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ABSTRACT

Begun in 1983, the Math English Science Technology Education Project (MESTEP) is a collaborative effort among the University of Massachusetts, a network of Massachusetts school systems, and private corporations, designed to recruit into teaching academically talented college graduates with degrees in math, English, and science. MESTEP is an intensive 15-month program during which candidates complete an M.Ed. degree program that includes certification in one of three disciplines, one full semester paid teaching internship, and one full semester paid industry internship. The combination of course work, teaching, and industry experience represents a new route by which college graduates can enter teaching. Teaching interns are employed by a school system to assume most of the responsibilities of a full-time teacher; industry interns work in a full-time position at one of the cooperating companies. During the first three years of teaching, participating companies are committed to making an attempt to hire MESTEP graduates for summer employment. (JD)

The Math English Science Technology Education Project

(MESSTEP)

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COVER SHEET

Grantee Organization:

University of Massachusetts
Math English Science Technology
Education Project
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Fund Program Officer:

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Year 1	$83,483
Year 2	$97,313
Year 3	$71,012
Total	$251,808

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PROJECT SUMMARY

Begun in 1983, the Math English Science Technology Education Project (MESTEP) is a collaboration among the University of Massachusetts, a network of Massachusetts school systems, and private corporations, designed to recruit academically talented college graduates with degrees in math, English and science into teaching. MESTEP is an intensive 15-month program during which candidates complete an M.Ed. degree program that includes certification in one of three disciplines, one full semester paid teaching internship, and one full semester paid industry internship. The combination of course work, teaching and industry experience represents a new route by which strong college graduates can enter teaching.

Including the 1989 graduating class, in its six year history, MESTEP has trained 123 middle school and secondary teachers in math, English and science. Of this number 23% have been minority candidates. To date, approximately 73% (90) of the 123 graduates remain in teaching, in public and private middle and secondary schools and in other educational institutions around the country.

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EXECUTIVE SUMMARY

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PROJECT OVERVIEW

Currently in its sixth year, the Math English Science Technology Education Project (MESTEP) is a fifteen month collaborative M.Ed./certification program of the University of Massachusetts, a network of public schools, and 12 Massachusetts corporations. MESTEP was developed in 1982 as a response to the shortage of highly qualified recent math and science majors who choose to enter teaching.

The program design allows students the opportunity to center their Master's degree program and beginning teaching experiences around two paid internships that each take place during one semester of the academic year. In addition to the internships, the program immerses students in two intensive summers, the first of coursework and student teaching and the second of coursework. MESTEP asks graduates to commit to teaching for at least three years following completion of the program.

The MESTEP partnership, over six years, has recruited, prepared, and placed 123 candidates in math, English, and science. In addition, over the six year history of the program, the number of corporations involved has grown from 1 to 12, and the commitment of schools and companies has been enlarged through the efforts of the MESTEP Planning Board.

PURPOSE

The purpose of the MESTEP partnership is to recruit, select, prepare, place, support, and retain recent college graduates with strong academic majors in math, English, or a science who are interested in starting their careers by teaching. To achieve this purpose, the school, university and corporate partners in MESTEP have designed, implemented, and assessed the effectiveness of new approaches to recruitment, selection, preparation, placement and retention of talented and diverse beginning teachers.

BACKGROUND AND ORIGINS

Begun in 1983, MESTEP was developed as a response to the shortage of highly qualified recent college graduates in math and science who choose to start their careers by teaching. Richard Clark and Klaus Schultz of the University of Massachusetts met with a group of Massachusetts schools superintendents, and continued the

conversation with representatives of Digital Equipment Corporation, the Mass High Tech Council, and the Boston Private Industry Council.

Organizational support for the MESTEP partnership is strong, continuing, and expanding. From the outset, both the Dean of the School of Education and the President of University system endorsed the work of the Planning Board. The Board is both a policy and working group, and consists of much the same nucleus of school, university, and corporate members today as then.

