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ABSTRACT

This study examined a group of Master of Arts in Teaching (MAT) programs to determine: (1) effectiveness in attracting academically able students; (2) the retention rate among MATs in teaching; and (3) what characteristics differentiate among the MATs' career choices. An assessment is given of the strengths and weaknesses of the MAT model. The MAT model appeared to be effective in attracting academically superior students. In regard to the retention in teaching and the factors that differentiated among career choices of MAT participants, the following topics are discussed: (1) who became a teacher; (2) background and training; (3) teaching experiences; (4) satisfaction with teaching?; (5) reasons for teaching; (6) reasons for leaving teaching; (7) reasons for not entering teaching; (8) other education careers. Findings indicated that the MAT model was successful in getting its graduates into teaching. A substantial number of MATs not currently teaching in the schools continue to play a role in education through such professions as adult education, administration, research, and private consulting. Some strengths and weaknesses of the MAT model are illustrated by examining information about the model's implementation and operation. Fifty endnotes provide documentation. Appendices which make up about half the document, consist of profiles of current MAT programs and 51 supporting data tables. (JD)

A Look at the MAT Model of Teacher Education and its Graduates: Lessons for Today

Final Report

Sponsored by:

The Ford Foundation

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EXECUTIVE SUMMARY

Recently, much attention has been focused on the quality and quantity of our nation's teachers. Some studies have shown that students entering teacher education programs are less able than those entering other fields; many are drawn from the bottom quarter of graduating high school and college students. Students intending to major in education, who may or may not end up in classrooms, had lower Scholastic Aptitude Test (SAT) scores than almost any other group of students.

Not only is education not attracting the "best and the brightest", but the nation appears to be facing a serious shortage of teachers that is likely to be exacerbated in the next few years as the 1980's "baby boomlet" reaches school age. Low prestige, low salaries, and classroom management and discipline problems are discouraging those who might have been inclined to teach in the past. Industry is attracting math and science graduates, and women and minorities have greater access to other employment because of progress made toward equal opportunity goals.

Reactions to this evidence have generated policy recommendations of more stringent requirements for undergraduate teacher training candidates, and a host of recommendations including more money and more status for teachers, different career lines and alternative teacher training programs. In June, 1985, the Holmes Group (a consortium of education deans from 28 prominent research universities) endorsed the idea of a five-year teacher education program leading to a master's degree. And earlier this year, a commission of the American Association of Colleges for Teacher Education (AACTE) made a similar recommendation. The crux of these recommendations is that in addition to courses in pedagogy, teachers should have at least the equivalent of an undergraduate degree in the subject they intend to teach.

Like the problem, the remedies being suggested are not entirely new. In the late 1950s, following the intense interest and concern about American education generated by Sputnik, and in keeping with its interests in improving education, the Ford Foundation instituted the Master of Arts in Teaching (MAT) program, which sought not only to attract different students into teaching, but also to revolutionize the manner in which they were trained. In brief, the MAT model sought to (1) attract bright liberal arts graduates; (2) prepare them for teaching by giving them graduate coursework both in their academic discipline and in professional education; and (3) provide them with teaching internships in participating school systems. Many of these programs ended with the oversupply of teachers in the 1970s but a number of them still exist. An examination of a group of these programs and the students they attracted, both from an historical and modern perspective, can help teacher educators and other policymakers develop and/or improve similar models of teacher

education. In addition, this study can inform education policy questions of teacher quality and supply currently being deliberated in Congress, and in states like New Jersey which are developing alternative routes into the classroom.

Purpose and Methods

The purpose of this study is to examine a group of Master of Arts in Teaching (MAT) programs from both an historical and current perspective to answer the following policy questions.

- Is the MAT model an effective means to attract academically able students to teacher education?
- What is the retention of MATs in teaching and what characteristics differentiate among the the MATs' career choices?
- What lessons can be learned from an assessment of the strengths and weaknesses of the MAT model to help teacher educators and other policymakers design or improve similar models of teacher education?

The study's data collection included a mail survey of 1968 and 1969 MAT graduates at nine institutions and the most recent graduates of modern MAT programs at four institutions. Archival and other information was collected to understand how and why the programs were implemented.

Major Findings

- The MAT programs attracted students of high academic ability to teacher education. The opportunity to obtain a master's degree and a teaching credential in a short period of time, while pursuing graduate academic work at prestigious institutions were the primary motivators.
- The MAT model was successful in terms of the proportion of its graduates who entered teaching and who are teaching today. Eighty-three percent of the MATs entered secondary or elementary teaching and one-third of those who entered teach today.
- The majority of the MATs have taught in suburban, public secondary schools in which the majority of the students are white, mid- to upper-middle class, and above the mean in academic achievement.
- The MATs who left teaching taught for an average of about five years. Thus, the model may also be a viable means to provide a stream of students who teach for a period of time and then move out of the classroom. Such a group of teachers provides "fresh

blood" to the profession, while holding down the costs of teacher salaries.

o The MATs left teaching for multiple reasons including personal circumstances and the availability of other career opportunities. Other reasons had to do with the structure of the teaching profession and the conditions of teaching. Salary appeared to be a necessary, but not sufficient, reason to stay in teaching.

o In addition to providing classroom teachers, the MAT model has made a substantial contribution to the field of education through its graduates who have pursued other careers in education. Of the MATs who are not currently teaching and are employed, nearly one-third hold other positions in education.

o Modern MAT students project careers in teaching that are very similar to the older MATs.

o The MAT programs involved academic departments in teacher education and also had effects on education departments within the IHEs, either by influencing traditional teacher education programs or replacing them.

o While the MAT students rated their programs highly, deficiencies were noted in students' preparation to handle individual student differences and discipline problems.

o From the students' viewpoint, the teaching internship was the most valuable component of the MAT model. The majority of students, however, expressed dissatisfaction with the supervision they received during their internships.

o A few of the original MAT programs still exist, but most were discontinued at some point after the termination of foundation funding. The end of the teacher shortage and difficulties in securing paid internships contributed to the demise of the programs.

Policy Implications and Recommendations

o Given the current climate of concern about education, the MAT model appears to be a viable one to increase the supply and quality of the nation's teachers. But, while the MATs were prepared to teach "mainstream students," modern efforts should recognize the changing composition of the nation's school population and tailor recruitment and training accordingly.

o The development of recruitment networks and the use of other means of communication should be employed to attract students who would not otherwise enter teacher education.

o The involvement of LEAs should be sought early in the program planning process and maintained. Such involvement is critical to the success of internship arrangements.

o Special care should be taken to involve traditional teacher education faculty and administration in efforts to develop and implement nontraditional models.

o The need for effective supervision of interns is essential.

o More attention should be focussed on providing teacher education students with the skills necessary to teach students with different backgrounds.

INTRODUCTION

Recently, much attention has been focused on the quality and quantity of our nation's teachers. Some studies have shown that students entering teacher education programs are less able than those entering other fields; many are drawn from the bottom quarter of graduating high school and college students[1]. Students intending to major in education, who may or may not end up in classrooms, had lower Scholastic Aptitude Test (SAT) scores than any other group of students, with the exception of those intending to major in ethnic studies or in trade and vocational education.[2]

Not only is education not attracting the "best and the brightest"[3], but the nation appears to be facing a serious shortage of teachers that is likely to be exacerbated in the next few years as the 1980's "baby boomlet" reaches school age[4]. Low prestige, low salaries, and classroom management and discipline problems are discouraging those who might have been inclined to teach in the past. Industry is attracting math and science graduates, and women and minorities have greater access to other employment because of progress made toward equal opportunity goals. While the size and nature of the teacher shortage is a matter of much debate, there is considerable evidence that a teacher shortage exists and is severe for mathematics and science teachers[5].

Reactions to this evidence have generated policy recommendations of more stringent requirements for undergraduate teacher training candidates, and a host of recommendations including more money and more status for teachers, different career lines and alternative teacher training programs[6]. In June, 1985, the Holmes Group (a consortium of education deans from 28 prominent research universities) endorsed the idea of a five-year teacher education program leading to a master's degree. And earlier this year, a commission of the American Association of Colleges for Teacher Education (AACTE) made a similar recommendation[7]. The crux of these recommendations is that in addition to courses in pedagogy, teachers should have at least the equivalent of an undergraduate degree in the subject they intend to teach.

Like the problem, the remedies being suggested are not entirely new. In the late 1950s, following the intense interest and concern about American education generated by Sputnik, and in keeping with its interests in improving education, the Ford Foundation instituted the Master of Arts in Teaching (MAT) program, which sought not only to attract different students into teaching, but also to revolutionize the manner in which they were trained. Many of these programs ended with the oversupply of teachers in the 1970s but a number of them still exist. An examination of a group of these programs and the students they attracted, both from an historical and modern perspective, can help teacher educators and other policymakers develop and/or

improve similar models of teacher education. In addition, this study can inform education policy questions of teacher quality and supply currently being deliberated in Congress, and in states like New Jersey which are developing alternative routes into the classroom.

Purpose of the Study

The purpose of this study is to provide information to teacher educators and other policymakers on a group of MAT programs and their students that can guide in formulating alternative teacher education routes and training. The study surveyed graduates of MAT programs at nine institutions of higher education (IHEs) from 1968 and 1969 and the most recent graduates of four modern MAT programs. In addition to data on the students, we present information on their teacher education programs.

These MAT programs and the students they attracted represent a unique effort in teacher education. The students attracted to these programs are bright and highly trained in their academic disciplines. They are of interest to policymakers because their entrance into teacher education serves to enrich the pool of potential secondary school teachers. This study will describe the characteristics of these nontraditional teacher education students and discuss their preparation for secondary school teaching. Finally, the study seeks to describe the careers of these students and discuss their career motivations.

We analyzed the data to answer the following research questions:

- What were the characteristics of the MAT programs and the students they attracted?
- What attracted the students to the programs?
- What were the characteristics of the MAT training and how do graduates evaluate it?
- What are the current occupations of the MAT graduates and what have been their occupations since graduation? What factors have influenced these career decisions?
- What characteristics distinguish among the MAT graduates' career choices in terms of entrance and retention in teaching?
- How do the MATs who are currently teaching compare with the national population of teachers?
- What are the career plans of modern MAT students?

In analyzing the data collected, this study focuses on the following policy questions:

o Is the MAT model an effective means to attract academically able students to teacher education?

o What is the retention of MATs in teaching and what characteristics differentiate among the MATs' career choices?

o What lessons can be learned from an assessment of the strengths and weaknesses of the MAT model to help teacher educators and other policymakers design or improve similar models of teacher education?

Procedures

Program Selection

The programs included in this study are not a representative sample of the many MAT programs that have operated or are currently operating. We chose programs according to the following criteria:

o That the old MAT programs were representative of the "breakthrough" idea. Eight of the nine MAT programs were original Ford Foundation MAT programs. The other program, University of Massachusetts, was not a Ford program, but was otherwise similar to the others. All programs had to have granted MAT degrees in 1968 and 1969.

o That the modern MAT programs have goals and philosophies that are similar to the older MAT programs.

o That the institutions were willing to participate in this study and maintained current names and addresses of the graduates, as well as information on the programs.

The programs included in the study are listed below along with the number of students for whom current addresses were available:

1968 and 1969 MAT Programs

Converse College	59
Duke University	90
Harvard University	227
Johns Hopkins University	102
Notre Dame University	54
Stanford University	272
University of Chicago	107

University of Massachusetts	35
Vanderbilt University	40
Total	986

Current MAT Programs

Brown University	32
Stanford University	63
University of Chicago	6
Vanderbilt University	6
Total	107

Survey and Response Rates

We conducted a mail survey in the Spring of 1985. Data were collected on student backgrounds, including education and experience; the MAT program; teaching experience and attitudes; and career motivations. The response rate for MAT program graduates from 1968 and 1969 was 81 percent. This response rate was computed by reducing the number of questionnaires mailed (986) by the number that were undeliverable (the address was not current) or were sent to people who did not receive an MAT degree, or prepared to become junior college teachers. Of the remaining 927 questionnaires, responses were received from 751 MAT graduates. No response was received from 177; 52 questionnaires were returned as undeliverable, several respondents indicated that they did not receive an MAT degree, and several respondents reported that prepared to become junior college teachers through the MAT program.

The response rates for each program are indicated below.

Converse College	69%
Duke University	83%
Harvard University	80%
Johns Hopkins University	81%
Notre Dame University	75%
Stanford University	83%
University of Chicago	85%
University of Massachusetts	82%
Vanderbilt University	84%

The response rate for the survey of modern MATs was 90 percent. The response rate for individual programs were 82 percent for Brown, 84 percent for Chicago, 96 percent for Stanford, and 84 percent for Vanderbilt.

82
84
96
84
346

107
90
96.30

Data Analysis

Program Information. The major source of information on the old MAT programs was the Ford Foundation Archives. Most of this material was in the form of annual reports made to the Foundation by the grant recipients. In addition, current staff at the IHEs included in the study provided some materials and, in a few cases, personal recollections of the programs. For the modern MAT programs, program staff provided brochures and/or other descriptions of the programs.

Student Information. We summarized the questionnaire data from MAT graduates who prepared to become secondary teachers. These data include background characteristics, attractions to the program, and preparation for teaching. Career choices and motivations were examined separately for those who entered secondary or elementary teaching, those who entered teaching and left, and those who never entered teaching. Bivariate analyses were performed to identify features that distinguished those who entered secondary or elementary teaching from those who did not, and to identify features that distinguished those currently teaching from those who left the classroom. An alpha of .05 was selected to determine significant differences.

No differences among programs were found in the proportion of graduates who entered teaching, but differences among programs were detected for the proportion of graduates in current teaching positions. Because of small sample sizes in all but two MAT programs, individual program analyses were not performed. Differences in the nature of students attending these programs were detected and may account in part for the differences observed.

Since the number of subjects in the survey of modern MAT students was considerably smaller than those from the earlier period, the comparisons that are made between modern MAT graduates and graduates of the older programs should be viewed within this limitation.

Finally, since almost all of the MAT teachers are teaching at the secondary level, comparisons to the national population of secondary school teachers are made wherever possible. This was accomplished through the National Education Association's permission to allow us to embed relevant NEA questions into our survey questionnaire. Data on the background characteristics, degrees held, teaching experience, and career motivations of the national population of teachers were drawn from the Status of the American Public School Teacher, 1980-81, National Education Association. Data on satisfaction with the conditions of teaching were drawn from Nationwide Teacher Opinion Poll, 1983, National Education Association. Here, comparisons were made with a national population of both elementary and secondary teachers.

The report is organized around the three policy questions that are the focus of the study. The data are summarized within the text of the report and supporting data tables are included in Appendix B.

THE MAT AS A MODEL FOR ATTRACTING SUPERIOR STUDENTS

Today, as in the late 1950s, the supply and quality of teachers are critical components of efforts to improve education. Does the MAT model provide an effective means to attract and train superior students?

Who Were the Students?

By many measures, the MAT students are in the upper ranges of academic quality, regardless of the comparison group. Among the original MAT programs, the mean scores of the Harvard MATs on the Miller Analogies Test and the Graduate Record Examinations were not only substantially higher than national means for education students, but were near the means for graduate and professional students in physical science[8]. Similarly, at Notre Dame, Duke, and Chicago, professors in academic departments stated that in most cases, MATs were equal, or even superior, to students in MA degree programs[9]. The data collected in this study substantiate the academic quality of the MATs. These students came from selective undergraduate schools, earned high grades, and received a substantial number of academic honors as undergraduates. Two-thirds of the older MATs were female and the majority were in their early twenties when they entered the program. Most were white and came from families in the upper ranges of socioeconomic status. Three-quarters of the MATs indicated that at least one of their parents held a professional, semi-professional or managerial position, or were self employed.

