set up by the Court. Having received $60,900 in Chapter 636 funds, the College Coordinator recruited forty Massachusetts College faculty members, representing nearly every academic department in the College, to meet with the teachers in District C and conduct a needs assessment. The College Coordinator and the District Superintendent then selected eighteen areas in which the College would become involved. By December of 1975, at one high school in the District, nineteen faculty members from ten departments were working on nine projects. By the end of the second year of the pairing, the College Coordinator estimated that 60 of the Massachusetts College faculty, 375 of the teaching staff in District C, and 4,400 students had been involved in pairing activities.

Although funds awarded varied in succeeding years ($112,310 in FY 1976; $87,000 in FY 1977, $82,430 in FY 1979, and $112,800 in FY 1980), demands on the College Coordinator decreased. According to the streamlined application process already described, College faculty and District C now submit only abstracts, the best of which are selected by the District Superintendent and the College Coordinator for preparation as full proposals. These are sent on to the various review committees outside of the District whose approval must be secured before a contract is drawn up and the funds are awarded, a process which takes about six months. Projects are funded for one school year, and if the pairing wishes to continue the activity for another year, the entire application process must be repeated.

Each proposal must specify the method by which the project will be evaluated. Each year the pairing selects an independent consulting firm to conduct interim and final evaluations of each pairing activity. While a

project is in operation, the District Superintendent and the College Coordinator have control over it and monitor it closely, meeting at least once each semester with the faculty consultant to determine the degree to which the project's goals are being met. On the basis of these reports, plus consultations with the principals and headmasters, the District Superintendent and the College Coordinator decide which projects should continue into the following year.

Most of the pairing projects have involved staff development, rather than the provision of direct services to students. Massachusetts College faculty members have conducted workshops and courses in the following areas:

For high school teachers:

Workshops for teachers in earth science;
Teacher training in the use of SCIS kits for science instruction;
Training in the use of a math lab;
Courses in various aspects of teaching reading in the secondary school;
Training for teachers who later earn graduate credit serving as clinicians in after school reading clinics supervised by Massachusetts College faculty;
A course in Haitian culture.

For middle school teachers:

Training in the use of a math lab;
Training courses for science teachers, followed by weekly consultation and classroom support by Massachusetts College faculty;
Instruction in individualizing reading instruction;
Workshops in teaching of reading in the content areas.

For elementary school teachers:

Workshops in skill improvement in special needs, reading, and math.

In many of the courses the teachers have earned graduate credits from Massachusetts College at a reduced tuition rate.

Curriculum development is another area in which College faculty have worked with teachers in District C. Accomplishments include:

Development of a math laboratory at a high school and assistance to the math teachers in curriculum revision.

Establishment and maintenance of a remedial math course at two high schools.

Creation of a three year algebra-geometry sequence which features individualized instruction.

Development of a structured English curriculum for a middle school

Development of an elementary math curriculum.

The primary focus of pairing activities had been basic skills. The District Superintendent decided in the first months of the pairing that, because reading was the most serious problem in the middle and secondary schools, most pairing funds should be spent on teacher-training workshops in reading. Three reading specialists at Massachusetts College had already been involved in setting up a reading program at a high school and a middle school in the District. This plan was expanded to include all of the District's high schools and middle schools, in a proposal submitted in 1975 which asked for more than $400,000 in Chapter 636 funds. However, only $140,000 was received. In subsequent years reading faculty at Massachusetts College have offered courses for teachers and have organized and supervised after-school reading clinics for students. Programs in mathematics and writing skills have also been offered.

In addition to working with teachers, Massachusetts College has provided direct assistance to District C students. Massachusetts College students served as classroom assistants to teachers at all grade levels and provided tutoring in all subject areas. They have also assisted in a physical education program for two elementary schools which bus children to the College to use its athletic facilities. The College also helps the principal of one middle school carry out an interdisciplinary environmental studies program which culminates each semester in a one week trip to Cape Cod for thirty eighth graders. Under the direction of a professor of psychology, graduate students from Massachusetts College provide psychological counseling to students at one elementary school.

Beyond the funded projects, the College has made its athletic facilities available to the District, provided classroom space for elementary school pupils during a school emergency, and hosted a high school dance. On the other side of the pairing, District C teachers have served as cooperating teachers for Massachusetts College's elementary education majors and secondary education minors doing their practice teaching in Bayside. Some schools have provided

locations where Massachusetts College faculty could conduct the classroom-lecture segments of their courses on site, before or after their students assisted teachers and pupils in the Student Assistance Project. (see Project 3 below).

The College has also lent assistance in grant writing to District personnel interested in securing funds from the federal government or other sources. Through the pairing, federal funds have been obtained for a Teacher Corps and a Teacher Center located in District C, as well as a National Science Foundation grant for pre-college teacher training in science.

METHODOLOGY

A study of knowledge dissemination within this pairing must be comprehensive because of the multiplicity of roles and relevant structures. Yet to study all the pairing projects would not be feasible. To insure comprehensiveness, a number of factors determined the choice of a few projects from the study of which generalizations might emerge. These included: the scope and aims of the projects; the institutional association of the project initiator; and the type of school in which the project took place. To obtain additional information about the projects selected for analysis as well as about the pairing as a whole, interviews were conducted with the College Coordinator, the District Superintendent, a district administrator, the former Associate Coordinator, the current Assistant to the Coordinator, and CDAC Coordinator, and a parent serving as an Assistant to the CDAC Coordinator. The files of the College Coordinator were also reviewed.

A large number of pairing projects were undertaken during the five year period. Four faculty members from the Elementary Education Department volunteered to conduct an initial needs assessment, and, along with two supervisors of student teachers from the Mathematics and the Biology Departments, visited each elementary school. They either collected priority rating sheets filled out by teachers or wrote summaries of their impressions. This process yielded a long list of requests by teachers for various types of assistance from Massachusetts College. Those "areas of concern" most frequently mentioned were:

1. further education of teachers;
2. development of better curriculum;
3. improvement of teacher/student/parent interactions;
4. help in planning and evaluating programs;
5. help in testing students in reading skills;
6. availability of student assistants;

7. assistance in controlling students' behavior;

8. additional educational materials and resources.

The faculty members then met with the College Coordinator and the Chairperson of the Elementary Education Department with whom they reviewed the needs listed above in order to determine what Massachusetts College could do "to be helpful with respect to the most important concerns" of the school personnel. They produced a list of seven possible tasks and sent it on to the District Superintendent. These included:

1. development of a pilot student intern program in one elementary school;

2. a comprehensive plan for continuing in service education workshops;

3. a multipurpose curriculum library center and resource area;

4. a multi-faceted psychological services program on a pilot basis in one elementary school;

5. development of a comprehensive physical education program;

6. "awareness" sessions involving teachers, parents, and students participating in the desegregation process;

7. bilingual/bicultural program for Spanish-speaking children at three elementary schools.

After a similar needs assessment in the secondary schools, the following planning tasks emerged:

1. development of leadership roles in physical education;

2. curriculum development in science, English, social studies, mathematics, and business education;

3. clarification of the rights and responsibilities of teachers, parents, and students within the school setting;

4. planning for continuous access of teachers and students to expert help, additional space, equipment, and materials;

5. staff development projects: middle school clusters, science, English, social studies-History; physical education, business, education, Teacher Corps;

6. reading, curriculum development;

7. district-wide student and community assistance program;

8. bilingual/bicultural programs;

9. multi-faceted psychological services, on a pilot basis in one middle school.

On the basis of these recommendations, in September of 1975 Massachusetts College and District C submitted a proposal to BEEO for funding of 21 programs in six broad areas. Each year thereafter the number of funded projects has dropped, down to seven for 1979-80. However, some projects have continued from year to year, notably those in Reading, Psychological Services, Mathematics Assistance, Science Assistance, and Student Assistance.

The majority of 636 funded projects are simple in structure, typically involving one Massachusetts College faculty member/consultant teaching a course to a group of District C teachers. A few are more complex. The Reading Project, for example, consists of after-school clinics at two locations. This project's participants fall into four categories: Massachusetts College faculty members, who supervise master teachers, who supervise other teachers, who instruct the children. The project provides direct assistance to teachers, who are instructed in methods of teaching reading, for which they earn graduate credits, as well as direct assistance to pupils. The children's reading levels are monitored and the results of the project are evaluated by the Massachusetts College faculty members, who also grade the participating teachers. Also complex are the two major federally funded projects - the Teacher Corps and the Teacher Center, which have complicated governance structures, large staffs, and include a variety of sub-programs.

The staff of this study decided to select four projects from each pairing for detailed analysis. To insure comparability, four broad topic areas allowing for the inclusion of at least one project from each of the three cases were specified. These topic areas were: basic skills, educational equity, informational/coordinational, and physical education/direct assistance to students. The study group also determined to focus on secondary school projects because of the relative dearth of research on this level of education, and to include

projects initiated in various years of the pairing's history, District-wide as well as single-school projects, and school-initiated as well as College-initiated projects.

From the total array of Massachusetts College/District C projects, the Mathematics Assistance Project at the Ingliss High School was chosen because it is secondary level, began in the first months of the pairing and continued until the present, has yielded both successes and failures, and encompasses three types of assistance: curriculum development, staff development, and the provision of facilities and equipment. To collect data, the three faculty members who filled the position of project director, the Headmaster of the High School, the Math Department Chairperson, and three math teachers were all interviewed.

Even though as a "basic skills" project, it is similar to the Mathematics Assistance Project at Ingliss, the Elementary Mathematics Assistance Project was selected for study because it is regarded as a success by all involved in it, and thus contrasts with the less smoothly running project at the High School. Secondly, it is a District-wide effort in which teachers from each elementary school participated. This second Basic Skills project takes the place of an informational-coordinational activity, since none of this type has been carried out in the pairing. A work session of this project was observed.

The third enterprise studied, the Environmental Studies Project at the Terrence Middle School, is the only one that addresses the issue of interracial harmony, the only one conceived and directed by someone on the school side of the partnership. Interviewees for this study included the project director, two teachers at the middle school, the former associate coordinator of the pairing, (who was involved in the project during its first year), and a faculty consultant who participated in a limited way for three years.

The fourth project studied, Student Assistance, is a District-wide effort that includes a physical education component in its program of direct service to

District C pupils by Massachusetts College faculty and students. It also is a project that has continued since the first year of the pairing. The director of the project, two faculty members involved in the physical education component, the former associate coordinator, and a teacher whose class participated in the physical education program were interviewed.

2. Project I: Elementary Math Assistance
Massachusetts College - District C

In the spring of 1978, Grace Jones, the District Superintendent, initiated plans to develop an elementary-level math program using Chapter 636 funds. Emphasis within the District, as well as in the city as a whole, had been on developing reading programs. However, Mrs. Jones believed it was necessary to create a standardized math curriculum which could improve students' chances of passing the minimum competency tests which the District would soon administer. Mrs. Jones had been trained as a math teacher and several years ago, before she assumed her present administrative position, had participated in workshops at the Harvard Graduate School of Education, where she met Susan Tile, now a Massachusetts College faculty member. When Mrs. Jones decided that pairing funds should be used for math assistance, an idea also endorsed by the elementary school principals, she asked John Powers, the College Coordinator, to include Professor Tile in the project. When Professor Tile learned that Grace Jones wanted to talk with her, she contacted the District Superintendent and agreed to work on the project.

Initially, Professor Tile's task was to complete the work of the City-Wide Task Force for Standards in Basic Skills. The Mathematics Subcommittee of this Task Force had established tentative guidelines for mathematics coverage in grades one through three, but did not delineate minimal competencies or minimal competency test items necessary for implementation. Professor Tile met three times with the District Superintendent and with her staff development officers. After evaluating the work of the Task Force, they decided that firm standards for minimal competencies in grades one through three should be developed, building on the work of the Task Force. Professor Tile wrote an abstract and a formal proposal describing the intended work.

The first phase of the project was supported by 636 funds. District and Massachusetts College applied for and received an additional $2,463 for the

second half of the project, to be carried out in the spring of 1979, which included setting standards for content coverage and minimal competencies for grades four and five. Professor Tile worked with elementary school teachers after school to produce the new curriculum. The teachers were asked by their principals to work on the project.

In a series of implementation meetings in the spring of 1979, Professor Tile met with all first, second, and third grade teachers. She held similar meetings in October, 1979, for the fourth and fifth grade teachers and for the principals. Professor Tile also took it upon herself to compare the new curriculum with the criterion reference tests (ICRT Basics) that the District had just adopted. Each teacher received a document showing which concepts in the ICRT Basics were not covered in the curriculum, so that each could decide when to follow the curriculum guide and when to emphasize the ICRT requirements.

As the curriculum writing project was drawing to a close, one of the participating teachers suggested that teachers would need worksheets (pages of problems for the children to solve) to accompany the new curriculum before they would be likely to make use of it in the classroom. She thought that the teachers would be too busy to develop their own worksheets. Professor Tile agreed that the development of worksheets was necessary to the ultimate success of the project. She submitted another abstract, which was approved by the screening team. The project for 1979-80 was funded in the amount of $11,572.

The elementary school principals were asked to send at least one teacher to the six day long "worksheet" sessions held in the District Office beginning in November, 1979. Only one of the elementary schools in District C failed to send a representative, apparently because substitute teachers could not be found. At the first meeting the teachers decided on the categories of worksheets they wished to produce for grades four and five. Professor Tile then divided the participants into small groups, each of which was assigned to develop problems on a particular topic, such as word problems, time, geometry, and fractions.

Within each group the teachers assigned themselves the various tasks of devising problems, writing them down, and illustrating them. Professor Tile spent time with each group, offering suggestions and criticisms.

At the end of each of these sessions, Professor Tile collected the worksheets, duplicated them, and returned them to the teachers at the next meeting. The teachers took the worksheets back to their schools and tried them out on their own students. Professor Tile also devised a rating form to be used by non-participating teachers to evaluate the worksheets. The teachers in the project distributed the worksheets and the rating forms to the other teachers in their schools. Professor Tile used these rating sheets to revise the worksheets.

Professor Tile received additional 636 funds for 1980-81 to cover the cost of printing the worksheets. This project is viewed by the District Superintendent and the College Coordinator as one of the major successes of the Massachusetts College-District C Collaborative. All of its goals have been met. The curriculum guide produced during the first year of the project was favorably received by the teachers, who (according to one participant) consider it a "realistic" guide. During 1979-80 twice as many worksheets were created by the teachers as had been projected in the proposal.

Relatively few problems were encountered in the course of the project. During the first year the teachers met after school and scheduling conflicts resulted in varying groups of people attending each meeting, a situation requiring time to be used discussing and reaching consensus again on work completed by participants at the previous meeting. As a result of this, Professor Tile insisted that teachers receive released time during the second year. This generated the new problem of finding substitute teachers. Boston was facing a shortage of substitutes and this problem led to the cancelling of at least one scheduled session. Professor Tile's illness during the second semester also resulted in the cancellation of several planned meetings. However, these obstacles did not prevent project participants from completing their work. In fact, so committed

were the teachers to the project that on one occasion four teachers who had not been notified that a meeting was cancelled spent the day working on their own at the District Office. They produced twelve worksheets, identified the objectives in the fifth grade curriculum to which they related, and summarized for Professor Tile the responses to the evaluation sheets they had administered at their schools.

The success of this project may be attributed to the following factors:

1. Professor Tile's personal attributes

Professor Tile has an international reputation in math education. Besides her teaching responsibilities and her work in District C, she directs a National Science Foundation grant on the biological bases of math learning. The teachers in the project, aware of her research and writing activities and her frequent trips to conferences and consulting assignments, were impressed by her energy and her commitment to their project. By revising, editing, and duplicating the worksheets herself between work sessions, Professor Tile set a standard for hard work.

Professor Tile's teaching experience at the elementary and secondary levels, as well as her supervision of student teachers at Massachusetts College, enabled her to develop excellent rapport with the teachers. She comments: "The advantage I have is that I was a teacher. I've worked in classrooms. I know what you feel like when you get out at three o'clock after teaching all day." Professor Tile also states that she sometimes develops ideas with her Massachusetts College students that she then shares with the teachers. Although neither of the teachers who were interviewed know of Professor Tile's teaching experience, they both stated that there had been no suspicion regarding her ability to communicate knowledge useful to classroom teachers. They found her suggestions to be "very realistic...Everything is geared to the level of the teachers." The teachers interviewed could recall no instance when Professor Tile had referred to research supportive of a suggestion she had made.