School participation is orchestrated through a nucleus of "founding partners," superintendents on the Planning Board, from Acton, Concord, Lawrence, and Framingham. These systems interview candidates and hire interns. The Acton schools have adapted their summer school to become a site where all MESTEP candidates student teach with mentor teachers before starting their school internships. Thirty-seven school districts have sponsored internships, at an average salary of $8,500, for the 123 candidates over six years. Half of the internships have been in urban schools.

The administrative and academic coordination of MESTEP is centered at the University of Massachusetts at Amherst/School of Education.

PROGRAM DESCRIPTION

The core of the MESTEP program is two full-time paid internships that allow students to teach half a year in a school setting and work in an educational environment in a company setting for the other half-year. Each component of the 15 month program of study is designed to encourage the students to work closely together in formal and informal roles and relationships, to build a sense of collegiality and support that is important for beginning teachers as they work to overcome the isolating tendencies of teaching.

In addition to the internships, the program immerses students in two intensive summers of coursework both before and after the academic year. The Acton-Boxborough Regional Summer School serves as the site for the collaborative MESTEP/Acton Clinical Site. MESTEP uniquely utilizes a single summer site for student teaching allowing students to plan and assess their student teaching in teams.

Minority recruitment is a major priority of MESTEP. During the last two years, MESTEP has met its goal of a minimum of 25% minority participation and worked to develop close ties with a national group of contacts to encourage minority candidates to consider MESTEP.

PROJECT RESULTS

In assessing results of the project, most importantly, recruitment goals set when the project began, have been met. The success of the first six years of the MESTEP partnership is evident in the accompanying support materials that document the 123 students who have been recruited, prepared, and placed in school teaching positions in Massachusetts and around the country. Ninety of the 123 are currently in education.

The evolution of the partnership structure of the program is perhaps a most important secondary outcome. Through the array of diverse and talented individuals who interact around recruitment, preparation, internships, and coursework each component of the teacher education program has been strengthened.

Further, MESTEP has demonstrated a viable model to provide excellent experienced teachers the opportunity to serve as colleagues with Professors of Education by fulfilling their roles as mentors, support teachers, supervisors, and instructors.

EVALUATION

Over the past three years with FIPSE support, MESTEP has been conducting a research project based on in-depth phenomenological interviews, with participants in and graduates of the program. Thirty-four of the 100 participants in MESTEP have been interviewed.

Early in the project, the MESTEP Research Team was created, composed of faculty and staff, to guide the research process and to discuss research findings.[1] The research effort is not primarily designed for evaluation. However, information gained through the interview transcripts has been important in reshaping the program's components and experiences. This is especially the case since all members of the research team are also administrators and/or instructors in MESTEP.

Another means of evaluation is through student feedback gathered from course evaluations and through written project evaluations at the end of the first summer and upon completion of the program.

Each grant sponsor through its approval process has evaluated both the merit and potential of MESTEP. Among the most important evaluations, to date, are those from the industry and school supervisors who work with MESTEP students and those from employers of MESTEP graduates.

SUMMARY AND CONCLUSIONS

The grant activity supported by FIPSE has enabled us to develop, regularize and computerize many parts of a complex management and communication system which will serve MESTEP well for years to come. The research and evaluation support has left us with an important database of transcripts, theme files, and profiles of beginning teachers which will be useful indefinitely.

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[1] The MESTEP research project was directed by Earl Seidman. The research team was composed of MESTEP faculty and staff and included: Richard J. Clark, Director, John Fischetti, Sharon Santilli, Mary Schatzkamer, Klaus Schultz, Earl Seidman, and Verne Thelen.

PROJECT OVERVIEW

Currently in its sixth year, the Math English Science Technology Education Project (MESTEP) is a fifteen month collaborative M.Ed./certification program of the University of Massachusetts, a network of public schools, and 12 Massachusetts corporations. MESTEP was developed in 1982 as a response to the shortage of highly qualified recent math and science majors who choose to enter teaching. This shortage leaves many school systems unable to fill vacancies with candidates who have a compelling background in math or science and maintains the trend toward aging the teaching population. Without a cadre of excellent new teachers in place, the impending retirement of a sizeable portion of the teaching force will leave few exceptionally qualified individuals in schools. English was added to the MESTEP certification areas in 1985.