MAT candidates not only graduated from selective institutions, but also had impressive undergraduate records, both in terms of undergraduate grade point average (GPA) and academic honors received. Approximately 60 percent of the MATs had a GPA of B+ or better and more than 90 percent had GPAs of B or better. About half of the MATs received academic honors as undergraduates.

While the MAT model was designed to attract students who had not prepared to become teachers as undergraduates, about 15 percent of the older group of MATs, and a similar proportion of the current MATs, had teaching experience prior to entering the program. However, despite similar levels of prior experience, modern MAT students report far less prior training in education. Two-thirds of the 1968 and 1969 MATs who had prior teaching experience held teacher certification. Only one person in the modern group of MATs reported having prior certification, though no prior teaching experience.

Slight differences were observed in racial/ethnic composition and parent occupation of the modern MAT students and the older group. The racial/ethnic composition of current MATs is slightly more diverse. In addition, a larger proportion of modern MATs come from families in which at least one of the parents held a

professional, semi-professional, or managerial position, or were self-employed.

What Attractions Did the MAT Model Hold for These Superior Students?

While the MATs found most features of the MAT model attractive, the most important and frequently cited attraction was the opportunity to obtain a graduate degree and a teaching credential in a short period of time. The prestige of the institution in which the programs were offered was also highly attractive. A number of the respondents commented that they thought that receiving a degree from a prestigious institution would be valuable in assisting them to obtain a position. The opportunity to further knowledge of their academic discipline by studying with well-known scholars was also a highly rated feature of the programs The MATs were eager to be stimulated intellectually both by their teachers and their peers. Though they were practical in wanting a program that could be completed in a short period of time, they were also attracted to a program that would give them strong preparation in their academic discipline and in the skills of teaching, all within a stimulating environment.

Financial incentives--the paid internship and the availability of tuition assistance--were important attractions to the older group of MATs, but were not as frequently mentioned by the modern MATs. Modern MATs, at least in the programs discussed here, report fewer paid internships and less financial assistance.

Summary

The MAT model and the attractions that it holds for students who do not prepare for teaching as undergraduates appear to be effective in attracting academically superior students. The opportunity to obtain teacher certification along with a master's degree in a short period of time and the opportunity to pursue further graduate work in the academic discipline at a prestigious institution were the primary features that attracted these able students. What remains to be seen is whether these MAT graduates enter teaching, and if they do, how long they stay. The next section of this report examines the MATs' retention in teaching and discusses the factors that appear to differentiate among the MATs' career choices.

RETENTION IN TEACHING AND THE FACTORS THAT DIFFERENTIATED AMONG CAREER CHOICES

Of the 715 MATs from the late 1960s who prepared to teach secondary school, 83 percent entered elementary or secondary school teaching following their MAT program. (Hereafter, when we refer to teaching we are referring to secondary or elementary school teaching unless otherwise noted.) Approximately one-third of these entrants to teaching currently hold a teaching position. Two-thirds of the entrants taught for a period of time and then left teaching. The mean number of years that the current teachers have taught is 13.4 years (S.D. = 4.6). The former teachers taught for an average of five years before leaving teaching (S.D. = 3.7). In addition to their contributions to the nation's classrooms, a large proportion of the MATs who are not currently teaching have contributed to other areas of education throughout their careers.

Interestingly, when the career plans of the modern group of MATs were examined similar patterns emerged. Eighty-eight percent of this group indicated that they plan to enter teaching following completion of their program. Of those who plan to enter, one-third indicated that they plan to make teaching their career.

The research literature on retention in teaching is limited. Existing studies are based on small, local samples that are frequently limited either to teachers who remain in the field or do not enter teaching in the first year after obtaining an education degree[10]. Based on these limited data, the behavior of our MATs compares favorably in terms of the proportion of teacher education graduates who enter and remain in teaching[11]. This section of the report examines the retention and attrition among a group of present and former teachers who graduated from selected MAT programs during the late 1960s. In addition it provides information on why people leave teaching and describes their alternative career choices. Data collected in this study also provide an opportunity to examine the career choices and motivations of MATs who never entered teaching. Finally, comparisons are drawn between the older group of MATs and the modern group on reasons to enter teaching.

Who Became a Teacher?

The decision to enter teaching, to remain, or to leave can be examined in light of a variety of contexts, including background characteristics, training, work experiences, career satisfaction, and career motivations. These contexts are reviewed to determine which aspects, if any, differentiate among three groups of older MATs--current teachers, former teachers, and those who never entered teaching. Overall, more similarities than differences were found among their background characteristics, training, and post-MAT teaching positions. But we found some factors that

appear to differentiate among the MATs' career choices. We present these differences below.

While the focus of this discussion is on teaching, we describe the MATs' career experiences in other positions in education to more completely represent the contribution of the MAT model to the field of education. In addition, to determine whether the MATs are different from traditionally trained teachers in the characteristics of their teaching assignments and their satisfaction with teaching, we present comparative data on the MATs and the national population of teachers, noting differences when comparable data are available.

Background and Training

Entrants and Nonentrants. Differences in background characteristics and training were found between those who entered teaching and those who did not.

- While the majority of both entrants and nonentrants graduated from very selective undergraduate schools, a greater proportion of those who entered teaching came from less selective schools.

- Relative to other majors, those who prepared to teach science were more likely to enter teaching; those who prepared to teach English were less likely to enter.

The other differentiating features related to the MAT programs.

- For the most part, entrants and nonentrants were attracted to the MAT program by similar reasons. However, those who received financial assistance were more likely to enter teaching.

- While the MAT program was well regarded by most of the MATs, those who entered teaching gave the program higher grades.

- More entrants reported receiving assistance from their cooperating teachers especially in the use of specific methods and materials during their teaching internships.

- While many MATs expressed dissatisfaction with the supervision they received from other district staff, entrants were less negative than nonentrants.

- More entrants reported sizeable gains in knowledge of their academic discipline.

- Entrants were less satisfied with their preparation to individualize instruction.

Current Teachers and Former Teachers. Differences between these two groups were found in background characteristics and aspects of their MAT training[12]. While the MAT model was aimed at students who did not prepare to become teachers as undergraduates, we found that the programs admitted some students who were certified and/or experienced teachers. In fact, those MATs who were fully certified and experienced teachers prior to entering the MAT program were more likely to remain in teaching. We also found differences between men and women in their teaching careers. Men have increased their representation among current teachers. Although women continue to outnumber men in current teaching positions by approximately 12 percent, men now hold a greater proportion of teaching positions relative to the original sample. While men had constituted only one-third of the original group of entrants to teaching, they now hold 43 percent of the current teaching positions. Men who are currently teaching also have longer and more continuous teaching careers. On average, men have taught almost 15 years, compared to twelve and one-half years for women. Men have been in their present school for longer periods of time. Fewer men have taken breaks from teaching, and for those that have, their absence from teaching has been shorter. Finally, in comparison to former teachers, MAT respondents who teach today tend to be slightly older and tend to have graduated from somewhat less selective undergraduate schools.

Compared to the national population of teachers, more MAT teachers come from families where one of the parents held a professional or semi-professional position. In addition, more MATs, who by definition have at least a master's degree, hold advanced degrees than the national population of teachers.

Current and former teachers differed in the characteristics of their internships and in their evaluation of the programs. While over half of all entrants into teaching served internships in suburban schools, a greater proportion of current teachers interned in suburban schools compared to former teachers. Conversely, fewer current teachers interned in urban areas. As was found between entrants and nonentrants, former teachers were less satisfied with certain aspects of the supervision received during the internship. Approximately three-quarters of those who entered teaching reported that they had a cooperating teacher. For the most part, both current and former teachers who received this form of supervision and support indicated regard for their cooperating teachers. However, among those who were dissatisfied, more former teachers indicated that their cooperating teachers were not helpful. In addition, former teachers were less satisfied with the assistance received from other district personnel. A greater proportion of current teachers reported that they were less satisfied with their preparation to individualize instruction and assess student progress.

Teaching Experiences

Overall, there are many similarities in the nature of the longest teaching positions that current and former MAT teachers have held. In general, both groups have spent their teaching careers in public secondary schools. Half have taught in suburban communities; over one-quarter have taught in urban communities; and the remainder have taught in small towns and rural communities. Their students have been predominantly white, from families of mid- to upper-socioeconomic status, and above the mean in academic ability. A greater proportion of current MAT teachers have received awards for their teaching, have taught honors classes, and students in the first two quartiles of academic ability than former teachers.

In comparing the schools in which the MATs have taught the longest with the schools in which the national population of teachers are currently teaching, some differences were found. More MATs have been employed in suburban communities and have taught students in the upper ranges of socioeconomic status. While similar proportions of both groups have taught in urban communities, fewer MATs have taught in small towns or rural areas. Finally, MAT have taken more breaks from teaching than the national sample of teachers.

Satisfaction with Teaching

In general, both current and former teachers exhibited similar patterns of satisfaction with the conditions of teaching, although current teachers were somewhat more positive in their ratings. Both groups appeared most satisfied with flexibility in deciding how to teach, fulfillment from teaching, and the support they received from other teachers. Both groups were least satisfied with their salaries, nonteaching functions and the image of teachers portrayed in the media. The largest differences between current and former MAT teachers were found for satisfaction with support from the media, fringe benefits, inservice training, the behavior of students, and personal fulfillment from teaching. Current teachers were more satisfied with all of these aspects, with the exception of support from the media. Here, former teachers indicated a higher level of satisfaction than did current teachers.

Overall, a similar pattern of satisfaction with the conditions of teaching was observed between the MATs currently teaching and the national sample of teachers. However, MATs were more satisfied with the behavior of students in their classes, fringe benefits, and parental support. MATs also expressed greater satisfaction with their flexibility in deciding how to teach. These differences may relate to where and whom the MAT teachers teach.

The fact that the MATs who are currently teaching are generally positive about their work is bolstered by the finding that more than half of them indicated that they certainly or probably would become a teacher again while only a quarter indicated that they probably or certainly would not. Men were more positive about their decision to become a teacher than women and the MATs were more positive about their career choice than the national sample of teachers.

Reasons for Teaching

The same motivations for entering teaching characterized both current and former teachers. An interest in the subject matter field, the value of education to society, and a desire to work with young people were the primary reasons given for entering teaching. For current teachers, their original reasons for teaching continue to motivate them today. While today's MAT students expressed similar motivations, differences in their rankings were evident. The modern MATs place more emphasis on the value of education to society and an interest in working with young people, and somewhat less emphasis on an interest in the subject matter.

Agreement between the MATs and the national sample of teachers was found for the three main reasons they became teachers, however the national sample was more likely to cite the desire to work with young people and MATs were more likely to cite the value of education to society.

Reasons for Leaving Teaching

The MATs left teaching for multiple reasons, many of them related. While personal circumstances and the availability of other career opportunities were mentioned by over half of the former teachers, reasons related to dissatisfaction with teaching may be understated. The proportions of former teachers who gave multiple responses or who chose to embellish their responses indicated that the conditions of teaching (salary, conditions within the schools, and the structure of the profession) played a substantial part in their decisions. When asked what might have made them stay in teaching, many of the former teachers indicated higher salary, more professional opportunities, support from school administrators, more reasonable workloads, and recognition for outstanding performance.

Men and women left teaching for different reasons. Women were more likely than men to leave teaching because of personal circumstances (40 percent vs. three percent). Men were more likely to leave because of salary (12 percent vs. three percent) and to pursue another career (47 percent vs. 18 percent).

Former teachers were asked whether they would ever return to teaching. Fifty-nine percent responded affirmatively, although most qualified the response in some way. In addition, women were more likely to respond positively.

Reasons For Not Entering Teaching

Only 17 percent of the MATs did not enter teaching, and about one-third of this group might have done so under different circumstances. Fifteen percent said that they could not find a teaching job and one-fifth did not enter teaching because they did not enjoy their internship. The desire to pursue another career was cited as the major reason by 21 percent of the MATs who did not enter teaching. Fifteen percent of these graduates felt that they would have more opportunities for advancement and financial rewards in other jobs. Smaller proportions went on to pursue further graduate or professional training, needed to stay home and care for their family, or went into the military. More males than females chose opportunities for advancement and financial rewards in other jobs (32 percent vs. eight percent), and going on for further graduate or professional training (11 percent vs. four percent), but more females indicated they could not find teaching jobs (19 percent vs. eight percent) and did not enjoy teaching during their internships (25 percents vs. 11 percent).

This group of MATs was also asked if they would ever consider teaching in the future. While about half indicated that they would, most qualified this response in some way, particularly having to do with the structure of the teaching profession, conditions within the schools, and changes in personal circumstances.

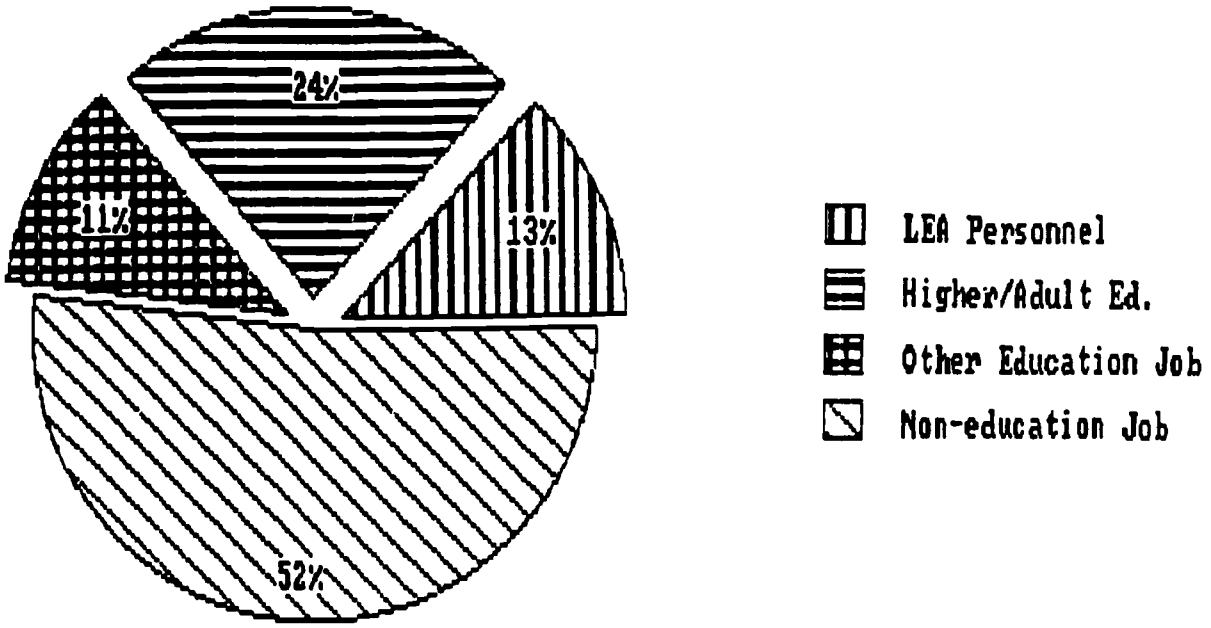
Other Education Careers

In addition to supplying teachers, the MAT programs were also successful in getting people into other careers in education. Many of the former teachers and those who never entered teaching are currently employed, or have been employed, in school or school district administration, higher education, or other positions in education such as research, education publishing, SEA administration, interest group representation, private consulting, etc.