2. Professor Tile's skills as a facilitator and a program designer

Professor Tile brought to this project a great deal of experience conducting inservice workshops and a well-conceived strategy for motivating teachers. Her conviction that "the teachers know what works for them" led her to establish a participatory format in which the teachers could express ideas, critique them, and arrive at consensus. By casting herself in the role of a resource person, and the teachers in the role of curriculum writers, she gave them a stake in the success of the project. Professor Tile views the project as a cooperative venture:

> ...I can polish (the worksheets) and get them okay mathematically and put them into a good format, but without their input it would be my work rather than their work.....It's the same with the curriculum. No teacher there could have developed the curriculum--you need the expertise of someone who knows how to develop curriculum. But this is really theirs. They went through everything, thought it out, talked it out. I just was able to guide them along and they were telling me: 'No, don't do that here. That comes later.' I might then have to say, 'Well, you can't do that until you've done this.' It was just a tremendous cooperative effort. And I feel the same thing is happening here. The teachers are not at all sensitive about each other's criticisms or mine.

Professor Tile also made it a practice to collect worksheets developed by each small group and bring copies to the next session for all the participants "so that we can use them as a starting point and we don't waste time. I never like to have any one teacher feel that they have wasted any time of the day or that their ideas have not been utilized." She believes that this practice nourishes the enthusiasm and commitment of the teachers.

> They can't believe that someone has taken what happened the previous time and done something with it and come back with something, so that the work goes on. So each time there's a tremendous amount of progress and a product.

3. Design of the project

a. Release Time

Professor Tile insisted that the design for the second year contain funds for release time for teachers. She believes that teachers are

too tired after school to work effectively and that they would accomplish so little in a short period of time then that their enthusiasm would quickly wane. By structuring the project into day-long work sessions, Professor Tile insured that the teachers would regard the project as both personally and professionally rewarding. She found that the teachers enjoyed the sessions because they could spend the day with their colleagues (and away from their students), enjoy conversation over coffee and doughnuts, and share lunch. Moreover, the experience of completing a substantial amount of work left them, she believes, with feelings of accomplishment.

b. Opportunity for Professional Growth

According to Professor Tile the opportunity for knowledge-sharing is a significant aspect of the project.

> Some of (the teachers) are enjoying (the project) not so much because it's math, but because they feel like they are using their whole minds. They have mentioned that so many times. They leave so stimulated, they feel like they are contributing. They love the discussions: they get to talk about kids, the different types of learners, they get to talk about math. They just feel very professional at these sessions.

Professor Tile mentioned that in working with the small groups of teachers she sometimes gave a "mini-math lesson," thereby increasing the teachers' competency in math. Especially signficiant is the sharing of craft knowledge among the teachers at the meetings. They were encouraged to bring in books which they found useful and which might provide them with ideas for the worksheets. They circulated textbooks, worksheets, visual aids, and teaching techniques. One teacher, for example, reported that she had considered a particular set of instructional materials to be too difficult for her students. However, when another teacher at a work session told her that the materials would improve the children's thinking process, she began to use them and has since noticed improvement in the students.

Other benefits of the project are described by a teacher who observed that as a result of her experience in developing worksheets she is able to examine other sets of worksheets and teaching aids more critically and she is now more sensitive to students' questions and complaints about teaching materials. Finally, the task of designing and illustrating the worksheets challenged the creative and artistic talents of the teachers.

c. District-Wide Involvement

The strategy of testing the worksheets in the classroom before they attain final form potentially creates several positive effects. First, it may heighten participants' sense of accomplishment since they bring back something for their colleagues to use in the classroom. In so doing they demonstrate that they spend their "free" time productively. Secondly, the other elementary teachers in the District, having participated in the project by evaluating the worksheets, may be more likely to use the curriculum guide and worksheets because they have played a role in creating them.

This project involved Massachusetts College faculty and administrators, District C administrative personnel, teachers, and even elementary school students (who tested the worksheets). The only group not involved in the project was parents. Professor Tile is aware of this weakness in the project's design and has plans to correct it:

> I've got student input. I've got teacher input. The one involvement that I think we do need to have is parent input. Some of the parents were involved in the curriculum guidelines, but I'm not aware that we really tried to involve parents, other than the teachers who are parents, in this. And we could do it very easily by getting a packet together and involving representative parents.

d. Support of the District Superintendent and Principals

The District Superintendent made her enthusiasm for the project apparent to the teachers. She attended work sessions, participating as a math teacher, or dropped in to welcome the teachers. The teachers interviewed were

aware that she intends to share the curriculum guide and worksheets with other school districts.

The principals, too, have been very supportive of the project. According to Professor Tile, when the College Coordinator suggested that the project be conducted on an after-school basis because of the difficulty of finding substitutes, the principals objected strongly and promised to find the substitutes. Indeed, one teacher reported that some principals personally took teachers' classes when substitutes could not be found. It seems likely that the teachers' comitment to the project was strengthened by the knowledge that the principals and the District Superintendent considered their work a valuable contribution to the District.

3. Project 2: Math Assistance at the Ingliss High School, 1975-80
Massachusetts College - District C

The Math Assistance Project at the Ingliss High School is now in its fifth year. Three members of the Mathematics Department at Massachusetts College have worked, at different times, with seven math teachers at the High School. The Massachusetts College - District C Pairing received for this project $1000 in Chapter 636 funds in 1975-76, $5156 in 1976-77, $14,050 in 1977-78, and $5,449 in 1979-80.

During the initial planning of the pairing in the summer of 1975, the Math Department and the Headmaster at Ingliss specifically requested assistance in math. One of the members of the Mathematics Department at Massachusetts College, Professor Sven Smith, had belonged to the Massachusetts College needs assessment team which went to Ingliss, and it was he who suggested the possibility of developing a math lab at the school. He proposed an approach to teaching math based on the use of various learning devices, or "manipulatives," housed in a specific location called a math laboratory. Each learning device is correlated with a specific lesson in the curriculum. Ideally, as a teacher prepares a lesson, he or she refers to an index to find out which pieces of equipment are useful in explaining the particular concept and on which shelf in the math lab they are located. The teacher then obtains the learning devices and uses them in his or her class.

When Professor Smith discussed the idea of establishing a math lab at Ingliss, the Headmaster, Math Chairperson, and teachers warmly received his suggestion. The Chairperson recalls that he had earlier seen a math lab in use at a suburban high school and had been impressed with its usefulness. With the support of the Ingliss staff, Professor Smith wrote a proposal calling for him to offer a course at Ingliss in the math lab approach to teaching math, as well as to set up a math lab in the High School. This proposal was funded.

The High School math teachers subsequently enrolled in the course,

The College Coordinator recalls that in conversations with Professor Smith the faculty members "seemed to feel that they were getting some understanding of the approach." The major problem encountered during the period when Professor Smith worked at the Ingliss, which extended from spring 1976 through the 1976-77 school year, centered on ordering supplies for the math lab and getting them hauled into the school. There was a union dispute over who would bring in the boxes, a problem which the College Coordinator helped to resolve. Once the equipment was in the school, it was discovered that there was no space available for it. The materials were stored in the office of the Math Department Chairperson, where computer terminals and other machines were also located. However, the math lab materials were not unpacked because the Chairperson feared that they would be stolen by the students. He wanted a proper math lab to be constructed before the materials were unpacked.

Professor Garfield Brown of the Massachusetts College Mathematics Department had been recruited by the College Coordinator to help the mathematics staff at Ingliss implement the second year of a two-year algebra program. However, the Headmaster unexpectedly terminated this program in the middle of its first year. Professor Brown, looking for something else to do, observed that the math teachers wanted to set up the math lab. He wrote a proposal to do so which was approved by CDAC and the other required bodies.

During the 1977-78 school year, Professor Brown worked with the Department of Planning and Engineering of the School Department to design an area in which the math lab, the computer room, and the Department Chairperson's office could be located. However, the renovations did not begin until late spring and were not completed until the following year.

A second goal of the 1977-78 project was the writing of behavioral objectives for every math course offered at Ingliss. Professor Brown was to work with five teachers to produce a resource book for each course that contained specifications of the behavioral objectives of each, together with lesson plans,

textbook references, lists of appropriate math lab materials, and their locations in the math lab. Professor Brown planned to meet with the teachers on a weekly basis; and each teacher was to write objectives for two of the courses he or she was teaching. However, by the end of the funding period work had been completed for only half of the courses and the math lab had not been constructed. Professor Brown did not return to Ingliss the following year, and the project was dormant during 1978-79. The math lab was not in use during that year, either: no assistant had been hired to staff it.

In the spring of 1979, the Math Department Chairperson approached the College Coordinator and asked for assistance in developing a remedial course. Ninth grade students at the Ingliss had scored well below national medians in math achievement tests taken the previous year. The purpose of the remedial program would be to improve students' test scores and their chances of passing the minimal competence tests which the High School would be required to administer in the spring of 1980.

In response to a request from the College Coordinator, Professor Helen Stone of the College Mathematics Department, previously a participant in a pairing project at another high school, volunteered to undertake the task. She first wrote a concept paper which she discussed with the headmaster, the Department Chairperson, and the math teachers at Ingliss. With their approval, she developed a proposal which listed the following objectives for 1979-80:

1. writing a detailed list of behavioral objectives for the developmental mathematics course;
2. selecting, for each chosen objective, appropriate conceptual and drill activities, and developing for each objective appropriate instructional materials;
3. writing a set of questions to test each chosen objective;
4. training paraprofessionals, volunteers, tutors, and student teachers to assist teachers in the mathematics laboratory.

Professor Stone agreed to work at Ingliss only if the Headmaster and the District Superintendent agreed to hire a math lab assistant with school

rather than 636 funds. According to the College Coordinator, he made this demand because 636 funds were not supposed to be used to hire permanent staff and because he wanted to elicit a commitment to the project from the High School. The Headmaster agreed and Professor Stone began work with the teachers in September, 1979. The objectives for the developmental math course have now been written, although the testing has not yet occurred. The math lab has been in operation since mid-January, when an assistant finally joined the staff.

Although most of the goals specified in the three Math Assistance proposals have been achieved, the process of meeting them has been anything but smooth. In the words of the College Coordinator, "The Ingliss has been the Sargasso Sea of our effort. Everything gets cluttered up with weeds."

Both Professor Stone and Professor Brown found that the Department Chair and the teachers welcomed the efforts of the Massachusetts College faculty but were unwilling to do much work themselves. They found the attitude of the teachers to be: "Come and do anything that you can for us. We appreciate your help." Both consultants found it impossible to meet with the whole staff on a regular basis; both were forced to meet with teachers individually. Both did most of the work themselves. Professor Brown observed: "To help them out, you have to end up doing all the work yourself...and that's not really a cooperative venture."

The teachers did not attend meetings and did not complete individual assignments on time. Although they received training in the use of a math lab and had equipment for it, they did not attempt to put the lab into operation. Even after the facility had been constructed, the teachers would not unpack and set up the equipment themselves: Professor Stone did it, with the help of the newly hired Math Lab Assistant.

The teachers' explanation for their inactivity is that they were busy and did not have time to do any extra work. But Professor Brown charges them with a general lack of commitment:

> Lack of motivation, lack of real interest. It always takes more effort to change your approach to your normal presentation of ideas in the classroom, to also incorporate some audio-visual aids, to get the students more involved. It takes more preparation, more time, more effort, more discipline. I think that's lacking. From what I have been able to see, it's simply not there.

Professor Brown further suggests that because many of the teachers are already at the top of the pay scale, and thus could not profit from additional graduate credits, participation in the project contained no monetary incentive for them. Several of the teachers had received credits for their work with Professor Smith and with Professor Brown but were expected to work with Professor Stone on a voluntary basis.

Both Professor Stone and Professor Brown mention situational factors that contributed to the demoralization of the teachers. They cite the lack of effective leadership by both the Headmaster and the Department Chairperson. The Headmaster, for example, has not supported the Math Assistance Project consistently. During Professor Brown's tour of duty at Ingliss, he repeatedly called last minute faculty meetings during times when Professor Brown had scheduled meetings with the teachers, cleared previously with the administration. The Headmaster did not facilitate the hiring of the math assistant. He cut off the two-year algebra program in midstream, leaving the teachers resistant to a new plan to institute a three-year algebra-geometry sequence because they did not believe the administration would allow the project to continue beyond the first year. In Professor Stone's view, the attitude of the teachers is:"We've tried and failed, so there's no sense in trying again."

Another factor may be suspicion on the part of the Math Department staff that the High School will be closed in the next few years. Professor Brown recalls that this was a concern among the teachers with whom he worked.

Although both faculty members experienced frustration in their work at the Ingliss, they responded in different ways. Professor Brown defined his role as one of helping teachers with a task that belonged primarily to them. Most of the work that was done occurred when he deviated from this role, he felt,

contrary to his beliefs. However, he was willing to bend his principles in order to achieve the objectives specified in the proposal. He notes that he could have gone further and unpacked the math lab equipment himself (as Helen Stone did more than a year later), but he refused: "I was tempted to physically make the changes myself, but I drew the line, because I did not feel it was my place to do it."

Professor Stone, on the other hand, redefined her position at Ingliss, involving herself in all aspects of the work of the Department. When she was unsuccessful at arranging group meetings with the teachers, she began to meet them on a one-to-one basis. She worked extensively in the classroom with one new teacher who had serious disciplinary problems. She tried to get the teachers to develop a plan (required by the School Department) for dealing with students who fail the minimal competencies test. She rewrote the course descriptions for each course offered by the Math Department. Since she was dissuaded from quitting the project after the first term by the Headmaster and the Department Chairperson, her strategy has been to signify her commitment to the school by means of her continued presence within the Department and thus to win, however slowly, the good will of the teachers. She feels her role is to serve as a model:

> I think that because of the fact that I am there, they talk about math, they talk about doing things. I have to set an example by doing more work than any of them (is) doing, so that they'll recognize that they can do work, too, and things will happen accordingly.

The fact that teachers trained in the math lab approach made no effort, four years later, to set up the math lab in a way that would be useful to them might suggests that they reflected this instructional method. However, both Massachusetts College consultants reported that the teachers recognized the usefulness of the approach. In the consultants' views the Ingliss teachers are willing to accept new ideas but unwilling to go out of their way to implement them. Even with the math lab finally in operation,

the teachers are reportedly not using it to best advantage: they are sending individual students to work with the math lab assistant on a one-to-one basis. According to Professor Brown, this practice constitutes an underutilization of the math lab, the basic purpose of which is to provide materials for teachers to use in the classroom. Used by individual pupils, far fewer students benefit from it.

In this collaboration, Massachusetts College professors might have been catagorized by the teachers as experts in educational theory, as practitioners of math teaching, or as former mentors of the Ingliss faculty. None of these classifications was used to any significant degree. Neither faculty member had been asked by the teachers to cite research supporting either the math lab approach or any other idea about teaching they might have mentioned. According to Professor Stone, the important question in the minds of the teachers is "Will it work?"

Although both consultants had previous experience teaching in the public schools and supervising student teachers from Massachusetts College, they recalled no specific instances in which they justified a suggested teaching method by referring to their own classroom experiences. Both of them also had several of the Ingliss math teachers as graduate and undergraduate students at Massachusetts College, but they were unable to identify any effect this had on their relationships with these former students in the pairing context.

Apparently no overt distruct of academic expertise was communicated to the two consultants. However, one teacher commented to the interviewer that what was needed at Ingliss was the help of an elementary school teacher to advise high school teachers trained to teach algebra and trigonometry how to teach simple addition and subtraction. Professor Stone noted that College faculty sometimes gave suggestions that could not be implemented at the Ingliss. She explained that although playing games in the classroom is generally considered a good instructional technique, it is impractical at Ingliss, where teachers may have thirty or more students in a class. She also mentioned an instance

where she and the teachers modified an exercise which involved the use of compasses, since the teachers were unwilling to distribute compasses to the students because they regarded them as potentially lethal weapons.

The problems encountered by the consultants working with the Math Department reflect the problems facing the entire High School. Since last summer, Community House, a social service agency in the area in which Ingliss is located, has hosted a series of meetings at which representatives of all of the agencies and institutions associated with Ingliss have met to plan ways in which the efforts of all these groups might be coordinated. The main problems at the Ingliss identified by the participants in these meetings are very similar to those observed by the math consultants.

4. Project 3: Student Assistance Project
Massachusetts College - District C

The Student Assistance Project has operated since the first year of the Collaborative. After the Court announced the pairing of Massachusetts College with District C, the College Coordinator recruited faculty members to conduct a needs assessment in the District. Asked how the College could best meet their needs, principals and teachers most frequently requested Massachusetts College students to come into the schools on a regular basis to tutor students and to provide other help to teachers. The College and the District also conducted two on-site surveys of secondary schools to determine the number of student assistants each elementary and secondary school required in each subject area.