The program design allows students the opportunity to center their Master's degree program and beginning teaching experiences around two paid internships that each take place during one semester of the academic year. In addition to the internships, the program immerses students in two intensive summers, the first of coursework and student teaching and the second of coursework. The summer segments take place both before and after the academic year. During the first summer, MESTEP candidates spend one month in Amherst working closely together in courses designed to explore and practice the work of a beginning teacher. Following that month, the program moves to Acton where their summer school

has been adapted to enable MESTEP students to student teach in the mornings and intensively plan and develop strategies with experienced teachers during the afternoon. One half of the group spends the Fall semester in a full-time paid teaching internship, assuming the responsibilities of a regular teacher. The other half of the group spends the Fall working full-time in an educational setting in a Massachusetts corporation. The company internships primarily involve students in training components of the educational services divisions.

MESTEP asks graduates to commit to teaching for at least three years following completion of the program. During that time, corporate partners attempt to find summer employment at the corporation in which the student completed his/her internship. Thus far about 40% of the graduates have chosen and received this summer employment option.

MESTEP students have an overall undergraduate grade point average of 3.3, and rank on average in the 80th percentile on the Graduate Record Exam. Over the past two years MESTEP, with the assistance of the school and industry partners has met a program goal for minority participation of at least 25%. For 1988-1989, the Massachusetts Board of Regents awarded the program a one-time grant for minority recruitment that will enable the partners to offer summer fellowships to eight students admitted to the next class.

The MESTEP partnership, in the first six years, has recruited, prepared, and placed 123 candidates in the following

subjects: math--47, English--11, chemistry--14, physics--17, biology--20, and general science--15. In addition, over the six year history of the program, the number of corporations involved has grown from 1 to 12, and the commitment of schools and companies has been enlarged through the efforts of the MESTEP Planning Board.

PURPOSE

The purpose of the MESTEP partnership is to recruit, select, prepare, place, support, and retain recent college graduates with strong academic majors in math, English, or a science who are interested in starting their careers by teaching. To achieve this purpose, the school, university and corporate partners in MESTEP have designed, implemented, and assessed the effectiveness of new approaches to recruitment, selection, preparation, placement and retention of talented and diverse beginning teachers. New approaches are reflected in part by the following unique features of MESTEP:

--the recruitment and selection process
--cohort group
--single site summer student teaching
--school and corporate dual internships
--equity and technology themes
--support for graduates
--employment of 2+ experienced teachers for each intern

Perhaps the most important, if perhaps obvious, repeating realization of the partners is that any serious approach to one component of the "problem" (i.e. recruiting talented young graduates into teaching) leads the problem solvers rapidly and

inevitably to a whole set of related components--the image and quality of teacher education; the condition of schools; earning power; career opportunities; public regard for teaching; state, union and federal policies, etc.). In the case of MESTEP, the existence of an active and diverse partnership has substantially increased our capacity to address multiple issues simultaneously and thereby enhanced overall effectiveness.

Two potential pitfalls are: 1) underestimating management requirements; and 2) moving too slowly while expecting too much too soon. Managing a university program in which major components are field-based and equally shared by school systems and by corporations, and managing a partnership such that all partners have active roles and a genuine sense of ownership requires a serious and substantial time investment. Universities are unaccustomed to budgeting for these realities.

The fastest way to dissipate energy and enthusiasm of potential partners is to engage in an extended planning process. Two intensive months, then action, is preferable to two years. Related to this, we have found that we learn and plan and modify by doing, more than by planning in the abstract. As long as people are prepared for mistakes in early stages, it is experience that guides effective planning and development.

Finally, each year gets better, especially where the same faculty, schools, corporations, mentors, etc., have the chance to do, discover, reflect, and refine. Our general description is more like than different from Year 1, but the program is

significantly better on all dimensions. Time and practice have been critical allies, and they need time to work before judgments are made.