Former Teachers. Twenty-one percent of the former teachers are not currently employed (29 percent of the women vs. two percent of the men). Of those who are employed, almost half are still working in the field of education. Figure 1 summarizes the positions of former teachers who are currently employed. The greatest proportion of these, one-quarter, are employed in higher education, mostly within departments of arts and sciences. Only

Figure 1

Current Job Categories of Former MAT Teachers Who Are Employed



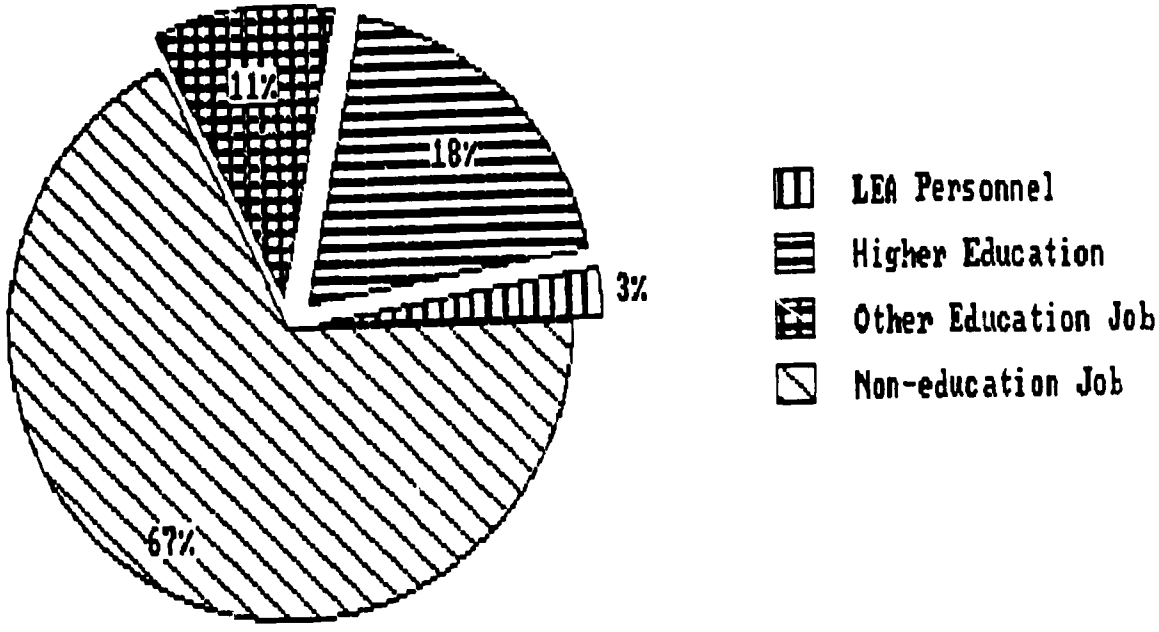
two percent are working within schools of education. The next largest segment are currently working in non-instructional positions within schools or school districts, primarily as administrators (13 percent). Another 11 percent of the former teachers are working in other positions in education. More men than women currently hold a position in teacher education or administration, or an administrative position in schools or school districts.

In addition to holding current positions in education, substantial proportions of these former teachers have held education positions since completing the MAT degree. Nearly half have held a position in higher or adult education; nearly a quarter have held administrative or other non-instructional positions in school or school districts; and about one-fifth have held other positions in education. As found for current positions, more men than women have held positions in teacher education and administrative positions in schools.

MATs Who Never Entered Teaching. Eighty-two percent of the MATs who never entered teaching are currently employed. Of those who are unemployed, all but one are women. Figure 2 summarizes the current positions of these MATs who are currently employed.

Figure 2

Current Job Categories of MATs Who Never Entered Teaching and Are Currently Employed



While these MATs never entered teaching, one-third of them who are currently employed are working in education fields. They are represented most heavily in higher education and in other positions in education. Over the course of their professional careers, one-third of these MATs have held a position in higher education (mostly within departments of arts and sciences) or have been employed in other education positions. Smaller proportions have held positions in adult education and school administration.

Summary

The MAT model was successful in getting its graduates into teaching. In addition, the limited data available on teacher retention indicates that the retention of MAT graduates is at least comparable to that of traditionally trained teachers. While more similarities were found among the MATs, some differences that relate to retention were noted. The MATs who entered teaching graduated from less selective undergraduate schools than their MAT cohort who did not enter teaching and expressed greater satisfaction with their MAT training. A greater proportion of

current teachers than former teachers had prior certification and teaching experience, came from less selective undergraduate schools, were slightly older, and were male. A larger proportion of current teachers received awards for their teaching, taught more academically able students, and expressed greater satisfaction with the conditions of teaching.

A substantial number of MATs who are not currently teaching continue to play a role in education through such professions as higher and adult education teaching or administration, school or school district administration, research, education publishing, education interest group representation, state education agency administration, and private consulting.

Given the success of the MAT model in helping to increase the quality and supply of teachers, we now turn to a discussion of the model to identify successful elements of the programs and to note features of the programs that might be improved. This information can supply teacher educators and other policymakers with the information necessary to develop and/or improve similar models of teacher education.

THE IMPLEMENTATION OF THE MAT MODEL AND ITS IMPLICATIONS FOR THE DESIGN OF SIMILAR MODELS

The MAT programs included in this study were successful in attracting students of high academic quality who entered teaching in substantial numbers. Approximately 15 years later, one-third of those who entered the profession hold a teaching job and many are employed in other positions in education. Some of the differences in the MAT training, described in the previous section of this report, appeared to have an influence on whether the MATs entered teaching and whether they stayed. This section of the report discusses the features of the MAT model, describes the MAT students' assessment of their programs, and reviews archival records and other published research about the implementation and operation of the programs. Its purpose is to describe the strengths and weaknesses of the model to help teacher educators and other policymakers develop or improve similar models of teacher education.

The MAT Concept

On April 1, 1959 the Ford Foundation announced grants totaling more than $9 million for what it termed a "breakthrough in teacher education." This initial set of grants (Ford's investment in the Breakthrough programs would total $29 million) was the first phase of a concerted effort to support improved training for teachers. As Henry T. Heald, president of the Foundation, remarked:

> "This effort toward a breakthrough reflects, and seeks to advance, growing trends to overcome weaknesses in teacher education. Even if American schools were not faced with a shortage of teachers, they would need improvement in the quality of teachers and teaching. Many officials, citizens, educators, and teachers recognize these weaknesses. They include the relatively poor quality of instruction for future teachers in many places, the neglect of subject matter in favor of undue concentration on teaching methods, the relative lack of attention to the importance of practice in actual school systems in developing the art of teaching, and barriers presented by state teacher certification requirements to improved educational programs."

Mr. Heald cited four trends that the Foundation grants would address: (1) extension of general and liberal education for future teachers; (2) establishment of a direct relation between public school systems and teacher training colleges, comparable in many respects to the relations between medical schools and hospitals; (3) development and application of new teaching and teacher training techniques, including internships, teaching aides and teams, and such technological aids as television, film,

and tape recording, and (4) improved long range financing of teacher education, including payment of teacher trainees by school systems before certification.[13]

Forty-three colleges and universities representing variety in size, sources of control, staff and students, traditions, and geographic location conducted Breakthrough Programs. The major focus, however, was on prestigious institutions concentrated largely east of the Mississippi River, and centered in the area north of the Mason-Dixon line. The foundation selected these elite institutions as the instigators of needed change in teacher education because of their status in American education and because there would be considerable "rub-off" from their programs on those of the less influential institutions. Further, it was assumed that these institutions prepared higher quality graduate students who in turn could influence other institutions as they joined their teaching staffs. Among the 43 institutions, a variety of program types were developed. The majority of the programs were Master of Arts in Teaching (MAT) programs and the majority of those programs focused on the preparation of secondary teachers. Other institutions developed five-year programs (combining both academic and professional subjects throughout the undergraduate and graduate period) and fifth-year programs (the graduate year providing for professional courses, thus freeing the undergraduate years for concentration in the liberal arts). Finally, a few Breakthrough proposals were funded for undergraduate programs.[14]

Implementation of the Model

The Model Curriculum

As might be expected, no two MAT programs were designed the same way. The philosophies of the institutions as well as the requirements of state education agencies and other state licensing authorities influenced the design and content of the programs. Stone (1968) describes the "typical" MAT program as follows:

> The graduate student arrives at the university in June. The first week of the summer, he enrolls in 6 to 8 units of education courses, at the same time assisting in teaching high school classes on campus or at a public school. During the second six weeks of the summer session he takes regular academic courses. Then the MAT candidates are divided, half beginning full-time teaching internships at nearby schools and the other half continuing on campus as full-time graduate students. At the end of the fall semester the two groups reverse their activities. By the following June, candidates are eligible for the

Master of Arts in Teaching degree and have qualified for their teaching credentials[15].

The most common variation to this typical plan sees the candidate simultaneously involved in graduate work on campus and in a teaching responsibility (of varying duration) in a public school during the academic year.

Duke's plan for its Cooperative Program in Teacher Education is illustrative of a program with a full-year internship. Students enter the program in June and spend 12 semester hours in a double summer session. They teach for a year in a cooperating school system and commute one evening each week for one course each semester. Six hours are thus earned in the two courses and six in their supervised teaching. Twelve hours carried in a double summer session following their internship year complete the program. Successful candidates receive the MAT degree, state certification as teachers, and come out of the program with one year of teaching experience. They have accomplished all of this in 15 months with the benefits of reduced tuition and a salary as a teacher as well[16]. Duke's program required between 12 and 18 hours in academic courses and between 18 and 24 hours in education courses.

The features of the modern MAT programs included in this study are similar to the original programs, except for the internship. All of the modern programs require student teaching, which appears similar to traditional student teaching, and is only sometimes paid. This student teaching is usually part-time and differs in duration. In addition, three of the modern programs provide classroom experience and/or observation prior to student teaching. The programs can usually be completed in a year, usually involving a summer of study and a full academic year. These programs provide the necessary education courses and experience to satisfy state certification requirements and also provide regular graduate academic work. Appendix A includes profiles of each of the modern MAT programs.

The remainder of this section examines the features of the MAT model and the institutional contexts in which it operated. The MATs' evaluation of their programs is also discussed. Finally, factors that impinged on the continuation of the programs are described.

Recruitment

The recruitment of superior students was a major objective of the MAT programs. Harvard's "twenty-nine college cooperative plan" (which was expanded in later years) was a result of its Ford grant. The university joined with 29 other northeastern liberal arts colleges in this plan in which faculty representatives recruited and screened potential candidates[17].

Other programs were active in recruiting superior students as well. Duke's president wrote letters to the presidents of some 30 colleges in the Southeast which did not offer graduate degrees in education, inviting them to make the program known to their students. In the following months, 23 colleges responded positively and identified a faculty representative with whom the MAT program director would communicate[18]. Similarly, at Stanford, the MAT program's senior staff was highly mobile and made a consistent effort to combine recruiting and interviewing students with other professional activities across the country. Field representatives, primarily former MAT program staff members, also served as interviewers to supplement the senior staff[19].

At Converse, where the program's focus was local, area school administrators were expected to publicize the program through newspaper releases, the local PTA, radio announcements, and local service organizations. The college supplemented this publicity through local media, circulation of a descriptive brochure, and the visitation by the president of the college to local communities[20]. Johns Hopkins, in an effort to solve a persistent recruitment problem--attracting math and science students-- sent an MAT poster to science and math chairmen in more than 200 colleges[21].

Even the academic departments became involved in recruitment. At Chicago, most of the academic departments volunteered to send representatives on visitations to other colleges to explain the program and talk to students who might by interested. At least one academic department allocated some of its own scholarship funds for the purpose of attracting students to the program[22].

Institutional Relationships

LEAs. Working relationships with LEAs were fundamental to the MAT model since the the success of the teaching internships were significantly dependent upon the LEAs' on-going support and supervision of the interns. The quality of these relationships appeared to depend on the extent to which the LEAs were involved in the planning of the MAT model. While such involvement did not always occur, several of the MAT institutions studied developed and maintained cooperative arrangements. At Converse, during the planning phase of the MAT, it was recognized that the success of the plan was dependent on the support it received from secondary administrators in the field. Area school personnel were brought in for discussions from time to time, and in 1959 a description of the plan was submitted to each secondary school principal and superintendent within a 50 mile radius of the college[23]. At Duke, the superintendents from the eight cooperating school systems met informally with the program's advisory committee about twice each year to serve as a general advisory committee for the MAT program[24]. And at Johns Hopkins, a conference on

teaching was held each spring for public school personnel involved in the internship program as a way of thanking them for their participation[25].

Stanford's plans for the program included strengthening school-university ties by developing a training program that would at the same time assist the separate school districts with their inservice responsibilities for the training of district supervisors for the MAT program[26]. In addition, the close association between the schools and the university was seen as useful in bridging the gap between theory and practice. In return for their investment, the schools received highly competent beginning teachers, excellently trained supervisors, and the opportunity to participate with the university in significant educational research[27].

While the programs described above are illustrative of the value of the arrangements that were formed with LEAs, effective relationships were not always achieved. For the programs that did not cultivate these relationships, there were adverse effects on the quality of the internships. These are discussed in a subsequent section.

Effects on Teacher Education. In the institutions we studied, the MAT programs appeared to have some direct effects on teacher education. At Vanderbilt, which never had a department of education (education courses were taken at Peabody), the Ford grant allowed for the establishment of an Office of Teacher Education. The experience of the university with the MAT program resulted in a firm decision by Vanderbilt's Chancellor that teacher education was there to stay and that the MAT program would be supported by the university in the future. Early problems in mustering support for the program gave way to enthusiasm generated by the quality of the students[28].

In those institutions that had a teacher education program before the Ford grant, there were mixed effects. At Chicago and Duke, which both had traditional undergraduate teacher education programs, the MAT program appeared to have little or no effect on the regular teacher education program[29,30]. At Notre Dame and Stanford, the MAT program eventually replaced the former teacher education program[31] and at Johns Hopkins, where the department of education was devoted primarily to graduate work, the MAT became the major teacher preparation program at the university[32]. The concurrent existence of a conventional program at Stanford throughout the five years of the Ford grant made it possible to compare student teaching and internship experiences. After four years the School of Education decided that the internship program was superior and that the university should limit teacher education to the preparation of secondary school teachers in an internship program, focused on the intern's undergraduate subject matter major. The preparation of elementary teachers was dropped[33].

At Converse, the MAT program helped to initiate the first graduate academic programs and also had effects on the regular undergraduate teacher education program[34]. A number of changes were made in the secondary undergraduate professional sequence as a result of the college's experience with the MAT. While the academic faculty were initially reluctant to free students for the significant period of time required to do their internship, they developed a new appreciation for the importance of good teacher education and for the necessity of allowing students a large block of time for clinical experience. In addition, the seminar approach to professional education in the MAT curriculum rubbed off on instructors of courses in the regular teacher education program[35].

Institutional Cooperation. Among the purposes of the Breakthrough Programs were the involvement of arts and sciences faculty in the education of teachers and the closing of the chasm that has existed between academic and education departments in colleges and universities. In general it appears that academic departments in particular showed some degree of interest in teacher education, probably stimulated by the quality of the MAT students. According to annual reports to Ford, the MAT program at Chicago was widely known among the university faculty, and over the years there was a noticeable increase in interest and commitment to the program on the part of the academic departments. There was even voluntary revision of the academic programs in the direction of making them better suited to the needs of secondary teaching[36]. At Converse, the director of the program reported that academic professors became more interested in the school's programs and the knowledge that they are thus involved has influenced the intellectual community of the college. In addition, faculty interest in teaching per se has been rekindled as they now have more professors of liberal arts departments visiting public school classrooms than ever before in the history of the university[37]. It appears that resistance to the MAT program was most visible within the education departments, where traditional undergraduate teacher education programs existed.

Consultants who evaluated the programs often noted problems having to do with the institutional support that the programs received. Excerpts from two such reports illustrate the range of support and cooperation that the programs enjoyed. These excerpts are also useful in illustrating the institutional contexts in which the programs operated.

> The program is administered by a Graduate Council whose members represent all major teaching fields of the College of Arts and Sciences, the president of the college, the academic deans, the librarian, the director of admissions, and the director of teacher education. The MAT director serves as chairman of the council. To carry out such legislation and policies as formulated, the

Graduate Council is assisted by a Graduate Admissions Committee which screens applicants and recommends them to respective departments for approval or disapproval. In addition, an MAT Advisory Committee composed of public school superintendents, principals, teachers, state department personnel, and lay representatives, provides an excellent organization for communication, cooperative planning, and college-public school relations. The program represents a most commendable relationship between the various departments of the arts and sciences and the department of teacher education[38].