Between two and three hundred college students are usually involved in the project each year, working three hours a week. At least half of the twenty-two schools in District C have participated in the project. The student assistants include student teachers from the elementary, secondary, and physical education programs; elementary and physical education majors and minors and secondary education minors enrolled in courses requiring field work; bilingual students tutoring bilingual secondary school pupils; and student volunteers earning three college credits through a course (Field Experience in Education: Practicum) created for the project. The students have provided remedial assistance primarily in language arts, reading, and math.

Practice teachers from Massachusetts College who choose to work in the City of Boston are now concentrated in District C schools, as are student interns in education courses featuring a practicum. These students are supervised by the Massachusetts College faculty members in whose courses they are registered.

During Christmas vacation in 1975-76, Bob Cot, Assistant to the College Coordinator, sent letters to all Massachusetts College students urging them to register for the Field Experience in Education course, which would allow them to earn three credits by assisting three hours a week in a District C school. The students were required to maintain regular attendance, keep a journal detailing their experiences, and write a final evaluative paper. Interested students returned a form to Bob Cot on which they indicated their special skills, the kinds of work they wished to do in a school, and the school in which they preferred to work. These forms were then turned over to a staff developer in the District C Office, who assigned students to schools. For the first year he decided to place all of them at the Lincoln Middle School because of its location next to an MBTA station. The only preparation the students had for their assignments was a brief orientation meeting. During the first two years of the project, Bob Cot supervised the students in their work.

In 1977-78, a faculty member in the Secondary Education Department, who had previously served as an assistant principal in a Bayside school, was named Director of the Student Assistance Project by the College Coordinator. Bus transportation from Massachusetts College to the schools was provided for women elementary education majors who were reluctant to use public transportation. Faculty members also began to conduct classes at the schools in which their students assisted.

The project was broadened to include a physical education component which had been operating separately under the direction of faculty members in the Women's Physical Education Department. During the initial needs assessment conducted by Massachusetts College faculty in June, 1975, teachers and principals requested special assistance in physical education. Some schools in the District had no physical education facilities, while others had facilities but no staff. One member of the Women's Physical Education Department wrote a long proposal detailing methods of improving the District's elementary physical

education program, but the ideas in it were never acted upon. However, Massachusetts College did obtain 636 funds in 1976 to hire several full-time physical education instructors for the schools.

A second and continuing element of the physical education project consisted of Massachusetts College students enrolled in physical education courses teaching movement, coordination, and dance, under the supervision of faculty members to children in schools in District B, outside Massachusetts College's pairing. Children from two or three special needs classes in the District were (and are) bused to Massachusetts College approximately eight times per semester to use the College's physical education facilities. This project is a continuation of Women's Physical Education Department's long-standing practice of working with the public schools. For many years before the pairing, faculty members had brought their students to schools within walking distance of the College, schools which under the Court Order became part of District B and were paired with Dunfey University. Two faculty members of the Women's Physical Education Department reported that the content of these courses was not affected by the assignment to District C, nor by subsequent administrative changes which shifted responsibility to another professor for choosing the participating schools and for arranging bus transportation.

In retrospect, this is the most likely project for the College and the District to have initiated during the early stage of the collaboration. School personnel suddenly asked to specify how Massachusetts College might assist them would immediately think of the College's largest resources - students. Also, this project probably represented the least threatening form in which both sides could fulfill the Court's mandate. The idea of College students working in the public schools was clearly not an innovation; it is a time-honored practice for education majors to work in the schools. In addition, students assisting children in small groups or on a one-to-one basis do not disrupt the schools' routine. The teachers could enjoy a lighter workload while providing only minimal supervision of the students. They would

not be pressured to change their customary teaching methods.

Massachusetts College, for its part, would gain at a minimal cost an opportunity to establish working relationships with the principals and teachers of a large number of schools in the District. The students' visibility would give evidence to parents and teachers of Massachusetts College's committment to the District. In addition, the project would provide field opportunities to students, reducing the need for faculty members to make individual arrangements for practica. Finally, the Student Assistance Project capitalizes on several aspects of Massachusetts College's curriculum, faculty, and student body, especially the following:

1. The College's history as a teacher-training institution: Faculty members in the three Education Departments (Secondary, Elementary, and Physical Education) accustomed to supervising students in schools did not have to be convinced of the educational value of field experience. A large (but decreasing) number of students was already enrolled in practica, internships, and student teaching courses and could easily be transferred to schools in District C.
2. The public school experience of the Project Directors: Like many Massachusetts College faculty members, both Directors had been public school teachers. Although one had taught in a suburban school district, the other had served as an assistant principal in Bayside, and some of the principals and teachers involved in the Student Assistance Project had been his colleagues. He used his rapport and credibility with school personnel to settle minor disputes over the supervisory responsibilities of teachers and College faculty and to expand informal relationships that developed between the College and District C. For example, three years ago the District Superintendent asked to meet with principals and teachers to discuss future collaborative

projects. During an emergency at one of the elementary schools, he arranged classroom space at Massachusetts College for a second-grade class. As a resident of Bayside, he used neighborhood contacts to arrange for a health center to conduct a course for District C parents and teachers through Massachusetts College's Program of Continuing Education.

3. Geographic distribution of Massachusetts College students: The largest group of Massachusetts College students comes from Bayside. Another large group of students lives in suburbs of Boston contiguous to Bayside. Many of the latter group either grew up in Bayside or have parents who lived in Bayside before moving to the neighboring towns. In the first two years of the pairing a majority of the student volunteers (basically, students not majoring or minoring in education) came from Bayside or the neighboring suburbs. The Project Director speculates that these students were motivated by a sense of social responsibility to the neighborhood, in some cases to the schools they had attended. A relatively large number of the participants were black, residents of Norwalk and Bayside, very likely assisting in a school which they had attended.

The Student Assistance Project has experienced few problems since it began. The most common complaints concern missed bus trips to and from the College. In a few instances principals are unhappy with the project. In one case a principal demanded that his teachers receive vouchers for supervising practice teachers, but the Director was able to convince him that the students in question were volunteers or interns, not student teachers.

The most serious problem associated with this project is Massachusetts College's difficulty in recruiting the number of assistants requested by the schools. Accused by the principals of taking advantage of the opportunity to place student teachers without putting much effort into recruiting the requested numbers, the two directors of the project have had to explain repeatedly

why the supply of assistants is dwindling. The reasons include a drop in enrollment in education programs in response to the decline in the number of predicted teaching positions, and increase in the number of general education requirements in students' programs, which means that non-education majors must use up one of the only three or four "free"electives they have in order to volunteer in a school.

The Student Assistance Project is considered a success by most of those involved. The annual evaluations of the project contain favorable comments by principals and teachers. All Massachusetts College project directors stated that they believe the project benefits both the student assistants and the children in District C schools. A special needs teacher stated that her pupils enjoy and profit from the physical education classes at Massachusetts College, so much so that she hoped her class would be selected to participate again next year. The District Superintendent views this project as one of the most successful in the pairing. Only the College Coordinator is more reserved in his enthusiasm, saying, "The project is very popular, but difficult to evaluate."

The favorable judgment of College and District participants seems to be based on the shared assumption that children benefit from the individualized personal attention in school. However, there has been no attempt to prove this assumption within the project. Education majors and minors are supervised by faculty members and bring to their work some familiarity with educational theory and teaching techniques. But in instances where no faculty members are present in the learning situation, it seems unlikely that new ideas or teaching techniques are transmitted from Massachusetts College faculty to District C teachers via the students. However, a special needs teacher who observed both faculty and students working with her class commented that she had later employed some of their techniques in her classroom. This same teacher reported that during physical education classes, she made suggestions regarding discipline and control that were used by faculty and student assistants.

5. Project 4: Environmental Studies
Massachusetts College - District C

The Environmental Studies Project, funded for $5,366 in FY80, is a project directed since its inception in 1977 by the Principal of the Terrence Middle School. The main focus of the project is a five-day trip in October to Cape Cod for 30 eighth graders at the Terrence. During the trip, the students, selected by lottery, stay at a dormitory-classroom facility operated by the National Park Service at the Cape Cod National Seashore. Divided into teams, the students cook and serve their meals, wash dishes, and clean the facility. They are supervised by counselors from Youth Enrichment Services and by Terrence teachers, who each spend a few days there on a rotating basis. During the first trip the Assistant to the College Coordinator, as well as a few parents, stayed at the Cape with the students.

The idea for the project originated with Dr. Norman Bates, the Middle School Principal, who knew about the National Environmental Education (NEED) Project sponsored by the National Park Service at the Cape. He asked the College Coordinator to obtain 636 funds for the project, the goals of which were: 1) to increase students' knowledge of the environment; 2) to provide a new experience for urban children, most of whom had never been outside their neighborhood; 3) to broaden students' career awareness; 4) to improve students' self-image and self-reliance; 6) to provide an opportunity for children of varying cultural backgrounds to live together for a week.

The project's curriculum was developed largely by Dr. Bates, who enlarged upon the curriculum suggested by the National Park Service. The program for the week reflected Dr. Bates' philosophy that experiential education is valuable, but only when combined with a focus on skill development. The children take field trips conducted by park rangers,

Massachusetts College faculty members, and the local clam warden. They visit museums and meet fishermen in Provincetown. They learn about swamps and salt marshes, beach erosion, food chains, and astronomy. Talks by park rangers alert the children, especially the girls, to new career opportunities. Every minute of the children's day, from 7:00 a.m. to 10:00 p.m., is filled with a scheduled activity, either educational or domestic.

This environmental information is integrated into a more traditional learning context. English teachers at the school selected poems and novels about the sea for the children to read. A postcard-writing session incorporated a lesson on letter-writing. A demonstration of surveying methods contains a lesson in geometry.

A hidden agenda of the project appears to have been to introduce the children to middle class behavior. Dr. Bates reports that he brings his Marine Corps training to bear on the children, who are expected to meet high standards of cleanliness during their stay in the Park Service facility. According to the Principal, many of the children are unfamiliar with such practices as making beds, hanging up wet towels, washing dishes, and sitting quietly at the dinner table. He reports that the children quickly recognize the need to maintain order and cooperate fully, and are each year very proud of their domestic accomplishments.

To some extent the entire school is involved in this project. Before the first trip in 1976, Dr. Bates met with all of the teachers and asked them to develop a curriculum in their field relevant to the trip. The teachers introduced the children to environmental material before the trip, presented lessons during the week at the Cape, and followed up afterwards. The Principal and two teachers reported that all of the teachers are enthusiastic about the project. They also mentioned that the sixth and seventh graders look forward to their chance to go to the Cape and that all of the children are eager to hear about the project when the participants return.

Massachusetts College's involvement in this project is limited to submitting the proposal for 636 funds and handling the logistical aspects of the trip. The College Coordinator assigns an assistant each year to take care of details such as chartering the bus and arranging a line of credit with a milk company and a supermarket on the Cape. During the first year of the project the assistant, after discussing the project with Dr. Bates, wrote the proposal, assisted the Terrence teachers in developing the curriculum, and accompanied the children to the Cape, where he led field trips and played sea chanties on his guitar.

The College Coordinator also asked two Massachusetts College faculty members, a geologist and a mathematician, to spend a few hours with the children. The mathematician conducted a demonstration of surveying techniques; the geologist led a field trip during which he discussed beach erosion and other geological aspects of the Cape. He also brought high school level films on beach erosion which he showed to the children. Neither faculty member had met with Dr. Bates or the Terrence teachers before the trip. They were paid for their services. The geologist stated that he went because he hoped "to turn street kids on to science."

The curriculum and schedule developed during the first year of the project have been followed without change each succeeding year. However, the Principal and the two teachers interviewed, as well as the Massachusetts College geologist, all stated that the trip had fallen short of the staff's expectations the third time it occurred. Because they had devoted little time to preparation or to familiarizing themselves with the schedule, they found themselves disorganized at the Cape. One of the teachers also mentioned that the rest of the school appeared to be aloof from the project. The geologist said that in contrast to previous years, the students were poorly supervised and he believed he was wasting his time. Dr. Bates reported that some teachers resented the unwillingness of other teachers to take responsibility for the children at the Cape.

The Principal and teachers have plans to forestall a recurrence of these problems. A committee of teachers has met to develop a new curriculum, and they plan also to screen the YES counselors before engaging them for the next trip. Dr. Bates requested that the College Coordinator locate a Massachusetts College faculty member willing to take charge of the project. Another geologist has agreed to serve as the Project Director.

The project has won the praise of all of the Massachusetts College and District C personnel involved in it. Its success derives from several factors:

1. It is the only project to be conceived and directed entirely by school personnel. The teachers might be expected, therefore, to be more committed to this project than to one administered by a Massachusetts College faculty member, especially since responsibility for the success of the project rests with them. In addition, the fact that the Project Director is the Principal of the School means that he has the authority to enforce the participation of the teachers.
2. The project coherently embodies the educational philosophy of the Project Director. The curriculum and schedule for the trip were carefully designed to reflect the Director's belief in the effectiveness of field-based learning integrated with classroom approach to basic skills. Dr. Bates emphasizes that the trip to the Cape was planned not as a vacation for the students, but as a solid educational experience. He and the Terrence teachers have organized other such experiences for the children, such as cross country ski trips, bicycling excursions, and a whale watch.
3. The entire teaching staff appears to be committed to the project. All play some role in it, either by accompanying the children to the Cape or by focusing their classroom teaching on issues relevant to the trip.
4. The history and size of the school make it ideally suited for this

type of project. Terrence Middle School opened just a few weeks before the first trip to the Cape. The excitement aroused by the trip and the elation generated by its success may have cemented the relationships of the new staff, enabling them to remain committed to the project year after year, as well as to initiate other field trips. In addition, the relatively small number of teachers and students at the Terrence (180 students in 1979-80) facilitates the sense of community and cooperation that the project requires.

Besides being the only pairing project to be directed by school personnel, the Environmental Studies Project is distinctive in its goal of promoting racial harmony. However, this aspect of the project appears to be incidental, since the curriculum and schedule contain no components directly aimed at achieving it. Although nearly equal numbers of black and white children participated in the first trip, the number of white children in the school has since dropped to 15 out of the total enrollment of 180, with the result that only five of the thirty participants in 1979 were white.

6. Project 5: Other Pairing Activities
Massachusetts College - District C

Chapter 636 funds have supported the only mandated pairing activities, but the Massachusetts College - District C Collaborative has sponsored other forms of cooperation, supported by in-kind contributions or by non-636 grants which the District and the College have secured together. In addition, some joint activities took place on an unfunded basis.

Pairing activities not specified in the 636 proposals but which have grown informally out of the relationship between Massachusetts College and District C include:

1. Use of facilities, equipment and supplies. As a result of the pairing relationship, District C administrators and teachers feel free to call on the College Coordinator or individual faculty members with whom they have worked for services not specified in the yearly proposal. For example, a high school dance was held at Massachusetts College; a second-grade class used a classroom at the College during a school emergency; and Bob Cot, the former Associate Coordinator, used his contacts in the field of educational media to supply a District C teacher with historical films.
2. Sponsoring of additional inservice courses. In 1979-80 three courses funded by mini-grants from the Commonwealth Inservice Institute (a division of the State Department of Education) were offered through the College's Program of Continuing Education. A course on health and nutrition was organized by the Director of the Student Assistance Project. Personnel from two neighborhood health centers in Bayside serving black and white communities taught the course, in which both teachers and parents (recruited through CDAC) enrolled. The District Office set up two courses, one entitled "Teaching the Gifted and Talented," in which both Massachusetts College faculty and District C staff members lectured,

and another, "Spanish for Educators," taught by a District C teacher. Difficulties arose in arranging these courses because District C personnel wanted control over them, but the Director of Continuing Education would only allow courses offered by an academic department at the College, and department chairpersons were unwilling to approve instructors members of their departments. The College Coordinator and his Assistant successfully mediated the dispute by persuading the chairpersons to sponsor the courses.

In addition, Helen Stone, Director of the Math Assistance Project at the Ingliss High School, identified a need for a course in which high school mathematics teachers learn how to present to high school students mathematical concepts usually taught in elementary schools. She has submitted a proposal for such a course to the Teacher Center in District C.

Besides gratis services provided by Massachusetts College and the Commonwealth In-service Institute, three other programs not receiving money from 636 funds have developed as collaborative projects: a program for Pre-College Teacher Training in Science, a Teacher Corps Project, and a Teacher Center.