BACKGROUND AND ORIGINS

Begun in 1982, MESTEP was developed as a response to the shortage of highly qualified recent college graduates in math and science who choose to start their careers by teaching. Richard Clark and Klaus Schultz of the University of Massachusetts met with Massachusetts school superintendents, including Robert Kessler (Acton-Boxborough), Irwin Blumer (Concord-Carlisle), and Eugene Thayer (Lawrence) and continued the conversation with representatives of Digital Equipment Corporation (Russ Johnson), the Mass High Tech Council (Howard Foley & Chris Anderson), and the Boston Private Industry Council (Jim Darr). B.J. Rudman of the Mass High Tech Council convened a meeting of selected corporate members of the Council, including DEC, which became the initial corporate partner and sponsor. From these discussions the MESTEP partnership was created. The individuals above established the MESTEP Planning Board during the 1982-83 planning year to work on all facets of developing the model and agreed to admit the first MESTEP class in June 1983.

Organizational support for the MESTEP partnership is strong, continuing, and expanding. From the outset, both the Dean of the School of Education and the President of University system endorsed the work of the Planning Board. The Board is both a policy and working group, and consists of much the same nucleus

of school, university, and corporate members today as then. In addition to time and intelligence, each member organization commits resources to, and solicits resources for partnership goals.

Since 1983, University of Massachusetts President David Knapp and the School of Education Dean have allocated an annual budget to support the partnership, given the Project Director release time to coordinate partnership efforts, and provided office space in Boston and Amherst for the Director and staff.

The Massachusetts High Technology Council and the Boston Private Industry Council have advocated for and introduced MESTEP to member companies. These activities led, initially, to the participation of DEC and the Bank of Boston, and now to the active participation of twelve corporations which are involved in recruitment, selection, sponsorship, and supervision of 24 semester-long corporate internships which generate more than $200,000 of student support annually, and of summer employment for MESTEP graduates who are teaching.

DEC has given personal computers to each student in Group I, and this year has donated $230,000 in equipment to support the program. DEC has also hosted receptions and ten interview days, sponsored recruitment trips to the Atlanta University consortium, and shared its minority recruitment contacts with MESTEP.

New England Telephone has provided room and board for interviewees, and course meeting space at their Marlboro Learning Center. Most companies have provided interns access to computers

and in-house courses and training sessions, and provided the Planning Boa.· and staff with technical assistance in recruitment, selection, refining corporate internships, and using technology in education.

School participation is orchestrated through a nucleus of "founding partners," superintendents on the Planning Board, from Acton, Concord, Lawrence, and Framingham. These systems interview candidates and hire interns. These superintendents host meetings of their colleagues to describe MESTEP, determine who is seeking math, physics, chemistry, biology, general science and English teachers, and advise the Project Director regarding who to invite to the spring interview sessions. The Acton schools have adapted their summer school to become a site where all MESTEP candidates student teach with mentor teachers before starting their school internships. Thirty-seven school districts have sponsored internships, at an average salary of $8,500, for the 123 candidates over six years. Half of the internships have been in urban schools.

The administrative and academic coordination of MESTEP is centered at the University of Massachusetts at Amherst/School of Education.

The Massachusetts High Technology Council and the Private Industry Council facilitate the industry commitment to MESTEP from Analog Devices, Bank of Boston, Barry Wright, Cullinet, Data General, Digital, General Motors (through the UMass Institute for Governmental Services), General Telephone &

Electric, Hewlett Packard, Houghton-Mifflin, IBM, Millipore, Museum of Science, New land Telephone, Prime Computer, and Spinnaker Software. Technical assistance is provided by the Massachusetts Field Center for Teaching and Learning. School and company participants each employ interns and pay their salaries directly. Grant funding for program development, recruitment, research, and/or administration has been provided by the Bay State Skills Corporation, the Fund for the Improvement of Postsecondary Education, and ESEA Title II administered by the Massachusetts Board of Regents.

Commitment to the leadership of the program has been provided by the private sector particularly through the Digital Equipment Corporation and Mass High Technology Council, by schools through the leadership of the superintendents of Acton, Lawrence, Concord, Wayland, and Lawrence. Representatives of these organizations participate in the steering committee of the program, the MESTEP Planning Board. Planning Board Task Groups are involved with the recruitment, development, graduate support, and placement components of the program.