At another university the Ford grant allowed the creation of a Graduate School of Education, composed of a small administrative group to enlist the collaboration in teacher education and curriculum study, other relevant divisions and departments in the college. A Department of Education continued as a graduate department in the Division of Social Sciences dedicated to the study of education and the preparation of those who will do research and teaching in higher institutions[39]. There was also a small undergraduate teacher education program that resided in the Division of Social Sciences in the College of Liberal Arts[40]. The consultants who evaluated this program described a much different scenario than was described above.

For a small university...[it] is a mixed up affair so far as teacher education is concerned. In the Division of Social Science in the College of Liberal Arts, there is an undergraduate Department of Education which operates a traditional undergraduate four year program for prospective elementary and secondary school teachers...In a School of Education, which is part of the Graduate Division of the University, there resides the MAT program. As a matter of fact, the Graduate School of Education seems to have come into being because of and in order to provide a home for the MAT program. How these several teacher education programs with their separate staffs and their separate relations with academic departments and with local schools live together, and more importantly, why they do is a moot question.

As near as I could tell from some pretty frank discussions about this matter, the answer is that no one wants to "rock the boat", at the moment. The general attitude of other-than-teacher education personnel, i.e. the group made up of the associate and full professors (and status members) of the Department of Education is that they could care less about teacher education as such in any form. They are interested only in themselves, in their own research, and its theoretical contribution to the "theoretical" components of education...Within this structure of disdain toward the training of teachers,

the MAT Program somehow flourishes and grows, thanks to [its director], an extremely able group of students, and several academic departments who find in the MATs the ablest graduate students at the University[41].

Internship

In all of the MAT programs some type of teaching internship was required. MAT students indicated that the internship experience was the most valuable component of the MAT program and frequently commented that their internship was where they learned to teach. The internship varied from a full year of full-time paid regular teaching under contract to the more traditional semester of part-time student teaching. In the programs we studied, most were either one or two semester paid internships. In addition, some of the programs provided for some type of pre-internship teaching experience. This was often accomplished through some kind of teaching responsibility in a summer school or some other type of laboratory or clinical experience. These pre-internship experiences were mentioned by some of the MATs as an important part of their program. They provided an opportunity to practice teaching skills in a laboratory environment and resulted in important feedback. The internship seminar, a feature of several of the MAT programs, received mixed reviews from the MATs. While almost half of the older group valued this experience, the modern MATs appeared less satisfied. Almost one-quarter of both groups expressed dissatisfaction with this experience. This seminar provides the practicing teachers with an opportunity to discuss their progress with MAT faculty and with other interns.

Characteristics of the Internship. The majority of the internships for the 1968 and 1969 MATs were in large, public, secondary schools with mostly white students. One-third of the MATs, however, served their internships in urban schools, and almost one-fifth served in schools with predominantly minority populations. A larger proportion of the modern MATs served their internships in large senior suburban high schools with more racially mixed student bodies.

Nearly all of the older group of MATs reported that they had complete responsibility for classroom teaching. While the MATs found this experience extremely valuable in preparing them to teach, many were dissatisfied with the supervision that they received during the internship. Almost one-quarter of the MATs reported that they did not have a cooperating teacher. When supervision was provided by cooperating teachers, more than half of the MATs rated it favorably. Substantial proportions of the MATs expressed dissatisfaction with the supervision they received from other school district staff, MAT faculty, and university personnel. The modern MATs are receiving more supervision than did their predecessors and continue to value the supervision they receive from their cooperating teachers. In addition, modern

MATs rate the supervision they receive from university supervisors and other school district personnel more favorably than did the older MATs.

The MATs' assessment of their supervision is consistent with evaluations made of the older MAT programs by consultants who often found fault with the supervision given to the interns. The following comment is typical of this criticism:

> To label what happens [in the internship] as supervision is a travesty. Let's face it, there really isn't any. Here again, because the MATs are unusually able people, they get by without supervision. But I can't help wondering what truly superior teachers and educational leaders they might become if some genuine and consistent and competent assistance were provided...The mistake in this case was made in the very beginning of the MAT program...[certain individuals] conceived and planned the program and got Ford money for it without any consultation with school people. Hence, for four years, [the director] has been trying to sell a "fait accompli" to the schools. No wonder their response has been slow and their cooperation limited...to employing the interns but taking little or no responsibility for their growth[42].

At Harvard and Stanford, MAT candidates were interviewed by the local school district where they were to intern; and at Harvard, acceptance into the MAT program was conditional upon being accepted as in intern in a school[43]. At some of the institutions however, internship placements were negotiated by the program staff; LEAs never saw the interns prior to employing them.

At Vanderbilt, schools employing the interns offered no supervision and the university provided only general supervision with no help from subject matter specialists. Here again, internship placements were secured by the MAT program director on negotiation; schools were not involved in seeing or deciding which intern they will get, and assignments were sometimes unrelated to the intern's major[44]. As was true for many MAT programs, this one was born on the campus and then belatedly offered to the schools on a "please help us" basis. Its strength therefore was its campus roots; its basic weakness was the lack of commitment and partnership relationship with the schools[45].

MATs' Evaluation of Their Preparation

Overall, both groups of MAT students appeared quite satisfied with their program of study. When asked to give an overall grade to their program, a high proportion of students gave a grade of B or above. A consistently positive assessment was seen in their rating of specific aspects of their program.

The most highly rated component for both groups of MATs was the internship experience, although modern MATs rated this feature slightly higher. The next highest rated program feature was the academic coursework, a component quite favorably rated by over half of both groups. A substantial difference between modern and older MAT students was noted in the ratings of education courses. Current MATs gave higher ratings than the older graduates.

An obviously important outcome of the MAT preparation is skill in teaching. While there was considerable variation in the MATs' assessment of their preparation, it appears that overall, the graduates felt that the programs gave them further knowledge of their academic disciplines (one of the primary program attractions) and provided the skills needed to teach their subjects to students in an organized, confident, and effective way. Areas that were not highly rated pertained to dealing with individual student differences. A substantial proportion of both groups reported inadequate preparation in assessing and reporting student progress, interpreting test results, individualizing instruction, teaching students from different backgrounds or students with discipline problems, teaching slow learners, and dealing with parents. While modern MATs report somewhat better preparation in these areas, less than half of the students indicated that they gained substantial teaching skills in these areas. Interestingly, older MATs reported somewhat greater preparation in their academic discipline and modern MATs report better preparation in organizing, managing, and evaluating instruction.

Impinging Forces

Three of the MAT programs that we examined are still operating--Chicago, Stanford, and Vanderbilt. The other programs were discontinued at some point after the termination of the Ford Foundation grants. Notre Dame and Duke dropped the MAT during the late 1970s; Johns Hopkins in 1970; Harvard around 1973; and Converse in 1975. Converse switched over to an M.Ed. program during that year geared to experienced elementary and special education teachers. The change was made to respond to conditions in the local area--social and economic changes in the 1970s, along with an oversupply of teachers, made the internship difficult to arrange[46]. Similarly, Johns Hopkins' program was discontinued due to a lack of institutional support and the evening college of the university picked up the total education activity[47].

In the winter of 1973-74 the Harvard MAT Board voted to place a one-year moratorium on the admission of MAT candidates. The decision resulted from the Board's uncertainty about the feasibility of the MAT model given such relevant factors as imminent changes in patterns of undergraduate education and mechanisms of certification, the declining demand for novice teachers, the mounting expenses of fifth year programs to those

involved in them, and the paucity of effective means for the continuing education of experienced teachers[48]. Subsequently, the Teacher Education Task Force recommended that fifth year training be deemphasized and that instead the preparation of novices be begun in the undergraduate years. It was believed that only a small number should be admitted each year and that most of them be Harvard graduates. The group also recommended that the MAT program should be eliminated and that the major emphasis of teacher training at Harvard should be directed toward the continuin education of experienced teachers[49].

Elisberg (1981) provides a good summary of the factors that came together to cause the demise of many of the MAT programs:

> The MAT experience provided a means through which the public schools could assume greater responsibility in the education of teachers, both financially and experientially. The schools' interest in this role persisted for the duration of the teacher shortage. Although many school administrators had positive attitudes about working cooperatively with the universities, providing high quality candidates access to the profession and meeting their staffing needs with above average teachers, they were unable to support the programs in the face of the teacher surplus that impacted on the status of their own faculties.
>
> Other forces to impede the success of the programs were at work as well. The MAT concept rose as a suburban phenomenon because of the tremendous expansion of the suburban schools after World War II. But two decades later, the programs failed to respond to the changing needs of the nation's schools. As attention turned to the urban crises and teaching the disadvantaged in inner-city schools, the program failed to meet the need. The MAT approach remained static during the swing toward specialization in teaching; i.e., preparation in bi-lingual teaching, reading improvement, learning disabilities, and teaching the handicapped. The MAT concept, with its liberal arts, suburban orientation was no longer on the cutting edge of reform.
>
> The commitment of the institutions to the MAT concept was also affected by societal forces. Institutional support for the programs faltered when funding ceased. It soon became obvious that outside funding, whether through foundation grants or salaried internships, is fundamental to the MAT concept...Administrative

costs were very high; to compete for good students, financial subsidies must be offered to them. As the grants terminated, salaried internships became the only means to adequately subsidize the programs. Without the salaried internship there is little hope for the survival of MAT programs because they will continue to cost more than institutions and school systems are willing to pay[50].

Summary

This section of the report illustrates some of the strengths and weaknesses of the MAT model by examining information about the model's implementation and operation. We summarize below and point out some of the policy implications that we derived from this information.

o IHEs invested heavily in the recruitment of qualified students. Networks were developed and extensive use was made of various media. Academic departments also became involved in recruitment.

o Collegial relationships with LEAs appeared to be important to the success of the MAT program. These relationships were more fruitful when LEAs were involved in the planning and early stages of the model.

o The MAT program had effects on both academic and teacher education departments of IHEs. In many cases these effects were positive. Academic departments became involved in teacher education, faculty interest in teaching per se was rekindled, and at some institutions where teacher education existed the MAT program replaced the original program. Resistance or indifference the the MAT program was most visible within education departments where traditional teacher education programs existed.

o The success of the teaching internship, a critical component of the MAT model, appeared to be dependent upon the cooperation of LEAs. While the MATs rated the internship as the most valuable component of the program, adequate supervision for the interns was not always provided.

o The MATs rated their programs highly, especially the internship and the academic coursework. The MATs felt that the programs provided them with further knowledge of their academic discipline and prepared them to teach that subject to the majority of students in an organized, confident, and effective way. Many MATs expressed dissatisfaction with the program in providing the teaching skills necessary to handle individual student differences and discipline problems.

o While a few of the MAT programs still exist, most were discontinued at some time after the termination of foundation funding. The end of the teacher shortage and difficulties in placing interns in salaried positions contributed to the demise of the programs.

Policy Implications

o The development of recruitment networks and the extensive use of media should be employed to attract students who would not otherwise enter teacher education.

o The involvement of LEAs should be sought early in the planning process. Such involvement is critical to the success of internship arrangements.

o Special care should be taken to involve traditional teacher education faculty and administration in efforts to develop and implement nontraditional models of teacher education.

o The need for effective supervision of interns is essential.

o More attention should be focussed on providing teacher education students with the skills necessary to teach students with different backgrounds.

CONCLUSIONS AND POLICY IMPLICATIONS

The MAT model was successful on a number of fronts that concern policymakers today. The model attracted academically superior students to teacher education and was successful in the proportion of its graduates who entered teaching. While about a third of those who entered teaching remain in classrooms today, a large proportion of the other MATs continue to contribute to education through their professional careers. Current MAT students indicate that they will enter teaching and remain there in proportions very similar to their predecessors. The majority of the MATs have taught in suburban public secondary schools in which the majority of students are white, mid- to upper-middle class, and above the mean in academic ability.

The MATs rated their program favorably, especially the internship experience and the academic coursework. The general consensus was that the program furthered their knowledge of their disciplines and prepared them to teach the majority of students in an organized, confident, and effective way. But, the MATs expressed dissatisfaction with their preparation to handle individual student differences and were especially displeased with the supervision they received during their internships.

Some of the weaknesses the students reported were corroborated by archival records on the implementation of the programs. Consultants often found fault with the supervision that the interns received. The development of collegial relationships with local school systems early on in the development of the program appeared to relate to the responsibility that the schools took for the interns.

The MAT programs had effects on both academic and education departments within the institutions in which they resided. In many cases the effects were positive, involving academic departments in the education of teachers and influencing traditional teacher education programs. Resistance or indifference to the MAT model, when it existed, was often most visible within education departments where traditional teacher education programs operated.

While MAT programs still exist, many of the original models have been terminated. The end of the teacher shortage, the diminution of external funding, and the difficulties in arranging the internships all contributed to the programs' demise. The conditions that spawned the MAT concept, however, have reappeared. Current concern over issues of teacher quality and supply have led to a host of reforms, some proposed and some already implemented, to address these problems. These include the establishment of alternate routes to the classroom, stricter requirements for prospective teachers, and reform of teacher education. Can the lessons we learned from the MAT model provide any guidance in the pursuit of solutions to the problem of teacher quality and quantity?

The MAT model (or models like it) appear to be viable means to increase the supply of academically competent teachers. The development of recruitment networks and the use of other media were effective for the MAT programs and are important in any effort to attract students who would otherwise not pursue teacher education. Financial attractions are also important in attracting nontraditional teacher education students. The paid internship and other financial aid were important incentives in the old MAT programs and are important today as well. Tuition forgiveness loans may provide an important incentive. The internship concept, the most valuable program component to the MATs, needs to be reviewed with two factors in mind. First, adequate supervision and support for the intern is essential. Second, relationships with schools in which the interns will work need to be developed early on in the program and maintained. In addition, other institutional relationships need to be cultivated. Since the education of teachers is the province of teacher educators, resistance to new models may be headed off by early involvement of such personnel in the planning of the models. Finally, there is a need to recognize the changing characteristics of our nation's school children and to tailor both recruitment and training to their educational needs.

In order to provide appropriate supervision for interns, individuals involved should be adequately prepared for this responsibility. District personnel, including cooperating teachers and principals, need to be involved in the planning and management of the internship experience. Selection of cooperating teachers should be made based on their ability to serve as a model of effective teaching practices and their willingness to assume the role of mentor to the intern. Involvement of principals in supervision should be encouraged to afford interns a broader understanding of the conditions and expectations within the school environment. University supervisors should have classroom teaching experience and should be knowledgeable in the academic areas they supervise. University staff must be prepared to offer constructive suggestions for improved instruction, as well as support. Both school districts as well as colleges and universities need to recognize the effort and time required to provide effective supervision and therefore, structure staff schedules and responsibilities accordingly.

NOTES

[1] National Commission on Excellence in Education. A Nation at Risk: The Imperative for Educational Reform. Washington, D.C.: National Commission on Excellence in Education, April 1983.

[2] National Center for Education Statistics. Projections of Education Statistics to 1990-1991. Washington, D.C.: National Center for Educational Statistics, 1982.

[3] Kerr, D. "Teaching Competence and Teacher Education in the United States." In L. S. Shulman and G. Sykes (eds.), Handbook of Teaching and Policy. New York: Longman, Inc., 1983; and Vance, V. S. and Schlechty, P. C. The Structure of the Teaching Occupation and the Characteristics of Teachers: A Sociological Interpretation. Unpublished paper submitted to the National Institute of Education, 1982.