Although funded by the National Science Foundation, the Pre-College Teacher Training in Science Program is similar in design to 636 staff development projects. The NSF project consisted of science courses offered in the summer of 1979 and in the fall and spring semesters of 1979-80. Elementary and high school teachers participated in parallel programs taught by Massachusetts College faculty.

The origin of the project is described in the proposal: "The College has endeavored to assist the schools (in District C) in all areas of instruction including science. It is this relationship, developed over the past four years, that has led to the formulation of this proposal." The idea for the project originated with the College Coordinator, who, as Director of Program Development and Research at Massachusetts College, regularly reviews the Federal Register

and other sources of information about potential grants. The College Coordinator sent a copy of the NSF announcement to Dr. Roger Dant, professor emeritus in the College Physics Department. Dr. Dant and the College Coordinator developed a proposal abstract which they discussed with the District Superintendent, as well as with the principals and headmasters of District C. The need for such a program had been documented in a survey conducted by a Massachusetts College professor directing a pairing project designed to instruct teachers in the use of a new science curriculum, SCIS. The survey of District C teachers in kindergarten through the fifth grade revealed that only 15% of them had college work in physical science, 15% had prior work in chemistry, and the rest had no physical science training. This survey also indicated that the teachers wanted help in elementary science teaching. In addition, the Director of Science for the Boston Public Schools had said that "lack of knowledge of the content of the physical sciences was limiting the ability of the teachers to use the physical science portion of SCIS."

Out of the discretionary funds which each district has for use in teacher improvement projects, District C funded a planning grant which enabled three teachers and one Massachusetts College faculty member, a pairing consultant on an earlier project, to develop the middle school and high school portions of the proposal. These three teachers surveyed their colleagues in the District about course content, format, meeting times, and other issues, and the teachers' recommendations were incorporated into the proposal. The first submission to NSF was rejected; upon resubmission the project was funded for 1979-80.

The project had two separate components -- one for elementary school teachers and the other for middle and high school teachers. The elementary program was staffed by three Massachusetts College physical science professors and included lectures, audio-visual materials, laboratory work, and field trips, all designed to provide the teachers with a background in physical science. The project began in the summer of 1979 with a two-week all-day program in

the geology of the Boston area. The teachers were divided into small groups to develop additional summer teaching modules based on the work of the first two weeks. In the fall, a follow-up session was held in which the resulting teaching modules were shared. The materials were tried out during the school year, and a second follow-up session was held at the end of the spring term. The three faculty members visited each of the schools involved during the year and served as consultants to the teachers. Physical science courses for elementary school teachers were also offered during the fall and spring semesters at Massachusetts College. Teachers learned about current research in the fields of astronomy, physics, and chemistry and participated in field trips to the Museum of Science and the Children's Museum.

The second component of the project was aimed at high school earth science teachers and middle school teachers involved in outdoor education programs. During field trips in the summer the teachers developed instructional materials which they could share with other teachers in their schools. The rationale for this is contained in the project proposal: "The use of local examples and materials helps to make the earth science course taught in the schools more interesting and relevant." During the fall and spring semesters recent developments in oceanography and in earth science were covered.

The major problem encountered in this project was difficulty in attracting participants. It had been assumed that most of the participants would be from District C, but the response from the Bayside teachers was very poor. In order to operate the program, Dr. Dant had to spend a few weeks actively recruiting teachers from other districts and from outside the city. The Project Director now believes that he should have used the Boston Teachers' Union to recruit participants. He was disappointed by District C principals upon whose assistance in recruiting teachers he had been depending.

The project also had a high attrition rate - only 18 of the 34 elementary teachers, and 27 of the 32 secondary school teachers who had originally

enrolled finished the courses. Dr. Dant believes the teachers dropped out because they found the courses too difficult, since they emphasized science content rather than instructional methods. Dr. Dant did not apply for funding to continue the project because he did not believe he could attract enough teachers. However, some District C principals have reported renewed interest among their teachers in participating in the program. Dr. Dant is now planning to submit a proposal to run the program again in 1981-82; but rather than depend on Boston teachers, he has sent letters describing the project to eighteen suburban communities and has thus far received several encouraging responses.

The consultants in this project are all Massachusetts College faculty members, most of whom have worked on other collaborative projects. The Director of the project has expertise in the field of elementary science education, and the Associate Director has supervised student teachers at Bridgewater State College.

Because the NSF grant was administered by Massachusetts College, the College Coordinator, as Director of Program Development and Research, had formal control over the project's finances. He also assisted Dr. Dant in his recruitment effort. The involvement of the District Superintendent and other District C administrators was limited to approving the grant proposal.

The Teacher Corps, the first federally funded collaborative project, is subtitled in the grant proposal as "A Comprehensive Training Collaborative Involving Students, Community People, School Staffs, and Teacher Trainees: A Model for Systemic Educational Improvement." The idea for the project originated in informal discussions which the Director of Program Development and Research (and College Coordinator) had with a faculty member in the Secondary Education Department. The Coordinator had been peripherally involved with a Teacher Corps project in Michigan. The Coordinator and his colleague contacted the Boston Public Schools and worked with the staff of a school in Norwood, a neighborhood

near Massachusetts College but outside District C. The proposal that was written was not funded. Then, when Massachusetts College was paired with District C, the Coordinator again discussed the possibility of developing a Teacher Corps project. The Fable Middle School expressed interest in the Teacher Corps during the needs assessment conducted by Massachusetts College in June 1975. Fable's teachers and Massachusetts College faculty wrote a proposal for a training project which was funded by the National Teachers Corps in the spring of 1976. Since then, the project has been expanded to include a high school and two elementary schools, "because the neighborhoods they serve or in which they are located have concentrations of low-income families, because many parents and residents of the neighborhoods indicated a strong desire to participate in project activities, and because the staffs of the four schools and that of District C, including the area Superintendent, enthusiastically endorsed the venture."

The project has several components: in-service credit-bearing courses for teachers taught at the participating schools by Massachusetts College faculty; workshops for teachers conducted by Massachusetts College faculty; in-service training for teacher aides; a two-year internship program in which four graduate students with no previous teaching experience work in the schools and in the community under the direction of a team leader, and pursue a Master's degree in education at Massachusetts College; a Community Council which sponsors a reading program and other school-related workshops and programs for parents and community people.

The Teacher Corps staff consists of a Director and Associate Director, three college facilitators, members of the College education departments who work with teachers in the schools, a community administrator, who works with the Community Council; and the team leader, who supervised the interns. In addition, the project employs consultants, many of whom are College faculty, to present lecture-demonstrations, conduct workshops, and teach courses.

The Teacher Corps project sponsors a variety of activities each year. At least ten courses have been offered to teachers, as well as numerous workshops on such topics as social studies curriculum and discipline techniques. The College facilitators worked with teachers at the two elementary schools to develop a school-wide Reading Improvement Plan which was mandated by the central office of the school system. At the Moore School teachers share materials and techniques at monthly Teacher Renewal Seminars. The Teacher Corps arranged for the Library Director at Massachusetts College to consult with the Moore teacher in charge of the school library. Members of the Community Council have participated in a number of state-wide conferences.

The Teacher Corps has difficulty attracting parents and community people. The bimonthly Community Council meetings have not been well attended. A reason for this is offered in the continuation grant application:

> What we are learning is that community people are working people, they often have difficulty getting together, and although they volunteer for activities with the best of intentions, in the final analysis they find it impossible at times to follow through without proper support and assistance.

The efforts of the Community Council were further impeded by the resignations of two successive community administrators at times when trusting relationships had formed between the administrator and the Council.

Although the teachers appear to be actively involved in all phases of the Teacher Corps project, an evaluation of the inservice courses revealed that "the content was helpful, was understandable, and that information being gained had immediate applicability," but that "participants felt they had limited involvement in the initial planning and outlining of the objectives of some of the courses."

Teacher Corps activities take place in the schools, but the administrative offices are located at Massachusetts College. The Director and Associate Director are members of the College faculty, as are the facilitators and most of the consultants. Other faculty members serve on a Program Inprovement Committee (PIC) which reviews Teacher Corps activities that are mainly teacher training oriented.

The College's Office of Program Development and Research administers the grant; therefore, the Director of this office, who also serves as the College Coordinator, monitors Teacher Corps expenditures. Because the credit-bearing courses are offered through the Program of Continuing Education, and Teacher Corps interns are matriculated in the College's Program of Graduate Studies, the Director of the Program of Continuing Education serves on the Policy Board. The College has also made a financial commitment to the project by assuming 50% of the cost of three faculty members serving half-time and one serving full-time on the project.

School personnel have both planned and participated in Teacher Corps activities. The District Superintendent serves on the three-member Policy Board. The Principal and teaching staff at the Holmes School helped to write the first Teacher Corps proposal. Since then, teachers conducted needs assessments which guided project planning. Teachers and teacher aides participate in the workshops and courses offered by the Teacher Corps. Each participating school also has its own Program Improvement Committee consisting of teachers, a teacher aide, a student, and in intern.

Community participation in the Teacher Corps is channeled through the Community Council, the membership of which consists of both parents and community residents. The elected chairperson of the Council serves on the Policy Board. The current chairperson is the Coordinator of CDAC-C.

Another major activity to develop out of the pairing is a federally-funded Teacher Center. The idea for a Teacher Center in Bayside was suggested even before the pairing by the late District Superintendent, Emil Jones. Efforts to create a Teacher Center as a project of the Massachusetts College - District C pairing were begun by a Leroy Hoffer, Library Media Specialist from a neighboring college engaged in 1975 as a pairing consultant because there was no one at Massachusetts College with expertise in this area.

The needs assessment conducted in District C by College faculty in June of 1975 yielded an informal suggestion for a project at the elementary level entitled, "Multi-Purpose Curriculum Library Center and Resource Area." The Media Specialist wrote a 636 proposal for a pilot workshop in reading and media skills. He also met with District C staff to plan for the proposed "Multi-Purpose Curriculum Library Center and Resource Area," which in January 1976 was renamed a Teacher Center by Emil Jones. At this time the National Education Association was agitating to obtain federal funding for local teacher centers which would be controlled by local teachers' unions.

In 1976 Hoffer reported on a feasibility study which he had conducted in District C. The idea of establishing a Teacher Center was approved by District C and the College Coordinator and endorsed by the Board of Superintendents of the Boston Public Schools which authorized the District Superintendent to seek outside funding. The College Coordinator and the Specialist made several unsuccessful attempts to obtain funding. They applied first to the State Department of Education and then sought Title IV-C (Innovative Educational Programs) funds. When federal money for Teacher Centers became available in 1977, the proposal was submitted, again unsuccessfully. Finally, a second attempt to secure federal funds was successful, and the Teacher Center has existed since September 30, 1979.

From the beginning, District C teachers and administrators were active in planning the program of the Center. When an Advisory Board was set up in 1977, teachers representatives, who volunteered, served with the approval of the Boston Teachers Union. The District Superintendent, staff developers from the District Office, and the College Coordinator were among the administrators on the Board. Through the REPOs, parent volunteers were recruited. In addition, because the Teacher Center was intended to serve all teachers in Bayside, the local Catholic schools were invited to send teachers to serve on the Board. In September of 1977, the Advisory Board became the Teacher Center Policy Board.

The members of this body, with the assistance of Bob Cot, then Associate College Coordinator, conducted needs assessments of District teachers and wrote the two proposals submitted to Washington.

The Teacher Center is intended to meet the perceived inadequacies of the pairing. It will be located in a central place and contain meeting and seminar rooms and stocks of equipment and supplies. Teachers will be able to attend lectures, participate in workshops, take courses, and construct multi-media materials with the assistance of library and media experts on the staff. As noted in a section of the grant proposal entitled "Limitations of Current Practice," present inadequacies of the pairing include: insufficient funds for all the assistance the schools need, absence of follow-up and feedback concerning projects, lack of mechanisms to disseminate information about activities from one school to another, and inadequate involvement of teachers. "While individual teachers have helped plan individual events and small groups of teachers have participated in workshops, there has been no extensive planning or decision-making by teachers on the programs." Also, according to the proposal, the Teacher Center will "establish firm connections in District C between the Center and other specialized services and sources, such as the Child Services Demonstration Project (a program for the learning disabled which is underwritten by USOE-BEH funds) and the career and occupational educational coordination unit."

Another goal of the project was expressed in 1977 by the former District Superintendent, Emil Jones, when the proposal seeking Title IV-C funds was submitted. In an article which appeared in the Boston Globe, Jones is quoted as saying that he was proposing the Teacher Center as a way "to overcome the obvious physical and more subtle educational differences between old and new buildings" in District C. He pointed out that in some of the older buildings, children did not have an adequate physical education program and that teachers were unable to use "multi-age grouping or cross grading, techniques employed to individualize education." Since it is unclear what the Teacher

center might do to remedy these particular problems, it appears that Jones was using the Teacher Center proposal to call attention to the needs of his District.

During the nine months that the Teacher Center has been funded, little has been accomplished. The Policy Board, led by a public school teacher, spent months defining the Teacher Center's relationship to the Boston Public Schools. A controversy arose over whether the Boston Teachers Union could dictate conditions for hiring the Director. The BTU required that the Director be someone who was already, or eligible to become, a member of the union, effectively limiting the position to public school teachers. The administrators on the Policy Board, led by the current Superintendent and supported by the Catholic school teachers, advocated that the Teacher Center operate independently of the Boston School Department. The public school teachers, supported by the College Coordinator, were successful in keeping the Teacher Center a part of the school system when the issue finally came to a vote. This meant, however, that the Policy Board, in its search for a Director, had to use the School Departments extremely lengthy process. The College Coordinator and the District Superintendent recommended that the Board hire a temporary director who would be paid by Massachusetts College, but the Policy Board, on the advice of state Teacher Center personnel, rejected this proposal. The Teacher Center just recently hired as Director a staff developer in the District C office who has been involved in several pairing projects. In this instance the College Coordinator voted with the District Superintendent in support of the candidate, who was opposed by the public school teachers.

A second problem arose when the site selected the previous year, an unused public library, was withdrawn by the city. The Teacher Center was finally located in a shopping mall, and, with the new Director actively hiring additional staff members, it is ready to begin operation.

Massachusetts College's involvement in the Teacher Center included recruiting the initiator of the project and providing long-term proposal-writing assistance. As a member of the Policy Board, the College Coordinator often provides the swing vote in important decisions. He also furnishes advice on hiring and affirmative action policies. The Assistant to the Coordinator, who has been named by the Policy Board as an advisor, has carried out administrative tasks related to the hiring of Teacher Center staff.

While the NSF project is quite similar to the projects funded under Chapter 636, the Teacher Corps and Teacher Center projects differ from the pairing projects in several ways:

1. Staff size. Whereas the pairing projects typically involve only one or two faculty members, the Teacher Corps employs a director, an associate director, a secretary, a community administrator, a team leader, four interns, College facilitators, and short-term consultants. The Teacher Center will also have a staff of at least four or five persons. The large staff enables these projects to operate numerous projects. However, staff size has also led to problems not encountered in smaller 636 projects. For example, the resignations of two Teacher Corps' community administrators prevented planned activities from being carried out.
2. Greater variety of projects. Because the federally-funded projects have more money to spend than do 636 projects, they can be more ambitious in the variety and scope of the activities they attempt.
3. Planning. In the case of both the Teacher Corps and the Teacher Center proposals, a large number of people from both the College and the District contributed to the proposal content. The proposals are much longer and more detailed than 636 proposals. However, in the case of the Teacher Center, this apparent cooperation among protagonists did not speed up the development of the project. Also, whereas proposals to renew 636 projects are written near the end of the project's life,

proposals for renewal of the federal grants must be written just as the project is getting started, diverting staff attention from project implementation to proposal writing. They must write a detailed description of the next year's proposed activities before they have evaluated and experienced the present year's agenda.

4. Inclusion of Catholic schools. The Teacher Center involves not only District C schools, but also the Catholic schools in Bayside. While this extends the project's outreach, it also adds another interest group to the participants, making consensus on policy matters more difficult to attain.

5. Formal knowledge dissemination. Both the Teacher Corps and the Teacher Center have plans to disseminate information about successful activities in particular schools to other schools in the District. Within the pairing, no knowledge dissemination mechanisms have been devised.

6. National networks. Both the Teacher Corps and the Teacher Center are linked to national networks from which they can seek support and guidance in regard to programs and policy.

7. Involvement of parents. Parents are more involved in the Teacher Corps than in any of the 636-funded projects. The Teacher Corps is also more closely tied to the CDAC, since the CDAC Coordinator serves on the Teacher Corps Policy Board. At least one of the Teacher Corps' interns has worked for CDAC to complete the community service requirement of the Teacher Corps Program.