PROGRAM DESCRIPTION

MESTEP's active school/industry/University partnership began in 1983. The ongoing program premise is that there is a present and future need to attract top academic college graduates to start their careers by teaching. Innovative aspects of the MESTEP partnership include:

--the recruitment and selection process
--cohort group
--single site summer student teaching
--school and corporate dual internships
--equity and technology themes
--support for graduates
--employment of 2+ experienced teachers for each intern

MESTEP's recruitment and selection process begins in the Fall with an intensive mailing and telephone networking to generate applications. It continues in the Spring with a two-stage University review of graduate applications followed by an intensive all-day interview with a selected group of about 35 of the 100 applicants. During that day, representatives of the schools and companies that intend to employ MESTEP interns each interview and give formal feedback on four or five candidates that they have had the opportunity to meet. Final admission to the program is based on the feedback of the interviewers. This allows each partner the opportunity to have a real role and stake in who is chosen to join MESTEP. Over each of the last three years MESTEP has reviewed about 1200 written and 300 telephone inquiries to the program and 100+ formal graduate applications.

Minority recruitment is a major priority of MESTEP. During the last two years, MESTEP has met its goal of a minimum of 25% minority participation and worked to develop close ties with a national group of contacts to encourage minority candidates to consider MESTEP. MESTEP was awarded a grant for the 1988-1989 year by the Massachusetts Board of Regents to enable summer minority fellowships for 8-10 students admitted through the regular admissions process.

The core of the MESTEP program is two full-time paid internships that allow students to teach one-half a school year and work in an educational environment in a company setting for the other half-year. In each position the cooperating personnel who serve as supervisors and support colleagues play significant roles as teacher educators, providing a supportive and positive environment for beginning teachers. MESTEP graduates leave the program having worked and been an active part of two worlds.

Each component of the 15 month program of study is designed to encourage the group of 22-24 students to work closely together in formal and informal roles and relationships. The cohort group aspect of the program builds a sense of collegiality and support that is important for beginning teachers as they work to overcome the isolating tendencies of teaching.

MESTEP's program design allows students the opportunity to center their Master's degree program and beginning teaching experiences around two paid internships that each take place during one semester of the academic year. In addition to the internships, the program immerses students in two intensive summers of coursework both before and after the academic year. During the first summer, MESTEP candidates spend one month in Amherst working closely together in courses designed to explore and practice the work of a beginning teacher. Following that month, the program moves to Acton where a collaborative summer school gives students a chance to student teach in the mornings and intensively plan and develop strategies with experienced

teachers during the afternoon. One half of the group spends the Fall semester in a full-time paid teaching internship, assuming the responsibilities of a regular teacher. The other half of the group spends the Fall working full-time in an educational setting in a Massachusetts corporation. The company internships primarily involve students in training components of the educational services divisions.

The Acton-Boxborough Regional Summer School serves as the site for the collaborative MESTEP/Acton Clinical Site. MESTEP uniquely utilizes a single summer site for student teaching allowing students to plan and assess their student teaching in teams. This structure facilitates real planning, consulting and thinking time.

Major themes of the required coursework and internships include the issues of social equity and the implications and applications of emerging technologies. Beginning teachers are asked to work in diverse and complex school settings with students. Challenging and reckoning with issues of race, class, and gender are crucial elements of serving students well. New technologies facilitated by the growth of computers allows students not only to gain useful skills, but to rethink teaching and classroom management strategies in light of the new tools and resources available to them.

As MESTEP enters its sixth year, with five graduated classes, issues related to supporting graduates and exploring ways to increase the likelihood that they may stay connected to

teaching have become increasingly important. During the summers of the first three years of teaching, MESTEP company partners attempt to employ graduates who worked with them during their internship. This employment increases a beginning teachers array of experiences and salary base. To date about 40% of the graduates have chosen to work in the summer. This year a selected group of alumni have chosen to establish a MESTEP graduate association to work together to explore formal academic and professional development and to maintain the close informal relationships they established during the program.

Administering a program that involves a network of schools, companies, the university, and students creates opportunities to overcome the stereotypical notion of the large uncaring bureaucracy. With the support of FIPSE, MESTEP has been able to establish administrative procedures that attempt to overcome the awkwardness inherent in a complex off-campus program and be responsive to the needs of all partners. This has involved computerizing and systematizing day-to-day functions of the office in order that more time can be spent serving students and prospective students as well as the partners.