[4] NCES, 1982; Sweet, J. and Jacobsen, L. "Demographic Aspects of the Supply and Demand for Teachers." in L. S. Shulman and G. Sykes (eds.), Handbook of Teaching and Policy. New York: Longman, Inc., 1983; and Sykes, G. "Public Policy and the Problem of Teacher Quality: The Need for Screens and Magnets." in L. S. Shulman and G. Sykes (eds.), Handbook of Teaching and Policy. New York, Longman, Inc., 1983.

[5] McGeever, J. "Retraining Programs to Alleviate Teacher Shortages in Mathematics and Science." Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois, April 1985; and Darling-Hammond, L. Beyond the Commission Reports: The Coming Crisis in Teaching. Santa Monica, California: The Rand Corporation, July 1984.

[6] Feistritzer, C. The Condition of Teaching: A State by State Analysis. Princeton, N.J.: The Carnegie Foundation, 1983; Braun, R. J. "Testing Plan Would Revolutionize Teacher Licensing for Jersey Schools." Newark Star Ledger, July 31, 1983; and Congressional Bills--Glenn, S289; Domenici, S248; Hatch S706; Erlenborn, HR1324; Perkins, HR1310.

[7] White, J. "How We Arrived at Five-Year Teacher Education," Education Week. September 18, 1985.

[8] Powell, Arthur G. The Uncertain Profession. Harvard and the Search for Educational Authority. Cambridge and London: Harvard University Press, 1980.

[9] Stone, James C. Breakthrough in Teacher Education. San Francisco: Jossey-Bass Inc., 1968.

[10]Heyns, Barbara. The Changing Contours of the Teaching Profession: Selection, Retention and Attrition Among Math and Science Teachers. Proposal to the National Science Foundation, March, 1985.

[11]Stone, 1968; Mark, Jonathan H. and Anderson, Barry D. "Teacher Survival Rates--A Current Look," American Educational Research Journal, 15 (3), 1978, pp. 379-83; Chapman, David W. and Hutcheson, Sigrid M. "Attrition from Teaching Careers: A Discriminant Analysis," American Educational Research Journal, 19 (1), Spring 1982, pp. 93-105; and Stinnett, T.M. (Ed.). The Teacher Dropout. Itasca, Illinois: F.E. Peacock Publishers, Inc., 1970.

[12]In examining the relationship of the MAT program attended to retention in teaching, we observed differences. Due to small sample sizes at several institutions, differences between current and former teachers are discussed in terms of the entire group of entrants to teaching. It appears that students' background characteristics may account for a substantial portion of these differences. Programs that have more than one-third of their graduates currently in teaching positions also had students who displayed one or more of the following characteristics which were found to relate to retention in teaching: A greater proportion of these students had prior teaching experience and training in education and came from less selective undergraduate schools.

[13]"News from the Ford Foundation," April 1, 1959. Ford Foundation Archives, PA59-185.

[14]Stone, James C. Breakthrough in Teacher Education. San Francisco: Jossey-Bass, Inc., 1968,

[15]Stone, 1968

[16]Duke University Cooperative Program in Teacher Education, Sixth Annual Report, August 15, 1965. Ford Foundation Archives, PA59-183

[17]Elisberg, Joan. "A Study of Selected Master of Arts in Teaching Programs in the U[n]ted States," Ph.D. Dissertation, Northwestern University, June 1981, University Microfilms International.

[18]Duke University Cooperative Program in Teacher Education, First Annual Report, August 20, 1960. Ford Foundation Archives, PA59-183.

[19]Innovation in Teacher Education: Parallel Programs as a Stimulus, no date. Ford Fo[u]ndation Archives, PA-59-186

[20]A Regional Project for Improving Preparation of Secondary School Teachers (Converse College), October 7, 1959. Ford Foundation Archives, PA60-180.

[21]The Johns Hopkins University Master of Arts in Teaching Program, Ninth Annual Report, November 1966. Ford Foundation Archives, PA59-343.

[22]A Report to the Ford Foundation for the Period Ending June 30, 1963, The Graduate School and Department of Education, University of Chicago, no date. Ford Foundation Archives, PA59-181.

[23]A Regional Project for Improving Preparation of Secondary School Teachers (Converse College), October 7, 1959. Ford Foundation Archives, PA60-180.

[24]Duke University Cooperative Program in Teacher Education, First Annual Report, August 20, 1960. Ford Foundation Archives, PA59-183

[25]Stone, 1968.

[26]Innovation in Teacher Education: Parallel Programs as a Stimulus, no date. Ford Foundation Archives, PA-59-186

[27]Ford Foundation Project. Secondary Education at Stanford, 1959-1964, First Narrative Report, Summer 1970. Ford Foundation Archives, PA59-186

[28]Memorandum to Dr. Frank H. Bowles from James C. Stone, May 18, 1964. Ford Foundation Archives, PA59-348.

[29]Memorandum to Dr. Alvin C. Eurich from James C. Stone, November 20, 1963. Ford Foundation Archives, PA59-181.

[30]Memorandum to Dr. Alvin C. Eurich from James C. Stone, no date. Ford Foundation Archives, PA59-183.

[31]Annual Report of the University of Notre Dame du Lac, Master of Arts in Teaching Program, for the period commencing July 1, 1962 and ending June 30, 1963, September 1, 1964. Ford Foundation Archives, PA60-186.

[32]1968 Johns Hopkins University Graduate Arts and Sciences Catalogue, 1968.

[33,34]Stone, 1968.

[35]Assessment of MAT Degree Program by a Special Investigating Team of MAT Consultants, July 1965. Ford Foundation Archives, PA60-180.

[36]A Report to the Ford Foundation for the Period Ending June 30, 1963, The Graduate School and Department of Education, University of Chicago, no date. Ford Foundation Archives, PA59-181.

[37]Stone, 1968.

[38]Assessment of MAT Degree Program by a Special Investigating Team of MAT Consultants, July 1965. Ford Foundation Archives, PA60-180.

[39]Letter to Dr. Clarence H. Faust and Dr. Alvin C. Eurich from Francis S. Chase, January 30, 1959. Ford Foundation Archives, PA59-181.

[40,41,42]Memorandum to Dr. Alvin C. Eurich from James C. Stone, November 20, 1963. Ford Foundation Archives, PA59-181.

[43]Personal correspondence, Dr. Donald K. Davidson, Dennis, MA, June 3, 1985,

[44]Stone, 1968.

[45]Memorandum to Dr. Frank H. Bowles from James C. Stone, May 18, 1964. Ford Foundation Archives, PA59-348.

[46]Telephone interview, Dr. Thomas McDaniel, December 12, 1984.

[47]Telephone interview, Dr. Richard Robins, October 2, 1985.

[48]Harvard University, "Orientation of the Teacher Education Task Force," May 1973.

[49]Harvard University, "Report of the Task Force on Teacher Education," no date.

[50]Elisberg, pp. 131-132.

Appendix A: Profiles of Current MAT Programs

Brown University MAT Program

Program Philosophy

Lamentably, most high school teachers are overloaded with obligations. Conditions for them to teach well are too often absent. Unless this overload is lessened and the conditions improved, the quality of teaching--and the willingness of able new people to enter into and to stay in the profession--will continue to suffer.

Teacher educators must address these structural problems in the schools, to provide witness to their students of their personal commitment to significant, practical school reform and to create among prospective professionals an understanding of and commitment to improving the profession in very specific ways. Brown University pursues these ends by deliberately overlapping its pre-service teacher education programs with a major school restructuring effort, described below.

The MAT at Brown, in existence since about 1959, provides prospective teachers with substantial graduate study in their teaching field and immerses them in issues of adolescent learning and the social and philosophical context in which the school exist. Practice teaching and associated work in teaching methods starts with intensive clinical work at the Brown Summer High School, and continues in regional schools during the subsequent year. In 1985, an effort to integrate students' training with educational reform efforts has been added to the program. This is possible at Brown due to two other program, the Institute for Secondary Education and the Coalition for Essential Schools.

The Institute provides programs designed and presented by teams of high school teachers and Brown University faculty for high school teachers continuing education and in the hope of creating a cadre of secondary school and university colleagues who will work together to restructure their curriculum and teaching, to improve the schools in which they teach. During the last two years, over 600 participants throughout Rhode Island and Southeastern Massachusetts have been involved in a dozen or so programs, on topics such as molecular biology, contemporary American literature, women's history, Latin American culture, writing skills, computer programming, and school leadership.

The Coalition of Essential Schools, a national program initiated and chaired by Theodore Sizer (Chairman of the Brown Education Department), is based on principles developed by "A Study of High Schools" and reported in Horace's Compromise (Sizer, 1984). Some dozen schools have committed themselves to work closely in concert to redesign their programs to stress the essential needs of each child. A larger growing group of schools is associated with the effort in a less `total' way. The `core' Coalition schools have each agreed to restructure their programs--each in its own appropriate way--according to nine

general principles of school reform that emphasize the intellectual aims of schools, the importance of personal relations among students and teachers, and the value of positive expectations, trust, and decency. Included in the nine principles is the specific target of creating an improved school environment while exceeding current operating costs by no more than 10 percent.

The Coalition and the Institute accept the school site as the central locus of decision-making. The basic philosophical approach--the empowerment of classroom teachers and principals--is the premise that connects these two programs with the Brown Teacher Education Program, also a collaborative effort. The work of the Coalition and the Institute during the last two years has set the stage for Brown to embark on a program of teacher education that is school-based.

Hope High School, an inner-city school with a large foreign born population and a wide range of ethnic groups, recently joined St. Xavier Academy in Coventry as the second Rhode Island school to join the coalition. In addition, Hope will become a major teaching site for student teachers from Brown. The Brown and Hope partnership, although complex, offers a comprehensive model for reform. Clinical professors are the central feature of this partnership. Jointly selected by Brown and the Providence Public Schools, these "preceptors" will teach methods courses to student teachers as well as work with the Essential School faculty at Hope High School.

Involvement at Hope comprises at least one half of the clinical professor's time. They are available for regular, often daily, consultation with student teachers, teach demonstration classes for both new and experienced teachers, and work with faculty planning and implementing a variety of school reforms. The clinical professors are also responsible for coordinating the supervision of student teachers and for weekly seminars focusing on pedagogical issues common to beginners. Because the professors are based at Hope, they are able to draw on the lively work of veteran teachers in the process of ambitious school restructuring.

It is the direct link to the major school reform effort at Hope High School that makes the Brown Teacher Education Program a potentially far-reaching experiment. This partnership tests the idea that meaningful teacher education should be directly linked to school reform.

The program also focuses on the retention of new teachers in the profession. The partnership with Hope will allow student teachers to work in a supportive school environment. A concern is whether this experience, which is deliberately designed to nurture teachers, will create unrealistic expectations about the schools in which they will eventually teach. This issue is being addressed through a more focussed approach to student

placement, helping Brown graduates find first-time jobs in schools that are actively involved in school renewal and committed to the professional and intellectual development of both new and experienced teachers.

Program Information

The Graduate School offers the MAT degree for individuals who intend to teach English or Social Studies. During the next two years, it is planned that the program will include math, science, foreign language, and the arts. The program consists of the equivalent of eight courses taken over an eleven month period (June to May) and the student teaching experience. The MAT program consists of four interrelated components.

Summer Session. The Brown Summer High School is a special summer school program sponsored by the University. High school students from the greater Providence area annually participate in the four week program of intensive work in English, social studies, and science, with different topics selected for each summer. During the summer high school, student teachers work under the guidance of clinical professors and Master Teachers. Groups of four to five MATs are assigned to a Master Teacher and these teams jointly plan the curriculum and teach the summer school classes. This collaborative effort provides MATs with a supportive environment in which they gain valuable teaching experience and the opportunity to learn from exemplary classroom teachers.

Subject Matter Courses. All students take four courses in their teaching field, chosen from among a wide variety of course offerings available to Brown graduate students. Each student works in conjunction with an advisor in the Education Department and in the appropriate academic department to plan a program of study that is compatible with the student's subject matter background and career plans.

Student Teaching. After the Brown Summer High School each student teachers for several months in a Brown teaching center. A teaching center, such as the one that is being created at Hope High School, is a local high school wherein several students are engaged in part-time teaching and where the school faculty are skilled and experienced. The Institute for Secondary Education provides workshops on supervision for teachers from the region. The clinical professors coordinate the efforts of the supervisors and observe all the student teachers.

Core Curriculum. A twelve month core curriculum that covers major themes and concepts in educational psychology and the foundations of education including history, sociology, psychology, and public policy is being planned for 1986-87.

Admission and Certification. For admission, students must

present a BA degree with an appropriate undergraduate major. Applicants in English are expected to have completed a major in literature and language or its equivalent. Those seeking admission in social studies should have completed a history major. In some cases, students with a major in another social science such as political science or economics will be admitted if they have adequate undergraduate coursework in history. All applicants must take the GRE and should have the commitment and interpersonal skills necessary for a successful career in secondary teaching.

Brown is a member of the Interstate Certification Compact (ICC) which provides graduates of the program automatic certification in the 29 ICC states. Graduates of the program are also eligible for teacher certification by transcript evaluation in the remaining 21 states.

Program Costs. Tuition in the graduate school is presently (1985-86) $1,353 per semester course credit or $10,825 for the eight semester course credits required for the degree. The cost of a room in a dormitory for the six-week summer session is $418 and $2,140 for the regular academic year. Most students receive some financial aid in the form of tuition scholarships and proctorships. Graduate student loans are also available.

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University of Chicago MAT Program

The MAT program for pre-service teachers began in 1960 as a two-year program (first year on campus, second year teaching 3/5 time in a school) and continued in that form until 1969-71. In 1970, due to the difficulty of finding 3/5 time positions and due to the feeling that there was not enough value added by the second year to warrant the effort required, the program was changed to its current four-quarter format. The typical student begins work in the autumn quarter and graduates at the end of the next summer. The MAT is currently offered in mathematics and English. The program is small: In 1984-85 there were five students enrolled in the English program and one student in the mathematics program.

In addition, since 1973 there has been a joint BA-MAT program that enables senior mathematics majors to receive an MAT degree by having two summers full-time residence beyond that required

for the BA, and during their senior year, three courses that apply to both the BA and MAT degree.

Mathematics

The MAT program in mathematics is a program in the special field of Curriculum and Instruction in the Department of Education. The Department is situated in the Division of Social Sciences, one of four graduate divisions of the university. Through a coordinating committee, the MAT program is allied with the Department of Mathematics, a department in the Division of Physical Sciences, another one of the graduate divisions. The program is built around the premise that successful teaching of and leadership in school mathematics requires substantial knowledge of mathematics, in-depth exposure to general methods of teaching and specific methods for teaching particular mathematical topics; acquaintance with educational philosophy and psychology; and as much in-school experience as can be had.

Admission. A bachelor's degree in mathematics, or its equivalent, is required. In general, an MAT student is expected to have, before entering the program, the equivalent of 11 quarter courses in mathematics at the level of calculus or beyond, statistics requiring calculus, or computer science in a structured language or beyond. Applications are evaluated on the following criteria, which often overlap: (1) GPA in college or previous graduate courses; (2) GRE scores; (3) perceived ability to handle mathematics courses at the university; (4) evidence of potential success as a teacher, based upon previous experience, statements, letters of recommendation, and where possible, personal interview, and potential for leadership, based on all of the above.

Program Requirements. All graduate MAT students must register for at least 12 courses. Of these, six must be in mathematics, statistics, computing, or related areas above calculus. The education requirements include one course in the "fundamentals" of education; one course in education psychology; the equivalent of one course in teaching the exceptional student; and some experiences related to the "understanding and awareness of the unique nature of distinct cultural and ethnic groups" (this requirement is handled through a mathematics teaching methods course and through special experiences designed for all students in the teacher training program. Mathematics education requirements are a course in methods and materials in secondary mathematics and at least one other course in mathematics education.