8. Project autonomy. The Teacher Corps and the Teacher Center are not subject to the direct control of either the District Superintendent or the College Coordinator, as are the pairing projects. Rather they "have a life of their own," in the words of the College Coordinator. They are, however, restricted by the terms of their respective grants. Moreover, the system of authority governing pairing projects is

unambiguous, but the Teacher Corps and Teacher Center have to negotiate their relationships with the individual schools, the District C administrative staff, Massachusetts College, the REPCs and CDAC, the Boston Teachers Union, the Catholic schools, the School Department, and various other organizations. In a few instances, notably the Teacher Center's effort to hire a Director, power struggles took precedence over project business.

7. Cross Project Analysis
Massachusetts College - District C

Changes Over Time

The pairing has existed for five years now, and the passage of time has brought a streamlining of the proposal-writing, evaluating, and awarding process. The first few months of the pairing were characterized by a frantic attempt on the part of Massachusetts College to determine District's needs and how the College might best respond to them. The first year of the pairing (1975-76) had four separate components: first, two needs assessments, one of the elementary schools and the other of the secondary schools were conducted by Massachusetts College faculty; then, planning tasks were specified and planning teams created; third, proposals seeking 636 funds for the planning efforts were submitted to BEEO, with secondary and elementary proposals submitted separately on different dates. Finally, more than twenty activities were carried our during 1975-76 for varying periods of time. Some were one-semester courses; some were two or three month planning efforts; some were two-week workshops.

During this initial stage of the pairing, over forty faculty members from about twenty different departments participated, conducting many different kinds of activities. A large number of teachers and principals were, of course, participants in the courses, workshops, and planning efforts.

Because the funding mechanism had been set up so hurriedly following the Court Order, the application was confused, marked by misunderstandings between College and District C personnel and the state agencies responsible for dispensing funds. The College Coordinator devoted nearly full time to the pairing during this process. Part of the confusion may also be traced to differing conceptions of how formal the proposals were supposed to be. But because of it, the timetables of many projects were set back, their outcomes jeopardized. The delays caused consultants to become disillusioned, and parents, teachers, and principals to complain that they were seeing few tangible results

of the pairing. At the end of the first year, the proposal-writing process was still inefficient, according to the Associate Coordinator, who wrote many of the proposals, only to see them rejected by either the District Superintendent or by the Screening Committee, which had not determined priorities for the types of projects it wished to support with the limited funds available.

The new procedure instituted by the District Superintendent at the end of the second year of the pairing eliminated much wasted effort. Even without this new directive, it is likely that proposal-writing would have become routinized because the excitement and enthusiasm originally generated at the College had begun to dissipate. The same projects were continued from year to year, conducted by the same faculty members. Currently most proposals simply update projects from one year to the next.

With the decline in the number of projects, the number of school and college personnel involved in the pairing has also dropped. Two of the four projects described in this case study employ only one consultant each from Massachusetts College. The number of academic departments represented by the pairing consultants has diminished, too, to include in 1979-80 only mathematics, secondary education, elementary education, physical education, English, geology, and psychology. An early concern about making the pairing successful has been replaced by a focus on completing the goals of specific projects. The pairing relationship appears now to be taken for granted.

Faculty members currently involved in the pairing generally are those who have experience either in public school teaching or in teacher training. Consultants from the Math Department, for example, are specialists in mathematics education rather than pure mathematicians.

From the start of the pairing, Massachusetts College has emphasized its long relationship with the Boston Public Schools to lessen school personnel's mistrust of "ivory tower" academicians. On the project level, consultants have used their previous relationships with teachers and principals. The

Director of the Student Assistance Project, for example, depended on friendships formed with District C personnel during his years as an assistant principal in Bayside to settle disputes and to improve College/District C relations, and he exploited his personal contacts as a Bayside resident to initiate a course in health and nutrition. The College's involvement in the development of a new elementary mathematics curriculum developed out of a previous relationship between the District Superintendent and Susan Tile, a College faculty member.

Although Massachusetts College was familiar to many teachers and therefore less threatening to them than another academic institution might have been, it was still perceived as a college, more specifically a teacher-training institution, and this may have had a serious effect on the direction of the pairing. In Bob Cot's view, this perception delayed pairing-initiated changes in the schools. He observes:

> When we first went (to the schools) in the beginning, it was sort of guarded enthusiasm. (The teachers) liked the fact that they were going to be matched with the College and at the same time I think they were somewhat suspicious of us. And because we were coming from a college, it limited their perception of what we might be able to do to help them; that is, in those early meetings just about the only thing that the typical teacher could think of would be some sort of credit-generating course for them....Thus, they perceived us as teacher-trainers and teacher educators more than anything else. They didn't perceive us as consultants who might help them do something. They perceived us as conveyors of information about teaching in the schools. I think that was unfortunate because we spent a lot of time in delivery of typical in-service courses that made it look like a simple thing we have been doing here for years, which had never had any impact on the school, anyway....Now, maybe that was necessary; maybe that period of delivery of those courses helped us develop some credibility. It made it easier for us later to do more interesting things. But, I suspect that if Judge Garrity had matched the schools with some educational consulting firm that didn't issue credits, they might have had more exciting and more productive results quicker...

Attitudes of teachers and administrators have changed over the years. In the beginning they were suspicious of Massachusetts College faculty and convinced that the professors' "ivory tower" perspectives would be of little

use in actual classroom situations. However, this attitude has diminished; the College faculty who have persisted in the pairing for more than one year are on friendly terms with the teachers or have won their respect. But the College instructors' understanding of the situations teachers face in the classroom continues to be an important criterion by which teachers rate them. For example, in discussing the elementary math curriculum developed by Susan Tile, teachers praised it for being "realistic."

Over the years certain goals seem to have evolved and to underlie more than individual projects. In the beginning of the pairing, the District Superintendent was most interested in setting up a reading program. This accomplished, the second District Superintendent, trained as a math teacher, seems to be guiding the pairing to a focus on mathematics. These projects also suggest an interest on the part of both Superintendents, as well as some of the faculty consultants, in standardizing the curriculum. One aim of the Elementary Mathematics Assistance Project, stated by both the District Superintendent and the Project Director, is to minimize the difficulties students experience when they move from one school to another within the District. In a move toward standardization on the high school level, the faculty consultant at Ingliss High School persuaded the Math Department to adopt the three-year algebra-geometry sequence developed at Bayside High School.

Throughout the history of the pairing, several problems persisted. In the early stages of the pairing, both the College and the District went through a process of defining the limits of the College's involvement in the District. As expressed in the Court Order, the goals of the pairing were broad; consequently the College Coordinator "assumed we had a very wide canvas on which to run." However, he soon learned that the District had a much narrower conception of Massachusetts College's involvement. One of the pairing activities proposed during the summer of 1975 by the planning teams of Massachusetts College faculty was a program focused on discipline and interpersonal relations within the schools. This proposal was turned down by District C principals,

"certainly on the basis of a political judgment," the College Coordinator believes. In proposing this activity, the College had violated an unarticulated rule that the principals had imposed on the relationship, but which College personnel had not recognized. The College Coordinator explains:

> ...It looked like we were really getting our necks into the social customs of the school....There was a social-moral agreement, if you will, an informal understanding of what would be socially acceptable. ...The unacceptable one was mucking around in interpersonal relations between students and teachers trying to solve human relations problems. Clearly, it was beyond what we were expected to do...I thought in the beginning that was the important thing. I heard it as a very important issue: what do they do about discipline? What do they do about differences in the way teachers reacted to black and white children?

No further attempts to set up a project of this nature were made by Massachusetts College. But there were a few other instances in the beginning of the pairing when Massachusetts College became involved in activities that were considered inappropriate by the schools. For example, a proposal on clustering in the middle schools was rejected by the School Committee, which did not think that there was a need for Massachusetts College to be involved in this activity. Also, in the first summer of the pairing, a study on access to equipment and supplies was completed but not followed up when it became clear that the problems were system-wide, not within the District.

According to the College Coordinator, when a project was discontinued, it was usually because "we didn't feel there was much real interest on the school side, or we didn't have the competent correct people, or we went ahead and found the logistical problems of doing it or the organizational difficulties were too much."

Another source of difficulty within the pairing has been what school personnel consider to be patronizing attitudes by some of the consultants. Teachers and administrators were particularly sensitive to suggestions by College faculty that before the consultants' arrival nothing had been done to alleviate the problems of the schools. A principal criticized the proposal

for reading clinics written by a reading specialist at Massachusetts College on this count. A district administrator, Bill May, recalled an interview in a local newspaper with a Massachusetts College faculty member who was directing one of the pairing projects: "It was as though, before his arrival, before Massachusetts College's arrival, nobody had done anything. Now, teachers who had been slaving in rough situations up to that time didn't appreciate that kind of talk." A related problem noted by May is Massachusetts College's tendency to steal the public credit for accomplishments which ought to be shared with the District.

In one instance, a pairing project encountered difficulties stemming from the extremely serious problems confronting the school in which the project was located. The Ingliss High School suffers from a multitude of problems, including a deteriorating physical plant, a declining enrollment, a high rate of vandalism, and assaults against teachers, plus the likelihood that the school will be closed within the next few years. These and other problems have left the teaching staff wary of outsiders and reluctant to involve themselves fully in new projects. These difficulties extend to the pairing project itself, and contributed to delays in making the math lab operational, for example.

The pairing has had to work within and around the work rules set by the Boston Teachers Union. Bill May points out that in some schools the pairing consultants have been caught in the middle of internal conflicts:

> ...If a group from Massachusetts College goes into a school to work on problems of school climate, it has this problem to face. It certainly must keep its ear to the ground and find out what's going on, which means it must have contact with teachers and get to a point of speaking easily with them. On the other hand, it must maintain a favorable relationship with the administration of that school. Unfortunately, the problem is that it's awfully difficult to be friends to both in some schools, because there is an internal conflict between principal and faculty senate. This is another force that has become stronger over the years.

Role Analysis

Looked at chronologically, the pairing can be seen as a dynamic process through which attitudes, procedures, and programs evolved. Yet a fairly constant network of relationships underlies the shifting historical movement. Although the participants' views of the pairing and its potential have altered, their ability to influence its direction has remained a function of their own role performance. The success or failure of each project and the direction of the pairing as a whole have been determined to a great extent by participants' awareness of the requirements and potential of their own roles and of the roles of other participants.

College Administrators

At Massachusetts College few administrators have been involved in the pairing. The President elected to limit his role to the formal one of signing grant proposals and representing the College at social or ceremonial affairs in the School District. The President's decision to turn control of the pairing to the Director of Program Development and Research appears to have eliminated one bureaucratic obstacle in an already tangled process of obtaining 636 funds, and to have promoted the involvement of faculty members who might have been reluctant to work closely with the President.

College Pairing Coordinator

The College Coordinator serves mainly as a "broker." He uses this term to describe his role, and the District Superintendent agrees that the description is apt. Rather than attempt to implement projects which reflect a personal philosophy of education or an agenda for the Boston Public Schools, the College Coordinator has chosen simply to ascertain the needs and desires of the School District and then locate someone with the appropriate expertise to satisfy those needs. He believes that the success of failure of a project rests on his judgment in choosing the project director.

The College Coordinator has full control over the College's participation

in the pairing. Although the President of Massachusetts College formally approves pairing projects, he plays no active role in determining policy. However, in the view of the College Coordinator, his personal relationship with the President is the single most important factor affecting his performance of the coordinator's role, since it allows him to centralize control and to make decisions swiftly.

Also important to the Coordinator's effectiveness is his relationship with the College faculty. In a College in which faculty members have a record of voting "no confidence" in the President and the Dean, the College Coordinator, as Director of Program Development and Research, has managed to stay on good terms with most of the faculty. This rapport is owed in part to his personal charm and in part to his control over lucrative opportunities. Faculty members whose teaching positions are in jeopardy as a result of declining enrollments are looking for ways to establish themselves in positions which may serve as springboards to a new career or to nonteaching positions in academia. During the years since the pairing began the College Coordinator has been successful in winning increasingly large amounts of grant money, which can be used to purchase released-time for faculty members. His control over the project budgets, over the dispersal of funds, and over the filling of grant-funded positions, coupled with his close relationship to the President, has made him a powerful figure in the College.

Within the pairing the Coordinator's style has been to act independently and to make decisions himself. Describing the College Coordinator as "playing close to the vest," the former Associate Coordinator comments that often he was informed that a project had been approved by the Coordinator and the Superintendent which he had not known was even being considered. The Associate Coordinator points out, however, that his lack of information may have been the result of his holding only a part-time position.

From the beginning the College Coordinator determined that

Massachusetts College would function within the District only in ways approved by the District Superintendent. His relationship with both of the individuals who filled this post since the pairing began may be characterized as one of mutual respect. They treat each other as equals, with one -- the District Superintendent -- being a little more equal than the other. For example, when the headmasters of the two District C high schools had at the last moment withdrew their approval of a non-636 funded project proposed by the Coordinator, he managed to persuade them to participate. However, when talk fails his next move is to threaten to withdraw the entire project from the school involved. On one occasion he specifically advised a project director having difficulty with a school administrator to employ this tactic.

The College Coordinator brought to his position years of administrative experience, having been employed in several state agencies outside of Massachusetts as well as in a large city organization before assuming the position of Director of Program Development and Research at Massachusetts College in 1972. It may be assumed that this experience prepared him to deal with the bureaucratic structures of the Boston School Department and the State Department of Education. Through his position at Massachusetts College he had established contact with faculty members and had proposal writing experience. In the process of earning a doctorate in educational administration, he had done practice teaching in an elementary school and is certified as a teacher. Thus, although his experience is in higher education, he did not take on the role of College Coordinator totally unfamiliar with the public schools and their problems.

College Faculty

The College faculty are involved in the pairing on an individual basis. They may suggest projects which they wish to undertake. More often they are personally recruited by the College Coordinator to carry out a specific task, or they respond to a call for volunteers issued by the Coordinator. As professionals, they are free to determine their own activities within a project

so long as they meet the goals specified in the proposal.

The faculty member's role as a consultant does not appear to have a great deal of power attached to it. The consultant cannot force teachers, or even students, to participate in a project. A faculty member is able to accomplish all objectives of a project with few problems only when, through his or her interpersonal or organizational skills, he or she is successful in arousing the interest and commitment of the school personnel with whom the consultant is working.

As consultants, faculty members are dependent on the cooperation of teachers and administrators. What power they do have in the pairing derives from their role as college professors. In teacher-student relationship with participating teachers, the faculty member, as a result of his power to evaluate teachers and reward grades, can exert some control over their participation in a project for which they are receiving graduate credit.

When the faculty members must work with the teachers as equals in a colleagial relationship with colleagues rather than in a hierachical arrangement they may gain some measure of control over the teachers by one of several methods: by giving evidence of possessing knowledge about teaching which the teachers judge to be useful and which they wish to share; by manipulating the teachers' behavior, through effective project design, such as Susan Tile's use of a participative format; and by developing a new role in which they become necessary to the school personnel, such as Helen Stone did at Ingliss.

The consensus among both school and Massachusetts College personnel is that the faculty members who are successful in the schools are those who have prior experience in the public schools, a description which applies to nearly all of the current consultants. As the former Associate Coordinator observes:

> The people who were the most interested, who hung in there, tended to be people who had had school experience themselves, or who had been supervising practice teachers. They were the (ones)...who had a notion of the Boston schools, who didn't feel uncomfortable in the Boston schools. Many of them had themselves grown up in Bayside and Boston and had, I think, a kind of feeling about it and a commitment to it.

Faculty members are most effective when they can establish rapport with both teachers and administrators in a school. Recognizing that is it the principal or headmaster, and not the consultant, who has the power to make changes in a school, teachers are more likely to take professors more seriously if they have the support of the school administrator. However, in defining themselves as intermediaries, faculty members run the risk of losing their effectiveness if they become identified with one side in the adversarial relationship that may exist between the faculty senate and the school administration.

District Superintendent

The District Superintendent is the most powerful person in the pairing, by reason of her control over which pairing projects are carried out and the form they take. It is unclear, however, how powerful the District Superintendent would have been had the College Coordinator taken a more aggressive role in setting goals for the pairing.

Although she may veto a proposed project, she is limited in her capacity to assist the success of a project. She may, for example, encourage the participation of teachers by lending visible support to a project, as she did by attending the implementation meeting of the Elementary Math Assistance Project. But her power over teachers and over other administrators in the District is constrained by rules specified in the union contracts of each of these groups. Thus, she cannot force principals to allow pairing projects to operate in their schools, nor can she require a teacher to participate in a project. She apparently cannot speed up the School Department's length hiring processes, which caused delays in the Math Assistant Project at Ingliss and in the Teacher Center Project.