PROJECT RESULTS

In assessing results of the project, most importantly, recruitment goals set when the project began, have been met. The success of the first six years of the MESTEP partnership is evident in the accompanying support materials that document the

123 students who have been recruited, prepared, and placed in school teaching positions in Massachusetts and around the country. Over 85 of the 123 are currently in education, a number that is far above the recent MISER (Massachusetts Institute for Social and Educational Research) study that indicates only 15% of newly certified teachers in Massachusetts teach in the state during the first five years after completion of their programs.

The evolution of the partnership structure of the program is perhaps a most important secondary outcome. Through the array of diverse and talented individuals who interact around recruitment, preparation, internships, and coursework each component of the teacher education program has been strengthened. Corporate partners have a vested interest in strong public schools that provide a well educated prospective employee base and a healthy community and economy in which to conduct business.

Further, MESTEP has demonstrated a viable model to provide excellent experienced teachers the opportunity to serve as colleagues with professors of Education by fulfilling their roles as mentors, support teachers, supervisors, and instructors. In the private sector, individuals who play important liaison roles with MESTEP have been able to utilize the talents of teachers in positions that they might not have otherwise had, thus increasing the respect and future potential of teachers. Too often teachers have assumed one <u>either</u> taught <u>or</u> worked in industry. MESTEP gives them the chance to stay a "partner" in both, without having to give up teaching to combine other interests.

At the University, faculty and administrators have been able to increase resources and opportunities for teacher education at a time when resources are scarce and when the need for creative ways to attract top candidates to teaching is critical. Schools and companies that participate have increased and support from the University has been substantially increased for at least the next three years.

Through the array of diverse and talented individuals who interact around recruitment, preparation, internships, and coursework unexpected results have become possible leading to program modification and a strengthening of the constituency base for public education in Massachusetts.

The "bottom line" of MESTEP, however, is that 123 extra-ordinary people have been recruited to teaching and have been given the opportunity to explore working in schools and the challenge to dream about their role in our ongoing process of improving how schools serve students.

DISSEMINATION

A primary means through which MESTEP project information and results have been disseminated has been through the recognition it has received. Over its six year history, MESTEP has received recognition for its work from a variety of sources. Over 70 articles about the program have appeared in newspapers and magazines. (A complete listing of all the citations appears in our six-year report in Appendix A.) Faculty, staff, school and corporate partners in the program have authored articles for

journals, and given presentations about the program and the research project at numerous professional conferences including:

American Association of Colleges of Teacher Education
American Educational Research Association
Association for Supervision and Curriculum Development
National Science Teachers Association
National Council of Teacher of Mathematics
Massachusetts Association of School Committees
National Association of Physics Teachers
Massachusetts Teachers Association

In addition, in the past two years MESTEP has been the recipient of two awards. In February 1987, MESTEP received the Award for Distinguished Achievement in Teacher Education from the American Association for Colleges of Teacher Education. In May 1988, MESTEP was one of six industry-education partnerships, selected from 100+ entrants, recognized as Exemplary by the Commonwealth of Massachusetts' Board of Education.

In October 1987, Governor Michael Dukakis spent a day visiting with MESTEP interns and MESTEP partners at Lawrence High School, one of the MESTEP internship sites, during a week-long emphasis on improving Massachusetts schools. Representatives of the program including the Project Director, MESTEP students, and school and industry participants met with the Governor to discuss MESTEP.

Over the past three years partners have responded to invitations to present the MESTEP model to the New Jersey Association of Colleges of Teacher Education and the New Jersey Board of Higher Education, College Relations Managers of Fortune 500 companies, Arizona's Institute for Educational Excellence, and

others. Arizona's "Project Partner," endorsed and supported by former Governor Babbit, is a direct replication of MESTEP.

EVALUATION

The MESTEP experiment is a unique model of an active partnership. How do we know that it is working? What evaluative methods have been used to ascertain the program's success? Over the past three years with FIPSE support, MESTEP has been conducting a research project based on in-depth phenomenological interviews, with participants in and graduates of the program. Thirty-four of the 123 participants in MESTEP have been interviewed.