In-school requirements include observation in schools and student teaching. Each student is required to observe in schools for 100 clock hours before beginning student teaching. Student teaching requirements include continuous teaching for eight weeks in at least two classes, and for at least four weeks continuously

and simultaneously in a third, and being available at other times during the day to help students, plan lessons, attend meetings, and speak with teachers. Student teaching almost always takes place during the winter quarter, in which students are expected to be in a school for the entire school day. Finally, students are required to submit a paper combining aspects of both mathematics and education that is of moderate length and that covers a topic in depth.

English

The MAT/English program is based on the assumptions (1) that the most important goals for high school students of English are to become effective writers, effective readers of literature, and effective processors of language in general; (2) that students learn such skills most effectively when they are actively engaged in dealing with problems which require their use and which become progressively more complex; and (3) that teachers who simply present rules and information to their students are largely ineffective in promulgating such skills. Therefore, the mode of instruction sought in the program might best be termed environmental. Teachers in the environmental mode see their role as that of creating an environment in which the students respond to and examine various materials and problems, make their own generalizations, draw their own inferences and conclusions, and create their own problems and materials for the class to examine.

Admission. Candidates must be admitted by both the Departments of Education and English. Requirements include an English undergraduate major or equivalent, a GPA of 3.2 in the major and 3.0 overall, GRE verbal and quantitative score of 1000 or higher (may be waived if GPA and grades in major are 3.5 or higher, and a minimum of three letters of recommendation indicating strong belief in the candidate's ability to succeed in the program.

Program Requirements. The MAT English program involves 12 course credits providing for advanced study in both English and education and has three major components: English, education, and English education. Each candidate takes five of six courses in the English department. Students choose from offerings in the areas of literature, criticism, linguistics, writing, and popular culture. In addition, many degree candidates take the MA English examination during the spring or second summer quarter. Such strong emphasis permits MAT graduates the option of entering English Ph.D. programs. In order to fulfill state certification requirements, each candidate takes two courses in education, one in the area of educational psychology and one in the foundations of education. The English education component of the program involves a sequence of five course credits, two in English education, two in student teaching, and one for the MAT thesis. The sequence begins during the autumn quarter with a course in teaching composition. MAT candidates plan and teach a four or

five week composition workshop for secondary school students. Each MAT student in responsible for helping to plan the class, for teaching the group as a whole for a part of the time, and for evaluating the instruction on a daily basis. The methods of planning and evaluation learned during the autumn quarter course, which combines the theoretical and the practical, make up the cornerstone of the courses which follow. The emphasis during the winter quarter English education course is on the design of instructional units. MAT students observe the classes they will be teaching, conduct inventories to discover student abilities and background in composition and literature, and develop instructional units which they will teach during the spring quarter.

A wide range of schools is available in which English MATs may do their student teaching. All participating schools are required to allow MAT practice teachers to develop their own curriculum materials, with the approval of the supervising teacher, and then be allowed to teach with those materials. MAT students may choose to teach in any school which permits the freedom and accepts the MAT student teacher. The point of this requirement is that if teachers are to do more than blindly follow some textbook, they must learn early to plan appropriate experiences for their own students and how to evaluate their own successes and failures.

Finally, the MAT thesis is a project developed by each candidate in consultation with the advisor. It deals with some aspect of teaching or curriculum in English. Theses topics vary considerably and have included the use of multi-cultural materials in English classes, the attitudes of high school students to grammar instruction, and sexual biases in adolescent fiction.

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Stanford Teacher Education Program (STEP)

STEP is a twelve-month, fifth-year program which leads to a California Single Subject Teaching Credential and a Master of Arts Degree in Education. It begins in June with a summer quarter of intensive preparation in the processes of teaching and experience in summer programs based at Stanford and in nearby schools. During the academic year students take courses in academic areas and in professional education both inside and outside the School of Education; they also teach part-time in

local schools. Single subject areas in which STEP students are admitted include English, Foreign Language (French, German and Spanish), Math, Science (Biological and Physical), and Social Studies. Program areas with fewer than four candidates admitted are eliminated for that year only. Sixty-three students were enrolled in the 1984-85 program.

Program

Students must complete 45 quarter units over a four-quarter attendance at Stanford. The work in the program is divided between academic and professional education course work in combination with a year-long practical teaching experience. In order to meet the minimum university residence requirements, students must be registered as a graduate student for four quarters and pay at least the equivalent of three full quarters' tuition.

The program must begin in the summer quarter and must be completed in sequence. During the summer quarter, students must complete 3 units in the introduction to educational theories; 3 units in curriculum and instruction in the teaching major; 3 units in adolescence: health and special needs; 1-5 units in the secondary school teaching practicum; and between 0-6 units in academic courses. During the academic year, students must complete the secondary school teaching practicum (11-15 units); 2-3 units in curriculum and instruction in the teaching major; 3 units each in perspectives on teaching, foundations of learning for teaching, social science: teachers and schools, and reading instruction in the high school; and 3-9 units of academic courses.

Student teaching involves limited responsibility for teaching two classes a day for the year under direct supervision of the teacher assigned to the class. Responsibilities of the assignment increase at the discretion of the school. Students are required to spend at least one additional hour in school daily for observation, preparation, or other on-site involvement. The internship involves full responsibility for teaching two classes a day for the year (plus the additional hour for observation, etc.) under a paid contract with a cooperating school district. This responsibility is available to a limited number of students in the program. During the past several years, approximately two-thirds of the STEP students obtained paid internships.

All STEP participants are supervised by a Stanford supervisor and a resident supervisor. The Stanford supervisors, who are experienced teachers, are doctoral students in the School of Education. They work with STEP candidates in the summer and visit them once every other week during the school year. The resident supervisors are experienced teachers in the school in which students are placed. They observe and confer with the

students. The curriculum and instruction professor in the student's major academic area serves as program advisor and works closely with the Stanford supervisors monitoring candidates as they progress through the program. Sites for practicum placement range from well-to-do to economically disadvantaged.

Admission

Graduates in the humanities and sciences are eligible for admission to STEP. Applicants must have an acceptable subject area major (not professional education) and little or no coursework in education. Applicants must have a GPA of at least a B, and take the GRE general test and the California Basic Educational Skills Test (CBEST).

Finance

Students usually pay full tuition (which was $3,235 per quarter for the 1984-85 school year). Most students, however, find that they are able to arrange their registration for half-tuition (a maximum of 8 units per quarter) for two quarters depending on their academic background in relation to Stanford's requirements. Financial aid is available for all four quarters. Those students who are placed in salaried positions usually receive a salary of between $2,000 and $6,000 for their teaching internship.

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Vanderbilt University MAT Program

Vanderbilt's MAT degree is conferred by the Graduate School and is designed specifically for the preparation of secondary school teachers. The program is open to those who are already certified as well as to other's with a bachelor's degree who have had no professional training in this field. Requirements for admission to this special program are the same as for other degree programs in the Graduate School. Certification areas are biology, chemistry, economics, English, French, German, history, Latin, mathematics, physics, political science, Portuguese, psychology, Russian, sociology, and Spanish. MAT candidates must

maintain a B average in academic work as well as in professional education courses.

The program requires 36 hours of graduate study. Eighteen of those hours must be in the major (the specific courses are determined between the student and his or her advisor); nine hours must be in education and education-related work; and the other nine hours are relatively open choices. However, the large majority of Vanderbilt's MAT students are pursuing teacher certification at the same time that they are pursuing the degree requirements. These students must complete the major and professional education courses necessary for certification according to the Vanderbilt University Teacher Certification Program. These requirements include approximately 24 hours of work if the student has not already had comparable coursework at the undergraduate level. Most of Vanderbilt's MAT students have either no previous education and psychology study or have only a single course. This means that they need to complete either all of the 24 hours or almost all of them as part of their program. As a result, most students complete either 21 or 24 hours in addition to the 18 hours in their major.

These certification requirements are exactly the same for a student who combines the seeking of certification with an M.Ed. degree. More students pursue certification through the this degree than through the MAT degree since the M.Ed. is more flexible, the requirements are more consistent with state certification requirements, and the maximum number of semester hours required is 30. The small number of people who choose the MAT option usually do so because they want to stress graduate study in their academic discipline rather than education.

The internship experience for both the MAT and the M.Ed. programs is the same as the student teaching experience for undergraduates. It involves a ten week student teaching experience in a local school, usually in the Nashville Public Schools. It carries six hours of graduate credit and those hours are part of the education component of the degree and of the hours required for state certification.

The MAT program, as well as all of Vanderbilt's teacher certification programs are approved by the National Council for the Accreditation of Colleges of Teacher Education (NCATE).

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Appendix B: Supporting Data Tables

Subject Guide to Tables

Table Subject	68-69 MATs					National Sample of Teachers	Modern MATs
	Whole Sample	Entrants to Teaching	Nonentrants to teaching	Former Teachers	Current Teachers		
Background Characteristics	37	1	1	1	1	1	37
Prior Experience/ Training	38	2	2	2	2		38
Program Attractions	39,40	3,4	3,4	3,4	3,4		39,40
Subject Preparation	41	5	5	5	5		41
Portion of Tuition Paid	42	6	6	6	6		42
Proportion Having Paid Internship	43	7	7	7	7		43
Internship School Characteristics	45	8	8	8	8		45
Internship Teaching Responsib.	46						46
Supervision and Assistance	47	9,10	9,10	9,10	9,10		47
Skills/Knowledge Gained	44	11	11	11	11		44
MAT Program Evaluation	48,49	12,13.14	12,13,14	12,13,14	12,13,14		48,49

Table Subject	Whole Sample	68-69 MATs: Entrants to Teaching	68-69 MATs: Nonentrants to teaching	68-69 MATs: Former Teachers	68-69 MATs: Current Teachers	National Sample of Teachers	Modern MATs
Characteristics of Teaching				16,17,18, 19,20	15,16,17, 18,19,20	16,17,18, 19	
Reasons for Becoming a Teacher	50,51			21,22	21,22,23, 24	21	50,51
Satisfaction with Teaching				25	26,26	25,26	
Career Motivations			29,30,31	27,28			
Employment			32,35,36	32,33,34			
Career Plans							52,53

LIST OF TABLES

Table 1

Background Characteristics

Key: E = MATs who entered teaching
NE = MATs who did not enter teaching
F = MAT former teachers
C = MAT current teachers
N = National sample of secondary teachers*

*Data on the background, training, teaching experience, and attitudes for a national sample of secondary teachers was obtained from Status of the American Public School Teacher, 1980-81, National Education Association.

	E	NE	F	C	N
Age at Graduation					
25 or younger	81.5%	81.7%	82.9%	66.5%	NA
Current Age (mean years)			40.8	42.5	39
Sex					
Male	33.3%	31.4%	28.7%	42.6%	46.9%
Female	66.7%	68.6%	71.3%	54.7%	53.9%
Race/Ethnicity					
White	96.3%	99.2%	97.1%	94.7%	91.8%*
Black	1.8%	-	1.6%	2.1%	7.6%
Hispanic	0.7%	-	0.3%	1.6%	3.3%
Asian American	0.6%	0.8%	0.8%	1.1%	0.1%
Native American or Alaskan	0.4%	-	0.3%	0.5%	0.4%
Parent Occupation					
Professional/ semi-professional	50.8%	50.4%	47.2%	45.9%	18.6%
Managerial/self-employed	28.2%	31.6%	30.1%	24.3%	20.3%
Clerical/sales	4.8%	4.3%	4.5%	5.4%	5.9%
Skilled/semi-skilled	13.0%	8.5%	10.9%	17.3%	31.8%
Unskilled	1.7%	3.9%	4.0%	3.8%	9.6%
Farmer	3.2%	3.4%	3.2%	3.2%	13.8%

*Percentages exceed 100% since respondents could indicate both race and ethnicity.

	E	NE	F	C	N
GPA					
B+ or above	61.3%	61.1%	63.2%	57.4%	NA
B or above	93.6%	87.5%	93.7%	93.4%	NA
Highest Degree Attained					
Less than BA	0	0	0	0	0.3%
BA	0	0	0	0	46.0%
Master's	67.5%	56.7%	59.8%	82.9%	47.7%
2nd Master's	14.8%	16.7%	16.0%	12.4%	-
Advanced Degree	17.8%	26.7%	24.2%	4.7%	6.0%

Undergraduate Major

	E	NE	F	C
Math	11.4%	8.3%	10.3%	13.7%
History/ Social Studies	17.2%	17.4%	18.1%	15.2%
English/ Journalism	20.5	33.9%	19.4%	22.8%
Science	15.6%	6.6%	14.6%	17.8%
Selectivity of Undergraduate School*				
61 or more	61.6%	75.0%	66.7%	51.3%

* The Estimated Selectivity Score of the Environmental Assessment Technique measure is defined as the total number of highly able students who want to enroll at a college divided by the number of freshmen admitted. The selectivity index is expressed in the form of T-scores in which the mean is 50 and the standard deviation is 10. Therefore the percentages in the table represent the proportion of students who graduated from schools with a selectivity rating one standard deviation or more above the mean. This measure is drawn from Alexander W. Astin, Who Goes Where to College? Chicago: Science Research Associates, 1965.

Table 2

Prior Professional Experience/Training in Education

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
None	77.6%	86.0%	69.5%	81.6%
Prior certification	5.6%	2.5%	3.6%	6.5%
Prior teaching	6.1%	4.1%	5.6%	6.3%
Prior teaching and prior certification	10.8%	7.4%	21.3%	5.5%

Table 3

Program Attractions

Respondents checked all features that were attractive

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Master's & certification in short time	84.6%	90.1%	81.2%	86.3%
Prestige of the institution	79.2%	74.4%	77.7%	79.9%
Academic coursework	66.0%	65.3%	66.5%	65.7%
Tuition assistance	54.8%	39.7%	57.9%	53.3%
Location of institution	53.8%	58.7%	52.8%	54.3%
Paid internship	49.6%	47.9%	47.2%	50.8%
Placement assistance	46.0%	41.3%	43.7%	47.2%
Academic caliber of other students	42.3%	39.7%	44.2%	41.4%
Education coursework	33.8%	37.2%	32.0%	34.8%
Other	14.4%	13.2%	16.8%	13.2%

Table 4

Primary Program Attraction

Respondents selected the most important attraction.

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Master's & certification in short time	41.3%	49.2	37.8%	43.0%
Prestige of the institution	13.5%	10.0%	12.8%	13.9%
Academic coursework	10.4%	9.2%	11.7%	9.8%
Tuition assistance	11.0%	8.3%	11.7%	9.8%
Location of institution	3.9%	4.2%	3.1%	4.4%
Paid internship	3.0%	8.3%	4.1%	2.8%
Placement assistance	*	0%	*	*
Academic caliber of other students	1.4%	*	3.1%	*
Education coursework	2.2%	1.7%	1.5%	2.6%
Other	6.8%	5.0%	6.1%	7.2%

*Less than one percent

Table 5

Subject Area of Preparation

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Science	18.9%	9.9%	17.8%	14.6%
English	25.5%	38.0%	22.8%	19.4%
History	28.2%	33.1%	15.2%	18.1%
Math	14.7%	11.6%	13.7%	10.3%

Table 6

Portion of Tuition Paid Out-of-Pocket

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
All	24.5%	39.5%	25.1%	24.2%
> Half	12.2%	10.1%	11.3%	12.6%
About half	11.1%	12.6%	12.8%	10.3%
< Half	16.0%	8.4%	15.9%	16.1%
None	36.2%	29.4%	34.9%	36.8%

Table 7

Proportion Having a Paid Internship

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Yes	80.4%	77.4%	79.0%	81.1%
No	19.6%	22.6%	21.0%	18.9%

Table 8

Characteristics of the Internship Schools

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Program Level*				
Senior	77%	81%	78%	77%
Junior	24%	25%	24%	25%
Middle	4%	1%	3%	4%
Elementary	2%	1%	2%	3%
Size				
>1,000	54%	41%	61%	51%
500-1,000	33%	49%	27%	36%
<500	13%	10%	12%	13%

*Percentages exceed 100% since respondents could indicate multiple levels.