The District Superintendent's style of administration appears to complement that of the College Coordinator, who has described her as being firmly in control of District C. In conversation, she frequently refers to "my District."

She commands the support of the black community in Bayside, which demanded that she be selected by the School Department to replace her late husband, a respected figure in the community, who had worked his way up the ranks of the Boston Public Schools to become the city's first black District Superintendent. Mrs. Jones, according to the College Coordinator, is highly influencial among CDAC members, who follow her lead on most matters. The District Superindentent also brings to the pairing previous experience in a collaborative with a university-school alliance at another Boston institution.

District Administrators

District administrators have been involved in the pairing since its beginning. Their role has been to serve as liaison between faculty consultants and the schools. They have been responsible for logistical support in some of the pairing projects, such as setting up meeting schedules, sending out notices, and arranging for xeroxing. In at least one instance, a District administrator initiated a non-636 funded project, a course entitled "Teaching the Gifted and Talented." Administrators also use their knowledge of the Boston Schools to help College personnel "stay within channels", suggesting that they play a conservative role within the pairing. As outsiders within the schools, faculty consultants' unfamiliarity with both formal rules and regulations, and informal norms, might give them a freedom of action to effect changes in school policy or practice more easily than an insider could. Helen Stone appears to be taking advantage of her role in this way in the Math Assistance Project at Ingliss High School, by ignoring the norms of apathy at the school. She has not reported much contact with District officials. However, it may be that in instances where administrators are directly involved in a project they serve to keep the College consultants in line.

School Principals

School administrators have authority to determine whether to allow a particular project to be conducted in their schools. In a few instances

they used this authority to attempt to win something from Massachusetts College. For example, in one case a principal demanded that those teachers assisted by student volunteers receive the same vouchers as teachers who supervise practice teachers.

The principal can effect the success or failure of a pairing project by facilitating its smooth operation, by creating obstacles for the Project Director, or, between these extremes, by not trying to help the Project Director overcome difficulties. In the case of the Elementary Math Assistance Project, the principals went out of their way to support the project by making great efforts to obtain substitutes to replace teachers given released time to participate in the project. Some even took over the teachers' classes themselves when no substitute could be found. On the other hand, at Ingliss High School, the Headmaster called faculty meetings at the same time as regularly scheduled project meetings. More recently, the same Headmaster made little apparent effort to speed the hiring of an aide to staff the math lab.

Over the five years, some principals of elementary and middle schools proved more cooperative or more committed to the pairing, and the College Coordinator worked with them more extensively. In one case where a principal conceived and directed a pairing project himself, the project experienced few difficulties. The principal was able to control the extent of the College's involvement, limiting it mainly to the handling of practical details.

Generally, principals appear to deal with the College on an individual basis. The notable exception to this is the instance of the headmasters of two high schools jointly deciding to pull out of a recently proposed biomedical project. The Associate Coordinator suggests that principals view a project located in one school as the property of the principal of that school, and believe they have no right to ask for a similar project in their own schools. He points out that a few principals have said of the Environmental Studies

Project, "What a great idea! I wish I had thought of it." On the other hand, the College Coordinator interprets the reluctance of principals to demand that a successful project be duplicated as recognition that funds are unavailable for extension of projects.

Instructional Staff

The members of District C's instructional staff were able to express their needs and desires for the District in the initial needs assessment, and subsequently, in surveys conducted by pairing consultants. They generally are not involved in planning the pairing projects. Rather, after projects are funded, announcements are distributed at the schools inviting teachers to participate. In some cases teachers are offered incentives in the form of graduate course credits, leading to salary increases, at low cost or during released time.

Teachers' power lies in their control of the outcomes of projects dependent on their participation. During Professor Brown's involvement with the math teachers at the Ingliss, the teachers did not participate fully in writing course objectives. Consequently, the faculty consultant did much of the work himself, and the project's goals were not fully accomplished.

Many of the teachers involved in pairing projects are graduates of Massachusetts College or currently enrolled in the graduate program. They might have used their knowledge of faculty members to guide them in choosing to enroll in courses offered through the pairing or in selecting projects in which to participate. However, there is no evidence that prior acquaintance with the faculty influenced project outcomes.

Most of the projects over the past few years focused on staff development. The most frequently employed medium of knowledge exchange has been the formal credit-bearing course. In order to earn acceptable grades teachers are required to master course content to the satisfaction of the faculty members, but in their own classrooms, teachers are the authorities. They are under no obligation to use teaching methods recommended by College faculty, or

curricula developed in a pairing project. Several math teachers at the Ingliss made this observation, a fact that suggests they are well aware of their power to resist change.

CDAC

CDAC's major involvement in the pairing has been to send representatives to the Screening Committee which reviews 636 proposals. It played no active role in planning projects or in carrying them out. Involved primarily in political activities associated with the desegregation process, such as recent controversies over school closings, or responding to everyday problems in the District, CDAC appears to be content to rubber-stamp the District Superintendent's decisions regarding the pairing. It may be that the CDAC leadership believes the organization's energies can be most effectively used on other issues, or that the members have internalized school people's beliefs that the CDAC members lack the expertise to develop proposals or to evaluate projects.

In general, it appears that few pairing participants have fully exploited the possibilities inherent in their roles to effect changes in the school system. Most have been content to mold their behavior in the pairing after already familiar and comfortable roles. Thus, administrators have enforced rules; College faculty members have defined themselves in relation to teachers, as professors rather than colleagues or change agents, and parents have continued to cede control over the educational process to the professionals.

Incentives and Disincentives

In the case of both the School District and the College, incentives and disincentives to involvement in the Collaborative can be identified. Among the incentives for Massachusetts College to participate are:

1. Released time for underutilized faculty. Faced with declining enrollments and a shift away from its traditional teacher training mission, Massachusetts College finds itself with large numbers of underutilized

but tenured faculty in the liberal arts and education areas. Pairing funds underwrite part of the salaries of faculty consultants, who are released from one or two courses in order to carry out their work. This arrangement is a direct benefit to the College since it does not hire part-time instructors to replace these consultants.

2. The pairing relationship helps the College obtain grants from other sources, such as the National Science Foundation and the Teacher Corps. Funds from these also allow the reassignment of underutilized faculty members and involve the College in important national and regional enterprises. In addition, overhead money from these grants can be used by the College as it pleases, for example, hiring staff not listed in its normal budget.

3. Massachusetts College's relationship with District C supports the College's claim that it is an urban college dedicated to helping the community and meeting the educational needs of minorities and working adults. Active involvement in the public schools blends usefully with the presence of a large minority enrollment and a comprehensive evening program serving working adults to support the modernized image Massachusetts College now seeks to establish.

4. Through the pairing a large number of District C teachers enrolled in courses offered through Massachusetts College's Program of Continuing Education.

5. As a result of the pairing, Massachusetts College education faculty no longer separately arrange placements for student teachers who wish to teach in Boston, or field work sites for classes that require practical experience in the schools, such as some of the physical education courses.

The incentives for continued participation by Massachusetts College in the pairing outnumber the disincentives. When the Court Order was first announced, the President of Massachusetts College joined the other college

presidents in expressing fears that the arrangement would be costly to the colleges and that unreasonable expectations of what the colleges could accomplish would engender bitterness and disappointment on the part of the school personnel, which would be damaging to the prestige of the colleges involved. However, once the pairing began, these fears dissipated. They have been replaced by a new concern which the Massachusetts College Coordinator shares with some of the other coordinators: that the benefits which the schools derive from the pairing do not justify the vast amount of money which the state has poured into the projects. In spite of this concern, there is no indication that Massachusetts College wishes to sever its ties to District C.

Incentives for District C's continued participation in the Collaborative include the following:

1. The District benefitted over the past five years from equipment purchased and physical improvements made with 636 funds. For example, through the Mathematics Assistance Project, Ingliss High School acquired a math lab and computer room stocked with a supply of learning devices. In a few cases, schools have used pairing funds to hire additional personnel, such as physical education instructors.
2. Teachers have the assistance of Massachusetts College students in their classrooms and thus provide more individualized attention to children in smaller groups.
3. The pairing furnished opportunities for teachers to upgrade their skills and be exposed to the latest ideas about curricula, instructional methods, and materials at no cost to the school system.
4. Teachers earn higher salaries after taking graduate courses at a very low cost.

Drawbacks of the pairing for the District include:

1. Principals and teachers suffer the intrusion of outsiders observing and sometimes criticizing their methods.

2. Teachers and principals have been pressured, occasionally by those in authority, to participate in pairing projects or to adopt new curricula or teaching methods. This may involve extra work or commitment of their own time. Although principals and teachers are free to refuse, and sometimes do, their unwillingness to cooperate may create a tense atmosphere in which to work.

3. The emphasis within the pairing on in-service, credit-bearing courses leads to increased teacher salaries, which are becoming too costly to the school system. According to a staff development officer, District C administrators would like Massachusetts College to continue to shift its activities from courses for teachers to more direct services to students.

Knowledge Exchange

The pairing projects carried out over the past five years have taken a variety of forms, ranging from graduate courses to after-school reading clinics, from field trips to the construction of new facilities. Various, too, are the kinds of knowledge transferred or exchanged in these projects and the structural arrangements which characterize them. Of the large number of funded projects, some have been singled out by the District Superintendent, the College Coordinator, school personnel, and College faculty as particularly successful. What is meant by success seems to vary among the participants. The College Coordinator defines a successful project as one which operates smoothly with a minimum of bureaucratic difficulties, delays, and personal conflicts. The projects which he rates most highly are those which have generated a "product," such as a published curriculum, which can be exhibited to outsiders (to auditors, for example) as evidence that state funds are being well spent. A District administrator's notion of a successful project is one that possesses the additional characteristic of providing a direct service to students, perhaps because this benefit wins the approval of community members, politicians, and

parents, constituencies which may not appreciate the need for teachers to receive on-the-job training at taxpayers' expense. Faculty members measure success in terms of enthusiastic participation of teachers and the absence of scheduling problems, delays in receiving materials or equipment, and conflicts with school administrators. Teachers judge a project by the amount of information they receive which can be put to immediate use in the classroom.

These definitions of success share a focus on the process of a project, rather than its long-term effects. Most projects are renewed from year to year on the basis of the level of enthusiasm of their participants, rather than an assessment of their outcomes. A few of the projects can be evaluated in terms of effectiveness. For example, students participating in the after-school reading clinics are tested at the beginning and end of the year to measure their improvement. However, these reading scores do not appear to be a primary factor in determining this project's renewal from year to year. Although the pairing has been in existence long enough to allow it to evaluate the lasting benefits derived from the earliest projects, this had not been done. The only monitoring mechanism built into the 636 funding is the annual evaluation of the projects by an outside consulting firm. The evaluators investigate whether the project is proceeding according to the time frame specified in the proposal, whether the project meets various guidelines set by the School Department, whether the specified number of meetings or work sessions has been held, whether all funded personnel have fulfilled the terms of their contracts, and what problems have been encountered. The evaluations are conducted at the middle and end of the funding period. Smooth transfer or exchange of knowledge is noted, but utilization of knowledge is ignored.

Projects which get underway promptly, which proceed efficiently, which maintain the support of school administrators, which attract and retain the enthusiastic participation of teachers, and which yield the product called for in the proposal are considered by pairing participants to be successful. Analysis of the District C/Massachusetts College Collaborative, in particular, of four pairing projects, indicates that some structural

arrangements promote the success of a project while others inhibit it, and that the presence or absence of some types of knowledge also influences whether a project is deemed successful.

The two broad types of knowledge transferred or exchanged by the College and District personnel are education knowledge and utilization knowledge, the former being knowledge about how to effect changes in children, and the latter strategies, tactics, and techniques for getting education knowledge into use. Each of these two types of knowledge can be subdivided into three categories: research knowledge, derived from rigorous investigation of a problem, the results of which are published and shared with the academic community; craft knowledge, derived from professional experience and accumulated during the course of a career; and situational knowledge, or derived from familiarity with a specific setting, in this case Massachusetts College, District C, the Boston School Department, and/or the State Department of Education.

Within the pairing education research knowledge is most often transferred from faculty consultants to teachers, especially in projects which involve credit-bearing courses that explore theoretical issues. For example, one of the courses offered to teachers in the Reading Assistance Project dealt with theories of teaching reading. Theoretically-oriented courses were least popular among the teachers, who repeatedly demanded programs in which they would learn practical methods and techniques to employ immediately in the classroom. A science course offered to teachers through the National Science Foundation grant had a high attrition rate, which the Project Director attributed to the fact that the course purveyed research knowledge.

Teachers appear to bring to the projects a strong anti-academic bias, a belief that theoretical formulations and research findings have little relevance to Boston classrooms. Faculty members, on the other hand, possess

a store of research knowledge acquired through their academic training and years of college teaching and research. To overcome teachers' suspicions and to convince them that something worthwhile can be gained from participating in pairing-sponsored courses and projects, faculty consultants try to translate educational research knowledge into education craft knowledge and education situational knowledge. For example, one consultant noted that the teachers never inquired into the pedigree of her suggestions and recommendations; their only question is, "Will it work?" None of the consultants interviewed referred to research knowledge explicitly or cited academic authorities in his/her interactions with teachers. In the Student Assistance Project, however, faculty members conduct some of their undergraduate courses in the District schools. In these classes the faculty members impart education research knowledge to their students.

It is reasonable to support that faculty members' public school experience would build far more credence for them with teachers than their academic credentials. However, interviews with faculty consultants indicate that few make reference to their teaching background, a finding corroborated by teachers' reports that they are unaware of faculty members' experience even in cases where the consultant's ideas were respected. This ignorance suggests that teachers are receptive to concrete recommendations which sound feasible to them, and that as long as an idea is expressed in everyday language and not in academic jargon, its origin in either academic literature or the consultant's experience is irrelevant.

The education knowledge transferred or exchanged in a pairing project is in most instances either craft or situational knowledge. Interviews with consultants and teachers, as well as observation of one project work session, suggest that the teachers offer education situational knowledge to which the consultant responds by drawing on his or her education research and, more often, education craft information. At the same time, the consultant absorbs

specific information about the needs and problems of the teachers, thus acquiring situational knowledge which can be profitably utilized later in the project.

No instances of the transfer or exchange of utilization research knowledge were identified, possibly because no key pairing personnel have a background in management or organizational psychology. Utilization craft knowledge is exchanged often, particularly in the proposal writing stage and during the first few months of a project's operation. The College Coordinator and the District Superintendent exchange utilization craft knowledge concerning which projects should be continued, what new efforts should be initiated, and what methods should be employed to insure that projects will be approved for funding and that they will then run smoothly. The College Coordinator also obtains information from School Department officials, particularly with regard to approved uses of 636 funds. He then develops strategies based on this information which he communicates to the proposal-writer and faculty consultant. He may advise a faculty member, for example, that because funds cannot be used to employ regular school personnel the consultant should try to persuade the school principal to hire the necessary employees.

Correspondence detailing the funding process during the first year of the collaborative suggests that utilization craft knowledge was more important in the early period of the pairing than it is now. In the first year participants were unsure about the process of obtaining funds and particularly about criteria which city and state personnel would apply in evaluating 636 proposals. The College Coordinator in those early months drew extensively on the utilization craft knowledge he had gained working in state and local bureaucracies earlier in his career and sought the utilization situation knowledge of the District Superintendent and other administrative personnel in the school. As the funding process became routinized and fewer projects were initiated each year, interaction among the

College Coordinator, the District Superintendent, and other administrators decreased. However, as a result of their access to administrators outside the District and to their counterparts in other districts and pairings, the Coordinator and the Superintendent have each amassed a wealth of utilization craft and situational knowledge about the funding process which they continue to transmit to proposal writers, faculty members, and District administrators. In addition, through years of dealing with principals, teachers, and the Boston Teachers Union, they have become knowledgeable about the best methods of structuring a project. They both meet, separately, with each project director once a semester and give advice on how to overcome problems impeding the operation of the project.

Faculty consultants sometimes make use of utilization craft knowledge in designing and carrying out their projects. For example, Susan Tile reports that she incorporated a participatory format into her project on the basis of her previous experience as an educational consultant on other settings, as well as from her experience as a teacher. The faculty member, especially if he or she has experience in pairing projects, may share his or her utilization situation knowledge with the College Coordinator in demanding that specific arrangements he or she considers necessary be provided in the proposal. For example, when the proposal for the second year of the Elementary Math Assistance Project was being written, Susan Tile employed utilization situation knowledge gained during the previous year and insisted that funds be budgeted to provide released time for teachers, an arrangement which she believed would increase the teachers' enthusiasm and productivity.