A major premise that has guided our research effort is that in order to understand any social institution or organization, it is necessary to understand the experiences of the people who constitute it. Accordingly, the MESTEP Research Project is centered specifically on the experience of beginning teachers. Through phenomenological interviewing we are able to gain access to the experience of beginning teachers from an insider's perspective.

Early in the project, the MESTEP Research Team was created, composed of faculty and staff, to guide the research process and to discuss research findings.[2] The periodic meetings of the

[2] The MESTEP research project was directed by Earl Seidman. The research team was composed of MESTEP faculty and staff and included: Richard J. Clark, Director, John Fischetti, Sharon Santilli, Mary Schatzkamer, Klaus Schultz, Earl Seidman, and Verne Thelen.

research team have been central to our learning from the experiences of MESTEP students enrolled in the program.

The research team conducted three 90-minute interviews with each of the 34 participants in the research project. The interviewer did not use a list of specific predetermined questions during these interviews. Rather, the basic purpose of each of the interviews provided the structure within which it was possible for participants to reconstruct and reflect upon their experience. In the first interview, the researcher asked the participants to reconstruct the autobiographical context of their lives which led to their involvement in MESTEP. The second interview centered on the participant's current experience as a beginning teacher. In the third interview, participants were asked to reflect on the meaning of their experience in MESTEP and to talk about how they understood and made sense of their beginning years as teachers.

All interviews were tape recorded and later transcribed by a secretary. Once the transcripts were typed, the research team marked compelling passages from the interviews. The team then first established files on approximately 80 themes that emerged from reading participants' transcripts, and compelling passages were excerpted and organized in these files which are used as a data base for writing, presentations, and planning.

As interviews were transcribed and read, the research team met periodically to discuss their reading of the transcripts. In this process, the team selected several interviews which were

particularly rich in compelling material and illustrative of the complexities of beginning teaching to be developed into profiles. Building on the method of presentation employed in In the Words of the Faculty (Seidman, 1985), we have developed the notion of a profile as a narrative of the participant's experience in his or her own words. To date we have 13 profiles, available for use as informational and instructional material on what it is like to be a beginning teacher.

The research effort is not primarily designed for evaluation. However, information gained through the interview transcripts has been important in reshaping the program's components and experiences. This is especially the case since all members of the research team are also administrators and/or instructors in MESTEP.

Another means of evaluation is through student feedback gathered from course evaluations and through written project evaluations at the end of the first summer and upon completion of the program. Results of the process led to the re-ordering of the courses during the teaching semester, expanded administrative services, revamping of several courses and the support seminar, and provision of more pleasant living quarters at the University during the first summer's coursework.

Each grant sponsor through its approval process has evaluated both the merit and potential of MESTEP. Among the most important evaluations, to date, are those from the industry and school supervisors who work with MESTEP students and those from

employers of MESTEP graduates. Their feedback has shown that the work of our students is respected and that the affiliations made by students and those associated with the program have helped improve schools.

Plans for Continuation

We plan to continue and will be cautious about pressures to expand the size of the program.

SUMMARY AND CONCLUSIONS

The grant activity supported by FIPSE has enabled us to develop, regularize and computerize many parts of a complex management and communication system which will serve MESTEP well for years to come. The research and evaluation support has left us with an important database of transcripts, theme files, and profiles of beginning teachers which will be useful indefinitely. It has also provided us with a set of questions and areas for further inquiry and possible program development including:

-- how to avoid miseducation of teachers as training becomes more school based;

-- extending the scope of the teacher education program to include the first 3 years of teaching;

-- developing greater clarity and consciousness about the stages of development of excellent teachers;

-- expanding the definition of "teacher education faculty;"

-- recognizing and using the power of biographical experiences as teacher educator;

-- capitalizing on the proposition that teaching is the best possible initial career choice for talented graduates who seek high autonomy, decision-making authority, profoundly important work, and real challenges; and

-- encouraging greater variability in teacher education in a time of increased standardization.