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Racial/ethnic group				
>80% white	66%	68%	69%	64%
50-79% white	18%	21%	17%	18%
>50% minority	16%	12%	14%	18%
Type				
Public	91%	93%	92%	90%
Private	7%	3%	7%	8%
Parochial	2%	4%	1%	2%
Community Type				
Suburban	58%	69%	68%	53%
Urban	33%	26%	26%	36%
Small Town	7%	4%	6%	8%
Rural	2%	1%	1%	3%
Student SES				
Upper	7%	6%	7%	7%
Upper middle	42%	43%	45%	41%
Lower middle	25%	30%	25%	25%
Lower	11%	7%	10%	12%
Mixed	15%	14%	13%	15%

Table 9

Value of Supervision/Assistance Received from Program Personnel

Students rated these personnel on a five point scale. Valuable ratings were considered as ratings of 1 or 2. Not valuable ratings were considered as ratings of 4 or 5.

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Cooperating Teacher				
Valuable	56%	47%	64%	52%
Not valuable	25%	33%	17%	29%
University Supervisors				
Valuable	43%	34%	48%	41%
Not valuable	36%	41%	35%	37%

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
MAT Faculty				
Valuable	33%	31%	40%	30%
Not valuable	41%	42%	36%	44%
Other District Personnel				
Valuable	27%	12%	37%	23%
Not valuable	46%	66%	35%	51%

Table 10

Percent of MATs Who Received Assistance from the Cooperating Teacher and the Type of Assistance Received

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Served as model	38%	31%	40%	37%
Made recommendations for methods/materials	46%	34%	50%	45%
Provide constructive criticism	46%	39%	47%	36%
Gave support	50%	50%	54%	49%
Made suggestions for class management	41%	40%	45%	39%
Provided no help	13%	18%	8%	15%

Table 11

Ratings of Skills/Knowledge Gained Through MAT Program

E = Entrants to teaching
N = Nonentrants to teaching
C = Current teachers
F = Former Teachers

	Large Extent 1	2	3	4	Not at All 5
Organizational Skills					
E	32.3%	27.7%	20.1%	10.5%	9.4%
N	33.6	29.0	16.8	12.1	8.4
C	26.9	29.0	20.7	10.4	13.0
F	34.9	27.1	19.7	10.6	7.6
Management Skills					
E	17.9	23.5	26.1	17.4	15.0
N	19.6	20.6	26.2	16.8	16.8
C	14.6	23.4	26.6	20.8	14.6
F	19.5	23.6	25.9	15.7	15.2
Explanatory Skills					
E	22.3	34.5	26.8	9.5	6.9
N	17.8	31.8	31.8	32.7	9.3
C	20.3	31.3	30.2	8.9	9.4
F	23.3	36.2	25.1	9.7	5.6
Arouse Interest & Enthusiasm					
E	29.1	31.0	24.6	10.0	5.3
N	21.3	36.1	24.1	13.0	5.6
C	27.4	31.1	23.2	11.1	7.4
F	29.9	30.9	25.3	9.5	4.3
Ask Questions					
E	24.5	30.2	26.1	11.4	7.8
N	16.7	31.5	31.5	13.0	7.4
C	21.7	29.1	24.9	14.3	10.1
F	25.9	30.8	26.7	10.0	6.7
Individualize Instruction					
E	13.2	15.8	31.2	22.5	17.3
N	9.2	24.8	33.9	23.9	8.3
C	10.0	14.2	27.9	23.7	24.2
F	14.7	16.5	32.7	22.1	14.0

	Large Extent				Not at All
	1	2	3	4	5
Assess Student Progress					
E	13.3	24.9	30.9	19.5	11.4
N	11.3	28.3	35.8	16.0	8.5
C	14.9	19.1	29.8	19.7	16.5
F	12.5	27.6	31.5	19.4	9.0
Assess Interpersonal Skills					
E	6.0	15.3	30.1	28.5	20.1
N	7.4	17.6	29.6	25.9	19.4
C	4.2	14.6	31.8	28.6	20.8
F	6.9	15.6	29.2	28.5	19.7
Interpret Tests					
E	14.9	22.0	27.1	20.4	15.5
N	16.7	22.2	22.2	20.4	18.5
C	17.7	18.8	27.6	19.8	16.1
F	13.6	23.6	26.9	20.8	15.1
Feel Confident in Class					
E	29.9	29.6	23.2	9.3	8.1
N	23.1	25.0	25.9	17.6	8.3
C	29.2	28.1	22.4	7	12.5
F	30.3	30.3	23.6	[illegible]	5.9
Teach Students from Different Backgrounds					
E	11.7	17.1	26.4	23.6	21.2
N	9.2	19.3	26.6	27.5	17.4
C	8.4	17.8	29.8	20.9	23.0
F	13.4	16.7	24.7	24.9	20.3
Interact with Other Faculty					
E	10.5	16.1	27.8	23.7	22.0
N	6.5	15.9	23.4	25.2	29.0
C	11.5	15.2	27.7	26.2	19.4
F	9.9	16.6	27.8	22.4	23.2
Teach Slow Learners					
E	3.1	9.2	19.0	28.9	39.7
N	1.8	7.3	11.0	38.5	41.3
C	1.0	10.4	18.2	28.6	41.7
F	4.1	8.7	19.4	29.1	38.8
Handle Discipline Problems					
E	5.5	16.6	27.4	26.2	24.2
N	1.8	9.1	27.3	34.5	27.3
C	4.2	18.4	26.8	23.2	27.4
F	6.1	15.8	27.7	27.7	22.6

	Large Extent				Not at All
	1	2	3	4	5
Evaluate Instructional Effectiveness					
E	16.7	27.8	30.8	14.4	10.3
N	15.6	26.6	31.2	18.3	8.3
C	16.7	28.1	28.1	16.1	10.9
F	16.7	27.7	32.1	13.6	10.0
Prepare Teaching Materials					
E	23.8	33.8	25.6	9.9	6.9
N	22.2	27.8	26.9	17.6	5.6
C	19.8	33.9	27.1	10.9	8.3
F	25.8	33.8	24.8	9.5	6.1
Report Student Progress					
E	10.7	24.1	32.8	17.7	14.8
N	7.4	23.1	38.9	18.5	12.0
C	11.5	19.4	34.0	17.3	17.8
F	10.2	26.3	32.2	17.9	13.3
Interact with Parents					
E	3.4	8.2	22.2	27.8	38.4
N	1.9	6.5	18.5	33.3	39.8
C	3.1	8.3	18.2	27.1	43.2
F	3.6	8.1	24.1	28.2	36.0
Gain Further Knowledge of Academic Discipline					
E	35.5	29.3	22.8	8.5	3.9
N	26.7	30.0	18.3	16.7	8.3
C	36.5	32.5	20.3	8.6	2.0
F	35.0	27.7	24.1	8.4	4.8

Table 12

Rating of MAT Components

Respondents rated value on a five-point scale. Ratings of 1 or 2 are classified as valuable; ratings of 4 or 5 are classified as not valuable.

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Education Courses				
Valuable	36.4%	23.1%	31.4%	38.8%
Not Valuable	30.0	31.6	32.5	28.8
Academic Courses				
Valuable	58.9	51.8	67.7	54.3
Not Valuable	18.2	14.3	11.5	21.6

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Internship				
Valuable	84.5	80.2	87.3	83.2
Not Valuable	4.5	10.9	2.5	5.3
Internship Seminar*				
Valuable	48.9	41.7	56.7	45.2
Not Valuable	21.2	31.6	14.4	24.1

*Forty-two percent of the MATs did not rate this component

Table 13

Most Valuable MAT Program Component

	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
Coursework in Education	5.7	9.2	6.4	5.4
Coursework in Academics	22.5	22.0	30.3	18.5
Internship	57.6	58.7	52.7	60.1
Internship Seminar	5.5	1.8	4.8	5.9
Cther	6.6	5.5	4.3	7.8
Multiple Responses	2.1	2.8	1.6	2.4

Table 14

MAT Program Grade

Grade	Entrants To Teaching	Nonentrants To Teaching	Current Teachers	Former Teachers
A	32.5%	25.9%	38.2%	29.6%
B	40.4	34.5	36.6	42.3
C	18.1	20.7	19.9	17.3
D	3.9	12.9	3.1	7.2
F	3.1	6.0	2.1	3.6

Table 15

Current MAT Teachers: Years in Present Position

	< 1yr.	1-4 yrs.	5-9 yrs.	>10 yrs.
Males	2.4%	10.7%	21.4%	65.5%
Females	.9%	27.7%	30.4%	41.1%

Table 16

Characteristics of the Longest Teaching Assignment of Current and Former MAT Teachers and the Current Teaching Assignments of the National Population of Teachers

Key: F = Former Teachers; C = Current Teachers; N = National Population of Secondary Teachers.

School Characteristics

Program Level *

	F	C	N
Senior high	73%	76%	62%
Junior high	30%	21%	31%
Middle	9%	11%	21%
Elementary	6%	10%	6%

Community Type

	F	C	N
Suburban	54%	51%	25%
Urban	27%	27%	21%
Small town	12%	15%	37%
Rural	7%	7%	17%

Size

	F	C
> 1000	44%	53%
500-1000	31%	30%
< 500	14%	11%

Type

	F	C
Public	81%	85%
Private	17%	13%
Parochial	2%	2%

*Percentages may exceed 100% since respondents could indicate all applicable teaching levels.

Table 17

Characteristics of Students Taught and Receipt of Teaching Awards

Racial/Ethnic Composition

	F	C
> 80% white	64%	64%
50-80% white	22%	25%
> 50% minority	11%	14%

Socioeconomic Status

	F	C	N
Upper	10%	7%	1%
Upper middle	37%	39%	21%
Lower middle	24%	27%	42%
Lower	10%	5%	13%
Mixed	19%	22%	23%

Academic Ability

	F	C
1st Quartile	21%	31%
2nd Quartile	29%	30%
3rd Quartile	14%	10%
4th Quartile	6%	5%
Mixed Quartiles	30%	24%

Taught Honors Classes

F	C
46%	73%

Received Teaching Awards

F	C
12%	26%

Table 18

Years in Teaching Following Training

	All	Males	Females
Current Teachers	13.4	14.8	12.4
(SD)	(4.6)	(4.5)	(4.5)
Former Teachers	4.96	5.2	4.9
(SD)	(3.7)	(4.0)	(3.5)
National Secondary Teachers	11.0		
(SD)	(7.2)		

Table 19

Breaks from Teaching

Took a Break from Teaching	All	Males	Females
Current Teachers	53.2%	30.5%	69.4
Former Teachers	29.0%	27.4%	31.9
National Secondary Teachers	27.5%	NA	NA
Years Away			
Current Teachers (SD)	4.3 (3.4)	2.76 (2.3)	4.79 (3.6)
Former Teachers (SD)	3.3 (3.6)	2.1 (1.8)	3.7 (3.9)
Number of Breaks			
Current Teachers (SD)	1.6 (0.8)	1.6 (.7)	1.6 (.8)
Former Teachers (SD)	1.4 (0.8)	1.4 (0.4)	1.6 (0.9)

Table 20

Level of Teaching Positions Held During Career

Current Teachers	All	Males	Females
Secondary	95.9%	97.6%	94.7%
Elementary	17.3%	13.1%	20.4%
Former Teachers			
Secondary	93.2%	96.5%	91.9%
Elementary	16.4%	10.5%	18.7%

Table 21

Three Most Important Original Reasons for Becoming a Teacher

Key: F = Former Teachers; C = Current Teachers; N = National Population of Secondary Teachers.

	F	C	N
Interest in subject matter field	62%	67%	61%
Desire to work with young people	46	51	65
Value or significance of education in society	52	48	38
Influence of a teacher in elementary or secondary school	21	24	25
Influence of my family	15	19	18
Never really considered anything else	14	13	16
Lifetime of self-growth	9	12	11
Job security	8	11	19
Long summer vacation	11	9	22
Employment mobility	7	7	3
Wanted a job with a draft deferment	6	6	2
Influence of college personnel	*	6	7
Program appealed to me in college	4	4	7
Wanted a suitable job until marriage	5	4	2
Wanted a change from other work	2	4	5
Need for a second income	2	1	3
Need for income after termination of my marriage	*	1	1
Financial rewards	1	1	4
Other reasons	13	10	6

*Less than one percent.

Table 22

Most Important Original Reason for Becoming a Teacher

	Current Teachers	Former Teachers
Interest in subject matter field	24%	22%
Desire to work with young people	11%	11%
Value or significance of education in society	22%	23%
Influence of a teacher in elementary or secondary school	5%	6%
Influence of my family	7%	4%
Never really considered anything else	5%	4%
Opportunity for a lifetime of self-growth	3%	3%
Job security	1%	2%
Long summer vacation	2%	1%
Employment mobility	1%	*

	Current Teachers	Former Teachers
Wanted a job with a draft deferment	3%	3%
Influence of a teacher or advisor in college	2%	2%
Preparation program in college appealed to me	0%	0%
Wanted a suitable job until marriage	*	*
Wanted a change from other work	*	*
Need for a second income	1%	*
Need for income after termination of my marriage	*	*
Financial rewards	*	*
Other reasons	6%	10%

*Less than one percent.

Table 23

Current Teachers: Three Most Important Original Reasons for Becoming a Teacher and Current Reason

	Original Reason	Current Reason
Interest in subject matter field	67%	57%
Desire to work with young people	51%	64%
Value or significance of education in society	48%	53%
Influence of a teacher in elementary or secondary school	24%	2%
Influence of my family	19%	2%
Never really considered anything else	13%	4%
Opportunity for a lifetime of self-growth	12%	26%
Job security	11%	22%
Long summer vacation	9%	27%
Employment mobility	7%	2%
Wanted a job with a draft deferment	6%	0%
Influence of a teacher or advisor in college	6%	.5%
Preparation program in college appealed to me	4%	0%
Wanted a suitable job until marriage	4%	0%
Wanted a change from other work	4%	1%
Need for a second income	1%	9%
Need for income after termination of my marriage	1%	2%
Financial rewards	1%	4%
Other reasons	10%	14%

Table 24

Current Teachers: Most Important Original Reason for Becoming a Teacher and Current Reason

	Original Reason	Current Reason
Interest in subject matter field	24%	24%
Desire to work with young people	11%	12%
Value or significance of education in society	22%	23%
Influence of a teacher in elementary or secondary school	5%	1%
Influence of my family	7%	0%
Never really considered anything else	5%	4%
Opportunity for a lifetime of self-growth	3%	10%
Job security	1%	6%
Long summer vacation	2%	3%
Employment mobility	1%	0%
Wanted a job with a draft deferment	3%	0%
Influence of a teacher or advisor in college	2%	0%
Preparation program in college appealed to me	0%	0%
Wanted a suitable job until marriage	1%	0%
Wanted a change from other work	1%	1%
Need for a second income	1%	3%
Need for income after termination of my marriage	1%	2%
Financial rewards	1%	1%
Other reasons	6%	10%

Table 25

Ratings of Satisfaction with Conditions of Teaching*

	Former Teachers	Current Teachers	National Teachers
Flexibility	91%	97%	88%
Fulfillment	78	90	83
Support from other teachers	76	86	80
Up-to-date texts	71	82	75
Student behavior	68	81	66
Parent support	62	71	61
Principal support	64	69	74
Number of students in classes	61	73	65
Fringe benefits	58	72	55
Availability of teaching supplies	68	68	66
Time spend supervising students	68	66	68

	Former Teachers	Current Teachers	National Teachers
Support from teacher organizations	43	63	71
Procedures for handling student misbehavior	56	62	55
Inservice	31	45	48
Time spent on work after hours	41	45	50
Clerical assistance	33	40	40
Media support	53	40	39
Salary	40	38	39
Record keeping and clerical duties	35	36	34

* For MATs, ratings of satisfaction represent the proportion of teachers who indicated they were very satisfied (1) or moderately satisfied (2) with each aspect of teaching on a scale of 1 to 4. For the national sample of teachers, ratings are as reported by the NEA.