In the course of a project, the consultants may share utilization situation knowledge with teachers and principals to influence school personnel to take actions which the consultants recommend. For example, Helen Stone, knowing that the math teachers would be unwilling to adopt a new curriculum

unless they were certain they had the support of the Headmaster, first convinced the latter of the value of the new program and then persuaded the Math Department that if they were to adopt the new curriculum they would have the Headmaster's support.

It might be expected that, compared to faculty members newly arrived on the scene, teachers and principals would possess superior knowledge of how to implement or facilitate a new technique or program. In general, this assumption is correct. However, as the above example indicates, the consultant's role as an outsider may in some instances allow him or her to glean utilization knowledge from both teachers and administrators and then make use of data from both sources to develop an implementation strategy more effective than any that could be devised by either group alone. The consultant is, of course, employing some of his own utilization craft knowledge in promoting this movement.

Of the six types of knowledge discussed, situational knowledge, both education and utilization, is most necessary to the smooth operation and timely completion of a project, the qualities most often included in pairing participants' definitions of a successful project. Nearly all of the projects sponsored by Massachusetts College involved opportunities for teachers to earn graduate credits. Comments from participants on course evaluations and surveys indicate that the teachers want the courses to be practical and directed toward immediate classroom needs rather than theoretical. In effect, the teachers want situational knowledge or at least craft knowledge, not research knowledge. According to the most recent report of the Teacher Corps, this project has been able to win the support of initially skeptical teachers in the four participating schools by offering inservice courses and workshops focused on specific needs determined by each school.

One implication of these points is that pairing projects limited to one school or one department within a school are likely to be more

successful than those which are directed toward teachers from many schools with diverse needs and problems. The College Coordinator believes that a college should be paired with only a single school if the relationship is to be most effective.

However, a comparison of two of the pairing projects shows that other structural factors may be more important than the scope of the project. The Math Assistance Project at Ingliss High School is limited to teachers from one department in one school, yet this project has been less successful than the Elementary Math Assistance Project, which involved teachers from all District C elementary schools. An important difference between these two projects is that three different faculty members worked at the High School, whereas one consultant has been involved in the elementary level project. The significance of this difference is related to the teachers' preference for situational knowledge. Although most faculty members involved in the pairing have public school experience which they can transform into craft knowledge, only when these consultants spend enough time in District C can they shift from the craft knowledge to situational knowledge and thus become maximally effective. Continuity of personnel seems to be important to the success of a project.

Individual teachers and principals appear not to base their attitudes and behavior on their perception of the larger relationship between District and College, but on their experiences in the particular project in which they work. It is the individual project rather than the pairing as a whole which moves through stages of wariness and distrust to mutual trust; the progression can occur only if much the same personnel are involved from year to year. In the Math Assistance Project at the Ingliss, for example, the annual change of faculty consultant seems to be associated with the teachers' reluctance to become involved in the project. The third consultant's willingness to become fully involved in the problems and concerns of the Math Department has influenced the teachers to be more inclined to

allow her to draw them into dealing with their Department's problems.

Another factor contributing to the success of a project is the provision of released time for teachers. The opportunity to get away from the classroom, to interrupt the daily routine, to interact socially with their colleagues, and to share professional expertise appear to elicit from the teachers more enthusiastic involvement in pairing activities.

APPENDIX A

Bibliography

Broadbent, Maida, School/Instruction Collaboration, Boston, Mass., April 1980, p. 3, 4, 6-8.

Hunt, Martin L., McMillan, Charles B., Worth, Karen I., "Integrated Education," March/April, 1978.

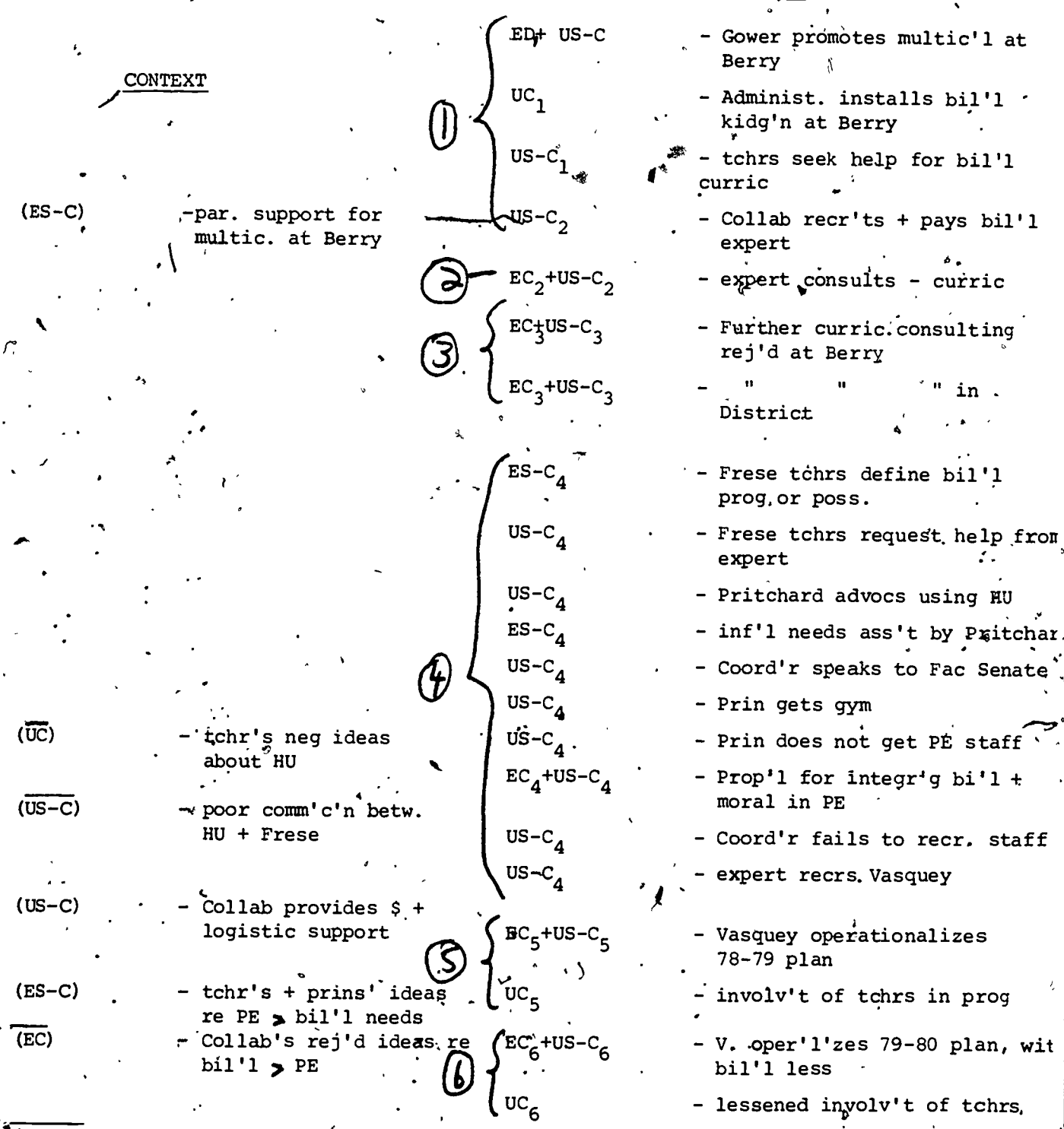
Memorandum of Decision and Remedial Orders, Boston: June 5, 1975, p. 50-53.

University Partnerships in Boston, Massachusetts Department of Education, Bureau of Equal Education Opportunity, January 1979, Publication #11201,p.6,12.

APPENDIX B

Coding Transcriptions

Harris University: 1. Movement/Multicultural



Harris University: 2. Developmental Reading

CONTEXT		ACTIVITIES	
		EC_1+$US\text{-}C_1$	- prev. Wkshp at Dunn by HUprof
		UC_1+$US\text{-}C_1$	- encours vols for wkshop
		UC_1	- HU org'd wkshp, Su 75
		UC_1	- pay to wkshp particips
		$ES\text{-}C_1$	- inf'l needs ass't at wkshp
		$US\text{-}C_1$	- focus on HS Eng.tchrs, dur to enth'm
		EC_1+$US\text{-}C_1$	- inf'l propl at end of Su
		EC_2+$US\text{-}C_2$	- tchr wkshps in 1/76
		$ES\text{-}C_2$	- inf'l eval'n of Wkshps
		EC_2+$US\text{-}C_2$	- prof consults on rdng diagn plan
		UC_2	- Univ. supplies + scores tests
		$ES\text{-}R_2$	- test results on studs'reading
(EC+ES-C)	- eager support of Rdng Coord'r	UC_2	- Univ/Schools div'n of labor
		UC_2	- dir.servs.to HS studs at HU
(UC+US-C)	- Coord'r's cont'g support	$US\text{-}C_2$	- app't of Distr.Rdng.Coord'r
(EC+ES-C)	- HU Rdng Dept's cont'g consulting	$US\text{-}C_2$	- Eng.Chair at HS never involve
		$US\text{-}C_2$	- Prin gets rooms +stud. sched
(ES-C)	- yrl'y incr. in 636 $= pos. eval'n	EC_2 + $US\text{-}C_1$	- prop'l written 5/76
		$ES\text{-}C_2$+$US\text{-}C_2$	- prop'l approved by CDAC
(ES-C)	- other acad.dep'ts supportive	UC_3	- Univ. buys materials for pro
(ES-C)	- Fac.Council supportive		
(ES-C)	- REPC supportive	presumed iteration of this cycle in 77, 78, 79 80	
(ES-C)	- CDAC "		

(7)	EC_7+US+C_7	- prop'l for 79-80
	ER_7+EC_7	- tchrs reg. staff dev't
	ER_7+EC_7	- " " curric "
(8)	EC_8+US-C_8	- prop'l for 80-81
(9)	EC_9+US-C_9	- CC's prop'l for DU use of HRHS

Harris University: 3. Reading Support Team

ACTIVITIES

(1)	$ES-R_1$	- RP surveys teachers, FA 75
	EC_1+UC_1	- CDAC+REPC's sponsor sems
	$ES-C_1$	- pass state needs (inf'ly)
	$ES-R_1$	- HS diagnostic test results
	$US-C_1$	- core planning team establ'd
	UC_1	- Sup'ts Circ. #33
	$EC+US+C_1$	- inf'l prop'l prep'd by team
	EC_1+ES+C_1	- Wkshps produces curric guide
	EC_1+US-C_1	- Wkshps dissem diagn+tchn skill
	UC_1+US-C_1	- Rdng Supp Team created to ext. network
	$EC-C_1+US-C_1$	- RP provides detail for prop'l
	EC_1	- HU prof consults
	UC_1	- HU Coord'r writes prop'l
	$ES-C_1+US-C_1$	- prop'l rev'd+approved (sp 76) + repeated thereafter

(US-C) - RP plans + runs Team mtngs

(EC+ES-C) - Rdng profs consult

(EC) - profs from other depts consult

(2)	UC_2+US-C_2	- RP+Rdng Prof arr. att'ce at Conf for Team
	EC_2	- learning at Conf
(3)	UC_3+US-C_3	- Distr.to expand team concept
	UC_3+US-C_3	- rel'p bldg by RP + others

Harris University:4 . Student Placement

CONTEXT			ACTIVITIES
		$US\text{-}C_1$	- HU elims tuition vouchers
		UC_1	- HU offers services to schools
	①	UC_1	- Coord'r places 300 students
		$US\text{-}C_1$	- studs + fac adjust
		$US\text{-}C_1$	- school staff "
(ER+EC)	- HU emphs urban ed		
(EC+ES-C)	- new cert'c'n requ'ts	$EC_2+US\text{-}C_2$	- Consortium planned
(EC+UC)	- HU shifts to field-base	$ES\text{-}C_2+US\text{-}C_2$	- " approval (?)
(US-C)	- profs know USG favors tchrs	②	
(UC)	- field base - more studs	$EG+UC_2$	- Coord'r presses for more studs
(US-C)	- HU stud #'s decline	$US\text{-}C_2$	- Coord secrs + supps Pact
(UC+US-C)	- HU Fac press again + Bos		
(UC+US-C)	- nes-Post nerbs against Bos		
(US-C)	- RP supps Consortium		
(US-C)	- supp for urvan ed dims (p.8		
(UC)	- funding system helps		
(US-C)	- extensive paperwork		
(US-C)	- prop'l wrtg by Coord'r		
(US-C)	- tchrs + prins support		
(US-C)	- inadeq. prep of HU studs		
(US-C)	- inf'l rel'rs with non-Bos educs		
(US-C)	- res't at loss of tuition vchrs		
(UC+US-C)	inadeq ext'n efforts		
(EC+US-C)	- District plans acc't'd		
(US-C)	- RP supp'd by tchrs		
(EC+UC)	- HU instruc'l plan affected		
(ER+EC)	- two new courses		
(US-C)	- pressure for better superv'n		
(US-C)	- involv't in intern assiss't		
(EC)	- lrng by HU profs		

DIST. A 76-77

Dunfey University: 1. Multicultural Curriculum

CONTEXTS

(EC) - 1970 SS Cur Guide
(UC) - PL 636 Guidelines
(EC+UC) - TB's views (planning)
(ES-C) - TB's local knowl. (p. 24)
(EC+UC) - BD's views
(ES-C) - BD's Knowl of DU
(ES-C+US-C) - MM's views
(EC+US) - RH (C+EC) views
(UC) - Distr B Staffer's views
(EC+UC) - GB's views
(US-C) - Insuff't time (p. 19)
(ES-C+UC-C) - Little CDAC involv't
(UC) - Proj. Dirs. hopes for region
(US-C) - Insuff't feedback (p.20)
(ER) - DU's lack of expertise
(UC+US-C) - Lack of admin structure (p.22)
(US-C) - "contr mert" of GB, CL, MM
(ES-C) - Sch people's distr of DU (p. 31)
(ES-C) - CDAC's distr of DU (p.32)

ACTIVITIES

UC_1 - Order regarding priorities
$ES\text{-}R_1$ - James needs ass't
$ES\text{-}R_1$ - 1977 District needs ass't
UR_1 - DU tech'l assist'ce in needs as't
$Es_1\text{-}C_1$ - Distr Adv'y Comm recs
UC_1 - Distr Supt asks prins to brainstorm
$ES\text{-}C_1$ - Prins' Comm recs
$ES\text{-}C_1$ - CDAC's failure to act
EC_1 - Tchr-training pushed for incl'n
$ES\text{-}C_1+US\text{-}C_1$ - Tchr-tr'g de-emph'd
$US\text{-}C_1$ - Input on $ from Prins
$US\text{-}C_1$ - Input on $ from CDAC
EC_1 - Adv'y Comm idea for new curric
$EC_1+US\text{-}C_1$ - Prop'l for 78-79 from Adv'y Bd
$ES\text{-}C_1+US\text{-}C$ - Impl. rev. & appr'l by ?

$UC_2+US\text{-}C_2$ - Summer planning session
UC_2 - Lack of orient'n session
$UC_2+US\text{-}C_2$ - Dec'n for standard lesson plan
ER_2+EC_2 - Info from ext'l sources(p.24)
ER_2+EC_2 - Inputs from 6 ethnic consultants (p.5)
$EC_2+US\text{-}C_2$ - Grp's less plan writing (p.5)
ER_2+EC_2 - C & E consultant's reu'ns (p.5)
$ES\text{-}C_2$ - Emotionalism of Nat Am consult't
$US\text{-}C_2$ - Sugg'n for 2nd Nat Am Wkshp
UC - Tchrs' sugg'ns re re dittos & transp's (p.25)
$UC_2+US\text{-}C_2$ - RH's sugg'ns to revise process (ignored)
$EC_2+ES\text{-}C_2$ - RH's spec session on gaps in package
$UC_2+ES\text{-}C_2$ - RH's session on 1-p'g & Afro-Am (regjected)

②	EC_2 + $US\text{-}C_2$	- Tchrs' "preconceived notions" (p.30)
	$US\text{-}C_2$	- tchrs'+ pars' recr't of par. res. persons (p.31)
	$ES\text{-}C_2$	- pars' recs as res people
	UC_2+US - C_2	- TREAD eval'r's suggn (ignored)
	ER_2+EC_2	- 85 les plans deliv'd to syst (p.5)
	$ES\text{-}R_2$	- TREAD eval'n

Dunfey University: 2. Student Publications

ACTIVITIES

①	US_1	- 636 Guidelines (basic skills)
	US	- Supt's Cir #33
	$ES\text{-}R_1$	- ERC's eval'n of 77-78 prog
	$ES\text{-}R_1$	- Needs Ass't interp'n
	EC_1	- DU's help to 77-78 prog

CONTEXTS

(EC)	- Burn's support for student newspapers etc.
(EC)	- DU's publ'g services
(EC+US-C)	- R's role def'n
(ER+UR)	- abs. of res. knowl.
(US-C)	- net'ly motiv'd school reps

②	$ES\text{-}C_2$+$US\text{-}C_2$	- Adv'y Comm ideas + endors't
	$ES\text{-}C_2$+$US\text{-}C_2$	- Prins' Comm's " " "
	$ES\text{-}C_2$	- "buy in" idea from CDAC
	$ES\text{-}C_2$+$US\text{-}C_2$	- CDAC disapproval + reasons for
	$ES\text{-}C_2$	- publish elsewhere idea
	$US\text{-}C_2$	- reduct'n in $ to District
	$US\text{-}C_2$	- transfer of $ from DU to Dist.
	EC_2+$US\text{-}C_2$	- 78-79 prop'l for stud publ'ns
③	$US\text{-}C_3$	- coord hires first staffer
	$US\text{-}C_3$	- Coord hires second staffer
	UC_3	- B's pusher central'z'n'
	UC_3	- R's pusher decentr'z'n'
	$US\text{-}C_3$	- R's dissem idea
	$US\text{-}C_3$	- CDAC urges training prog
	UC_3	- R's props Workshop
	EC_3+$ES\text{-}C_3$	- Workshop held
	EC_3+$US\text{-}C_3$	- 79-80 prop'l

CONTEXT

(UC) - phil on utiliz'n

(UC+US-C) - poor comm'c'n esp'ly in C/T services

(EC) - JL's ideas

(ES-C) - JL's personality

(UC) - PL636 Guidelines

ACTIVITIES

① planning

- $ES\text{-}C_1$ - no needs assess't
- $ES\text{-}C_1$ - DU's exp with HR
- $UC_1+US\text{-}C$ - efforts to gener. input + census
- $ES\text{-}R_1$ - James needs ass't
- $ES\text{-}R_1$ - District-wide "
- $ES\text{-}C_1$ - prins' " "
- $US\text{-}C_1$ - TB recb JL
- $EC_1+US\text{-}C_1$ - successive prop'l drafts
- $US\text{-}C_1+US\text{-}C_1$ - prop'l review + approval
- $US\text{-}C_1$ - ideas on monitoring mech'ms

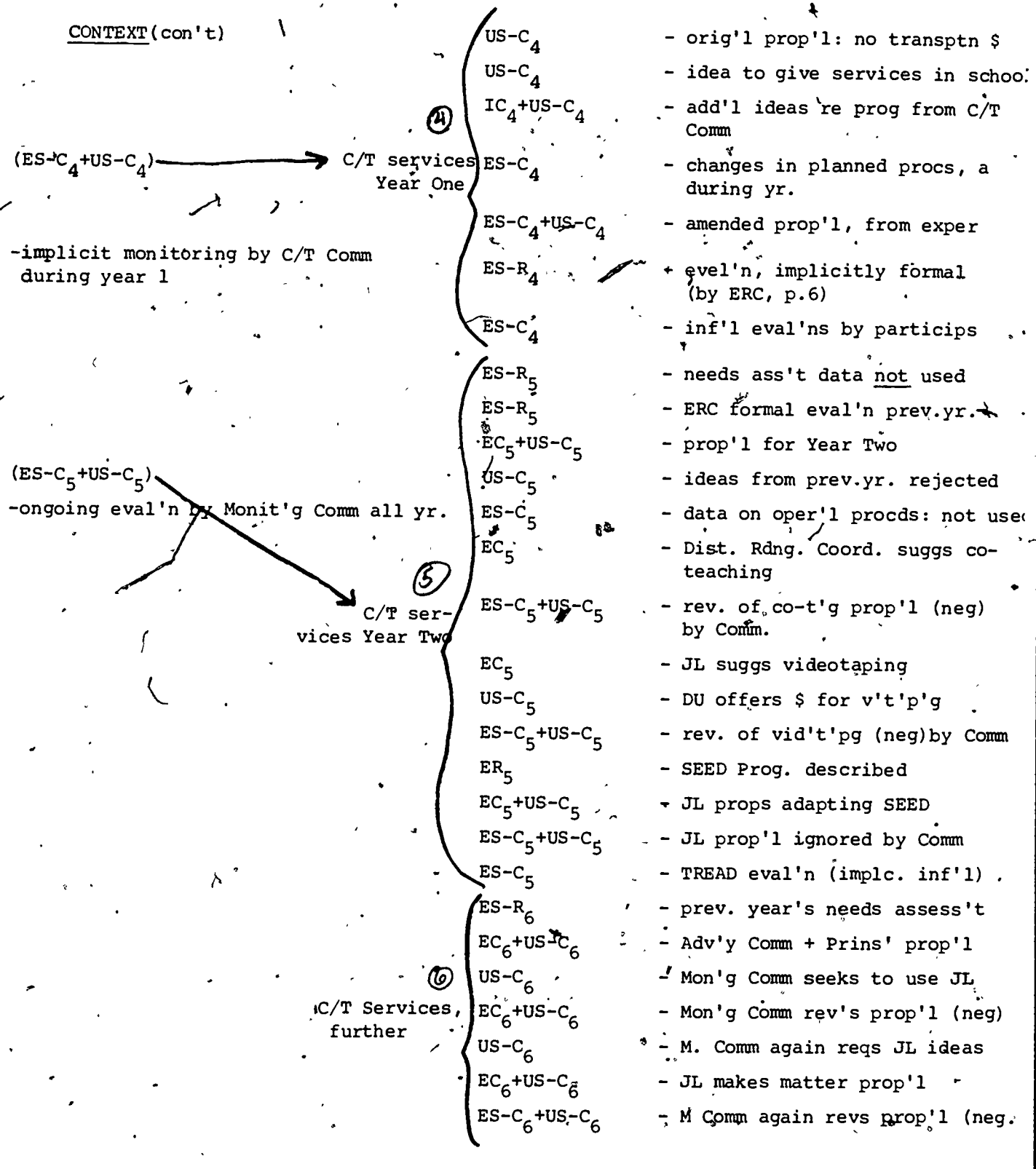
② grad. rdg course

- $US\text{-}C_2$ - tchr's recruited
- $ER_2+EC_2+UC_2$ - JL teaches course
- $ES\text{-}C_2$ - tchr's inf'l eval'n of course
- $UC_2+US\text{-}C_2$ - Dist Coord'rs eval'n efforts
- $ES\text{-}R_2$ - poor data from eval'n
- $ES\text{-}C_2$ - JL's eval'n of course
- $ES\text{-}C_2+US\text{-}C_2$ - Comm's final (neg) eval'n of course

③ workshops

- $US\text{-}C_3$ - tchrs recr'd (implied)
- EC_3+UC_3 - workshops taught
- $ES\text{-}R_3$ - ERC eval. data
- $US\text{-}C_3$ - sup. to leaders by TT Comm
- $ES\text{-}C_3+US\text{-}C_3$ - Comm's final (neg) eval'n of course

CONTEXT(con't)



Dunfey University: 4. Physical Education

CONTEXTS		ACTIVITIES		
		1	UC_1+US-C_1	- Cood'r calls + facs mtngs, Su 76
			$ES-C_1$	- agree't HRHS needs facs
			$ES-C_1$	- Admin + REPC inf'l needs ass't
			$US-C_1$	- HRHS Chair seeks out KH
			EC_1	- abortive FA 76 curric mtngs
(US-C)	- Comer's support for pairing	2	$US-C_2$	- Chair seeks DU profs
			$ES-C_2$	- visits to HRHS by profs (inf' Nds Ass't)
(US-C)	- BB service trad'n		EC_2	- HRPS tchrs present phil'y
			EC_2	- DU profs present suggn's
(US-C)	- service not rev'd in T+P at BB		$ES-C_2+US-C_2$	- rel'ps+underst'gs establ'd both ways
		3	$US-C_3$	- Coord's asks KH to write for 78-79 prop'l
			EC_3+US-C_3	- KH writes prop'l
			$ES-C_3+US-C_3$	- HRHS fac rejs intramural comp
			$ES-C_3+US-C_3$	- " " revs curric dev't "
			$ES-C_3+US-C_3$	- " " " staff dev't "
			$ES-C_3+US-C_3$	- rev+appr'l by 636 Adv'y Comm
		4	EC_4+US-C_4	- curric guides prep'd, 78-79
		5	ER_5+EC_5	- staff tr'g in gymnastics + outdoor rec
			ER_5+EC_5	- staff trains staff in gymn'cs
			$US-C_5$	- tchrs orgs other gymnastics tchrs
			$US-C_5$	- tchrs asks KH for DU fac's
			$US-C_5$	- KH gets DU facs for gymn'c's
			ER_5+EC_5	- staff trains staff in outdoor rec
		6	EC_6+US-C_6	- tchr writes ESEA prop'l for intramurals
			$ES-C_6+US-C_6$	- prop'l appr'd by?
			ER_6+EC_6	- more staff trained in gymn'cs

CONTEXTS		ACTIVITIES		
		(1) a.	EC_1+ES-C_1	Dist. Sup't proposes
		b.	UC_1	D.S. co-opts Prins
		c.	US-C_1	D.S. asks MC help
		d.	US-C_1	Coord'r recruits Tile
		e.	ED_1	City Task Force guidelines
		f.	UC_1	Tile coopts D.S. + staff
		g.	EC_1+US-C_1	Tile, D.S. + MC apply for $
		h.	ES-C_1+US-C_1	applic'n approved
a. (EC+US-C)	Tile's role def + bel	i.	US-C_1	tchrs recr'd for proj.
b. (EC)	input of MC studs	j.	EC_1+UC_1	Tile runs sessions
c. (UC)	Tile's exper in innov	k.	ES-C_1+UC_1	doc't on City and Distr.currics
d. (US-C)	Tile's reqs day-long sessions			
e. (EC)	shared EC at sessions	(2) a.	ES-C_2	suggs worksheets
f. (US-C+ES-C)	testing worksheets	b.	UC_2	Tile accepts sugg'n
g. (ES-C)	Tile eval of proj	c.	EC_2+US-C_2	Tile write prop'l
h. (ES-C)	D.S. + Prins eval'n	d.	ES-C_2+US-C_2	prop'l approved
		e.	EC_2 + UC_2	Tile runs sessions
		f.	UC_2	Tile involves non-part'g tchrs
		g.	US-C_2	Tile insists on released time
		h.	ES-C_2	eval'ns by all are pos.
		(3) a.	EC_3+US-C_3	Tile writes prop'l

CONTEXTS

a.	$(US\text{-}C_c)$	teachers' atts re work
b.	$(ES\text{-}C_c)$	tchrs' salaries
c.	$(US\text{-}C_c)$	poor l'd'p
d.	$\overline{(ES\text{-}C_c)}$	tchrs' worries
e.	$\overline{(ES\text{-}C_c)}$	tchrs' misunderst'g re Math Lab
f.	$\overline{(EC_c)}$	tchrs' doubts re helpfulness
g.	$\overline{(EC_c)}$	lack of needed expertise in consultants
h.	(EC+UC)	St's role def + beh.

ACTIVITIES

(1)

a.	$US\text{-}C_1$	Ingliss reqs MC aic
b.	$IS\text{-}C_1$	Chair's info
c.	$ER_1+EC_1+US\text{-}C_1$	Smith resps + writes prop'l
d.	$ES\text{-}C_1+US\text{-}C_1$	implicit rev. of prop'l
e.	EC_1	Smith teaches
f.	$US\text{-}C_1$	probs of impl'n at Ingliss

(2)

a.	$US\text{-}C_2$	Brown recr'd
b.	$US\text{-}C_2$	Brown's efforts nullified by Head
c.	$ES\text{-}C_2$	informal needs survey by Brown
d.	$EC_1+US\text{-}C_2$	Brown writes prop'l
e.	$EC\text{-}C_2+US\text{-}C_2$	prop'l reviewed by GDAC
f.	$US\text{-}C_2+ES\text{-}C_2$	Brown advises Pl'g + Eng'y
g.	$EC_2+ES\text{-}C_2$	Brown works with tchrs on beh'l objs.
	(UC_2)	Brown role def'n + beh
	$\overline{(US\text{-}C_2)}$	Brown departs → no Math help

(see add'l contextual inputs for episodes #2 and #3)

(3)

a.	$ES\text{-}R_3$	testing data worries Ingliss
b.	$US\text{-}C_3$	Ingliss asks for help
c.	$US\text{-}C_3$	Co-ord'r recruits Stone
d.	EC_3	Stone writes concept paper
e.	UC_3	Stone circs paper
f.	$EC_3+US\text{-}C_3$	Stone writes prop'l
g.	UC_3	Stone demands school commit $
h.	$Es\text{-}C_3+US+C_3$	Implicit review of proposal
i.	$US\text{-}C_3$	head + chair persuade Stone to stay

(4)

a.	UC_4	community Hse planning strats
b.	$ES\text{-}C_4$	info re Ingliss

Massachusetts College: 3. Student Assistance

CONTEXTS

a.	(EC)	MC Fac's fan'ty PS
b.	(US-C)	info re MC gets out
c.	(ES-C)	studs learn in FW
d.	(ES-C+ US-C)	Dirs' knowl. of pub.schls
e.	(ES-C)	studs'knowledge of pub schools
f.	(ES-C+ US-C)	Dirs explain shortage of studs
g.	(EC)	shared belief in indiv'l instruct.

ACTIVITIES

a.	$US\text{-}C_1$	Coord'r recruits fac for need ass't
b.	$ES\text{-}R_1$	6/75 needs assessment
c.	$US\text{-}C_1$	tchrs req. MC stud ass't'ce
d.	$US\text{-}C_1$	tchrs req PE ass't'ce
e.	$ES\text{-}R_1$	surveys of sec schs
f.	EC_1+$US\text{-}C_1$	Wom Phys Ed writes prop'l
g.	$ES\text{-}C_1$+ $US\text{-}C_1$	proposal ignored
h.	$US\text{-}C_1$	Coord'r recr studs + profs, PE + other
i.	$ES\text{-}C_1$	Distr. staff places studs
j.	$ES\text{-}C_1$	Coord'r orients studs
k.	$ES\text{-}C_1$	implicit prog eval'n (p.6)

(1)

a.	$US\text{-}C_2$	1c
b.	$US\text{-}C_2$	1d
c.	$US\text{-}C_2$	1h
d.	$ES\text{-}C_2$	1i
e.	$ES\text{-}C_2$	1j
f.	$ES\text{-}C_2$	1k

(2) Steps presumably followed in year 2

a.	$US\text{-}C_3$	1c
b.	$US\text{-}C_3$	1d
c.	$US\text{-}C_3$	1h
d.	$ES\text{-}C_3$	1i
e.	$ES\text{-}C_3$	1j

(3) Steps presumably followed in year 2

f.	$US\text{-}C_3$	Dir. named
g.	$US\text{-}C_3$	Dir arranges busing
h.	$US\text{-}C_3$	Dir. arranges profs to go to sc
i.	$ES\text{-}C_2$	1k

Massachusetts College: 4. Environmental Studies

CONTEXTS		ACTIVITIES		
		a.	ER	NEED Proj.
		b.	$US\text{-}C_1$	Bates reqs NC aid
		c.	EC_1	Bates proposes
(EC_1)	Bates phil'y	d.	$US\text{-}C_1$	Bates mobiliz'n of tchrs
(EC_1)	Bates MC bias	e.	$EC_1 + US\text{-}C_1$	Co-ord'r writes prop'l
$(ES\text{-}C_1)$	Bates knowl. of ch'n	f.	$EX+C_2+US\text{-}C_2$	implicit review of prop'l by?
		g.	EC	Co-ord'r assists tchrs
		h.	US-C	Co-ord'r recruits MC fac
		i.	$\overline{UC}$	poor integr'n of MC fac
		j.	ES-C	Coord'r arrs details on Cape
		2(+?)	$- ES\text{-}C_2$	implied multiple evaln's of proj + yearly prop'ls
			$ES\text{-}C_3$	- '79 eval'n
			$ES\text{-}C_3+US\text{-}C_3$	- Bates + tchrs plan rev'ns
			$US\text{-}C_3$	- Bates reqs MC aid
			$US\text{-}C_3$	- Coord'r recruits new MC staff