Table 26

Would You Teach Again?

Key: C = MATs currently teaching
CM = MAT males currently teaching
CF = MAT females currently teaching
N = National population of secondary teachers

	C	CM	CF	N
Certainly would	23.6%	20.5%	25.9%	18.1%
Probably would	28.7%	37.3%	22.3%	22.2%
Chances are even	22.6%	14.5%	28.6%	18.0%
Probably not	18.5%	19.3%	17.9%	27.5%
Certainly not	6.7%	8.4%	5.4%	14.2%

Table 27

Former Teachers: Reasons for Leaving Teaching

	All	Males	Females
Personal circumstances (marriage, maternity, family responsibilities, relocation, military, retirement, illness, etc.)	29.5%	2.7%	40.4%
Desire to pursue another career	26.7	46.9	18.4
Conditions within the schools (discipline, student motivation, parent/administrator support, intellectual stimulation,etc.)	14.9	15.0	14.8
Multiple reasons	9.2	8.8	9.4
Structure of the teaching profession (standing of teaching as a profession, autonomy, opportunities for advancement, rewards for performance, etc.)	6.9	8.0	6.5
Other reasons	6.2	6.2	6.1
Salary	5.6	11.5	3.2
Reduction in force or termination	1.0	0.9	1.1

Table 28

Would Former Teachers Consider Returning to Teaching?

	All	Males	Females
Yes	59.1%	49.6%	62.9%
No	40.9	50.4	37.1

Table 29

MATs Who Never Taught: Reasons for Not Entering Teaching

MATs who never entered teaching were asked to indicate all of their reasons for this decision.

Wanted to pursue another career	43.5%
Could not find a teaching job	25.2
Did not enjoy the internship	33.0
Went on to further graduate or professional studies	24.2
Went into the military	4.0
More chances for advancement and money in other jobs	33.0
Needed to stay home and care for family	11.3
Other reason	30.4

Table 30

MATs Who Never Taught: Most Important Reason for Not Entering Teaching

	All	Males	Females
Wanted to pursue another career	21.2%	18.4%	22.5%
Could not find a teaching job	15.3	7.9	18.8
Did not enjoy the internship	20.3	10.5	25.0
Went on to further graduate or professional studies	5.9	10.5	3.8
Went into the military	0.8	2.6	0
More changes for advancement and money in other jobs	15.3	31.6	7.5
Needed to stay home and care for family	3.4	0	5.0
Other reason	17.8	18.4	17.5

Table 31

Would MATs Who Never Taught Consider Teaching in the Future?

	All	Males	Females
Yes	50.4%	54.1%	48.8%
No	49.6	45.9	51.3

Table 32

Former Teachers and Those Who Never Entered Teaching: Percent Currently Employed

	All	Men	Women
Former Teachers	78.8%	98.2%	71.0%
Those who never entered teaching	81.8%	99.0%	74.7%

Table 33

Former Teachers: Distribution of Current Positions*

Job Category	Former Teachers	Males	Females
School administrator	6.1% (n=19)	13.5% (n=15)	2.0% (n=4)
District administrator	2.9% (n=9)	3.6% (n=4)	2.5% (n=5)
Other school/district personnel	3.9% (n=12)	2.7% (n=3)	4.5% (n=9)
Teacher education faculty/administrator	2.3% (n=7)	5.4% (n=6)	0.5% (n=1)
Higher education faculty/administrator	19.3% (n=60)	19.8% (n=22)	19.0% (n=38)
Adult education faculty/administrator	2.3% (n=7)	0.9% (n=1)	3.0% (n=6)
Other position in education	11.3% (n=35)	6.3% (n=7)	14.0% (n=28)
Non-education position	52.1% (n=162)	47.7% (n=53)	54.5% (n=109)

*This table includes only MATs who are currently employed. Percents may exceed 100% since some respondents indicated that they hold more than one position.

Table 34

Former Teachers: Distribution of Positions Held Over Career*

Job Category	Former Teachers	Males	Females
School administrator	14.6% (n=58)	28.1% (n=32)	9.2% (n=26)
District administrator	3.3% (n=13)	7.0% (n=8)	1.8% (n=5)
Other school/district personnel	6.0% (n=24)	5.3% (n=6)	6.4% (n=18)
Teacher education faculty/administrator	9.1% (n=36)	15.8% (n=18)	6.4% (n=18)
Higher education faculty/administrator	27.2% (n=108)	27.2% (n=77)	27.2% (n=31)
Adult education faculty/administrator	11.8% (n=47)	8.8% (n=10)	13.1% (n=37)
Other position in education	18.6% (n=74)	11.4% (n=13)	21.6% (n=61)
Non-education position	51.1% (n=203)	50.9% (n=58)	51.2% (n=145)

*This table indicates all positions held since completion of the program. Percentages exceed 100 percent since respondents were asked to indicate all applicable positions.

Table 35

MATs Who Never Entered Teaching: Distribution of Current Positions*

Job Category	Total Who Never Entered Teaching	Males	Females
School administrator	1.0% (n=1)	2.7% (n=1)	0% (n=0)
District administrator	2.0% (n=2)	2.7% (n=1)	1.6% (n=1)
Other school/district personnel	0% (n=0)	0% (n=0)	0% (n=0)

Job Category	Total Who Never Entered Teaching	Males	Females
Teacher education faculty/administrator	2.0% (n=2)	2.7% (n=1)	1.6% (n=1)
Higher education faculty/administrator	16.2% (n=16)	18.9% (n=7)	14.5% (n=9)
Adult education faculty/administrator	0% (n=0)	0% (n=0)	0% (n=0)
Other position in education	11.1% (n=11)	5.4% (n=2)	14.5% (n=9)
Non-education position	66.7% (n=66)	67.6% (n=25)	66.1% (n=41)

*This table includes the MATs who are currently employed. Percents may exceed 100% since some respondents indicated that they hold more than one position.

Table 36

MATs Who Never Entered Teaching: Distribution of Positions Held Over Their Careers*

Job Category	Total Who Never Entered Teaching	Males	Females
School administrator	5.8% (n=7)	10.5% (n=4)	3.6% (n=3)
District administrator	3.3% (n=4)	5.3% (n=2)	2.4% (n=2)
Other school/district personnel	4.1% (n=5)	2.6% (n=1)	4.8% (n=4)
Teacher education faculty/administrator	4.1% (n=5)	5.3% (n=2)	3.6% (n=3)
Higher education faculty/administrator	33.1% (n=40)	34.2% (n=13)	32.5% (n=27)
Adult education faculty/administrator	9.1% (n=11)	7.9% (n=3)	9.6% (n=8)

*This table indicates all positions held since completion of the program. Percentages exceed 100 percent since respondents were asked to indicate all applicable positions.

Job Category	Total Who Never Entered Teaching	Males	Females
Other position in education	30.6% (n=37)	21.1% (n=8)	34.9% (n=29)
Non-education position	71.9% (n=87)	78.9% (n=30)	68.7% (n=57)

Table 37

Background Characteristics of Modern and Older MATs

	Modern MATs	Older MATs
Age at graduation		
25 or less	76.1%	78.2%
26-29	12.6%	12.3%
30-34	6.1%	4.6%
35-39	3.0	2.2%
Over 40	2.2%	2.7%
Sex		
male	37.5%	33%
female	62.5%	67%
Ethnicity		
White	86.3%	96.8%
Black	1.1%	1.5%
Hispanic	5.3%	.6%
Native American	2.1%	.3%
Asian	5.3%	.9%
Parental Occupation		
Professional/ semi-professional	68.8%	47.4%
Managerial/self-employed	21.9%	28.8%
Clerical	1.0%	4.7%
Skilled/semi-skilled	4.2%	12.3%
Unskilled	3.1%	3.5%
Farmer	1.0%	3.2%

	Modern MATs	Older MATs
Undergraduate GPA		
B+ or above	60.0%	61.0%
B or above	96.0%	93.0%
Undergraduate Academic Honors	45.0%	55.0%

Table 38

Prior Professional Experience/Training in Education

	Modern MATs	Older MATs
None	85.3%	79.0%
Prior certification	1.0%	5.0%
Prior teaching	13.7%	5.7%
Prior teaching and certification	0	10.2%

Table 39

Program Attractions

N.B. Respondents checked each feature that was attractive.

Modern MATs	Older MATs	
99%	86%	masters degree and teaching credential in short period
79%	78%	prestige of the institution
42%	66%	coursework in academic discipline
25%	52%	tuition assistance
45%	55%	location of the institution
24%	49%	paid internship
22%	45%	post graduate placement assistance
38%	42%	academic calibre of other students
34%	34%	coursework in education
13%	14%	other attractions

Table 40

Primary Program Attraction

Modern MATs	Older MATs	
56%	43%	masters degree and teaching credential in short period
13%	16%	prestige of the institution
6%	10%	coursework in academic discipline
6%	10%	tuition assistance
5%	2%	coursework in education
3%	4%	location of the institution

(For modern MATs the responses to the remaining attractions were not tallied since there were two or fewer cases for these items.)

Table 41

Subject Areas of Preparation

Modern MATs	Older MATs	
35%	26%	prepared to teach English
31%	28%	prepared to teach History
25%	19%	prepared to teach Science
24%	15%	prepared to teach Math

Table 42

Portion of Tuition Paid Out-of-Pocket

	Modern MATs	Older MATs
All	38.5%	27.1%
> Half	21.9	11.8
About Half	6.3	11.4
	Modern MATs	Older MATs
< Half	21.9	14.7
None	11.5	35.0

Table 43

Proportion Having a Paid Internship

	Modern MATs	Older MATs
Yes	52.9%	79.9%
No	47.1%	20.1%

Table 44

MATs' Ratings of Skills/Knowledge Gained

Substantial Preparation		Inadequate Preparation		M = Modern MATs O = Older MATs
M	O	M	O	
61%	58%	16%	19%	feeling confident in the classroom
58%	60%	15%	16%	arousing student interest
84%	60%	4%	20%	organizing instruction
63%	56%	13%	18%	selecting and preparing materials
56%	56%	15%	16%	explaining
64%	54%	10%	19%	asking questions
61%	44%	16%	25%	evaluating instructional effectiveness
59%	41%	14%	33%	managing a class
44%	38%	25%	30%	assessing student progress
45%	37%	28%	36%	interpreting test results
46%	34%	21%	32%	reporting student progress
28%	30%	33%	38%	Individualization of instruction
42%	28%	32%	45%	teaching students of diverse backgrounds
33%	26%	37%	47%	interacting with other faculty
40%	20%	28%	52%	handling disciplinary problems
30%	22%	41%	48%	assessing interpersonal skills
26%	11%	50%	67%	interacting with parents
23%	12%	44%	70%	teaching slow learners
49%	63%	30%	34%	knowledge of academic discipline

Table 45

Characteristics of the Internship Schools

The following information describes the nature of the schools in which modern MATs (M) and older MATs (O) served their internships.

Program Level*

M	O	
94%	78%	senior high level
3%	24%	junior high level
1%	3%	middle school level
2%	2%	elementary school level

* Graduates were asked to indicate all program levels at which they interned. The above table indicates the percent of students who interned at each level. The percentages exceed 100 depending upon the range of program levels at their internship schools and the number of placements that the interns had.

School Type

M	O	
95%	91%	public schools
2%	7%	private schools
3%	2%	parochial school

School Size

M	O	
83%	51%	greater than 1000
13%	36%	between 500 & 1000
4%	13%	less than 500

Community

M	O	
2%	2%	rural communities
25%	32%	urban communities
71%	60%	suburban communities
1%	6%	small town

Racial/Ethnic Composition of Student Body

M	O	
48%	66%	80% or more white
38%	18%	50-79% white
14%	16%	over 50% minority

Socioeconomic Status of Students Taught

M	O	
41%	42%	upper middle
23%	25%	lower middle
28%	15%	mixed
2%	11%	lower
6%	7%	upper

Table 46

Internship Teaching Responsibilities

M	O	
87%	87%	complete responsibility for classroom teaching
7%	8%	shared responsibilities with classroom teacher
0%	1%	served as aides to teachers
6%	4%	indicated other arrangements

Table 47

Supervision During Internship

The following is the proportion of students who served internships and reported receiving supervision from the following personnel:

M	O	
97%	75%	cooperating teachers
97%	89%	university supervisors
77%	90%	MAT faculty
85%	74%	other district personnel

Those who were supervised rated the value of supervision received by category of personnel. The ratings were based on a 5 point scale with 1 indicating the highest value and 5 the lowest.

The ordering of highly favorable ratings within the range of 1 or 2 for both modern MATs and older MATs were as follows:

Favorable Ratings

M	O	
62%	56%	cooperating teachers
60%	43%	university supervisors
28%	33%	MAT faculty
38%	27%	other district personnel

The ordering of unfavorable ratings within the range of 4 or 5 were:

Unfavorable Ratings

M	O	
33%	41%	MAT faculty
11%	36%	university personnel
42%	46%	other district personnel
16%	25%	cooperating teachers

Table 48

Rating of MAT Components

Respondents rated each component on a five-point scale. Ratings of 1 and 2 were considered as valuable; ratings of 4 and 5 were considered as not valuable.

	Modern MATs	Older MATs
Education courses		
Valuable	51%	35%
Not valuable	14	30
Academic coursework		
Valuable	53	58
Not valuable	19	17
Internship		
Valuable	96	84
Not valuable	0	6
Internship seminar		
Valuable	35	48
Not valuable	28	23

Table 49

Program Grade

Grade	Modern MATs	Older MATs
A	27.4%	17.6%
B	59.5	44.1
C	9.5	17.6
D	3.6	11.8
F	0	8.8

Table 50

MATs' Reasons for Entering Teaching

Modern MATs	Older MATs	Older MATs are those who are currently teaching
60.4%	67.5%	interest in subject matter
61.5%	51.3%	like working with young people
66.7%	47.7%	value to society
14.6%	23.9%	influence of elementary or secondary teacher
4.2%	19.3%	influence of my family
2.1%	12.7%	nothing else considered
29.2%	12.2%	lifetime of self growth
2.1%	10.7%	job security
16.7%	8.6%	long summer vacations
13.5%	7.1%	employment mobility
1.0%	5.6%	draft deferment
5.2%	5.6%	influence of college teacher
1.0%	4.1%	preparation program in college appealed to me
3.1%	1.5%	financial rewards
8.3%	3.6%	change from other work
0 %	1.5%	second income
0 %	1.5%	need for income after divorce
0 %	3.6%	suitable job until marriage
9.4%	9.6%	other

Table 51

MATs' Most Important Reason for Entering Teaching

Modern MATs	Older MATs	Older MATs are those who are currently teaching.
11%	24%	interest in subject matter
21%	11%	like working with young people
37%	22%	value to society
2%	5%	influence of elementary or secondary teacher
0%	7%	influence of may family
1%	5%	nothing else considered
10%	3%	lifetime of self growth
0%	1%	job security
1%	2%	long summer vacations
3%	1%	employment mobility
1%	3%	draft deferment
2%	2%	influence of college teacher
1%	1%	preparation program in college appealed to me
2%	*	change from other work
5%	6%	other

*Less than one percent

Table 52

Modern MATs' Plans Following Graduation

85%	Plan to teach secondary students
3%	Plan to teach elementary students
2%	Plan to pursue a nonteaching position within education
1%	Plan to pursue a job outside of education
2%	Plan to continue their graduate studies
1%	No immediate plans
5%	Other plans

Table 53

MATs Long-term Plans for Careers in Teaching

34%	Plan to make teaching their career
7%	Plan to teach for a while then move into education administration
31%	Plan to teach then pursue something else
25%	Did not know their future plans
2%	Something else