

ABSTRACT

SUPERIOR STUDENTS' PERCEPTIONS OF COLLEGE TEACHING AS A CAREER: IMPLICATIONS FOR ACADEMIC RECRUITMENT

by Robert C. Andringa

Very few institutions of higher learning have undertaken organized programs to interest bright undergraduates in college teaching as a career. The purpose of this study was to produce new information which would better define the need for undergraduate recruitment of prospective college teachers and suggest directions such recruiting efforts might take. To that end, superior students at Michigan State University were surveyed to discover factors influential in their career decision-making, their perceptions of college teaching, and the chances of their pursuing academic careers. An ancillary survey of department chairmen at Michigan State assessed their views of faculty supply and demand, identified departmental efforts at undergraduate recruitment to the academic profession, and measured interest in a University sponsored undergraduate recruitment program.

Method

The student sample consisted of 954 juniors and seniors who were enrolled as full-time students with at

least a 3.20 cumulative grade average (4.00 scale). A 48-item multiple-choice questionnaire, designed especially for this study after a series of student and faculty interviews, was returned by 88% of the sample, including 431 males and 407 females. Although several tentative hypotheses provided direction for the research design and a basis for data evaluation, no experimental hypotheses were developed that allowed for statistical determination of acceptance or rejection. Nevertheless, the data were analyzed, using chi-square, on the University's CDC 3600 computer to identify significant associations between student responses and previously determined variables such as sex, college major, and career choice. The department chairman questionnaire, consisting of four open-ended questions, was returned by 64 of the 69 to whom it was sent. The results of this questionnaire were coded and tabulated by the investigator.

Findings

1. Seven out of ten students decided upon their present career choice after college enrollment, but a sizeable minority were still uncertain about their career plans.
2. Four out of ten had never seriously considered college teaching as a career possibility.
3. Seven out of ten had never been singled out by a faculty member and encouraged by him to consider the academic profession; nine out of ten had never been in a group situation where information about the academic profession was a planned activity.

4. More than nine out of ten believed that colleges and universities could do much more to interest good undergraduates in the college teaching profession.
5. College teachers had the greatest influence on students' perceptions of college teaching as a career.
6. Interest in students and ability to lecture were perceived as most important for college teachers.
7. Six out of ten thought faculty advancement was based more on research and writing than on teaching ability; only one out of ten agreed with this supposed emphasis on research.
8. Almost one out of five identified college teaching as his present career choice; an additional three out of five left open the possibility of an eventual academic career.

The results of the department chairman questionnaire provided considerable support for undergraduate recruitment. A large majority of the chairmen reported that their discipline has problems finding enough qualified teachers, both nationally and, somewhat to a lesser degree, in their own department. With a few minor exceptions, none of the departments was making any special effort to encourage its most able undergraduates to consider college teaching as a career possibility. But only 25% of the chairmen responded negatively when asked whether the University should consider an organized program to identify and recruit prospective college teachers from the undergraduate student body.

Implications

Two major implications of this research were discussed in the dissertation followed by suggested guidelines for a voluntary recruitment program. First, enough superior undergraduates (185 in this study) anticipate careers in higher education to warrant special efforts to orient them to their future profession. Second, the large number of superior students who are yet unsure about their career plans and express interest in discovering more about the college teaching profession, and the decided concern of department chairmen, more than justify serious commitment to institutional undergraduate recruitment.

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CHAPTER I

THE PROBLEM

The keystone to all which follows is this general proposition: the number and the quality of college teachers can and must be increased in the years ahead. Population growth and inflated proportions of college-age youth demanding higher education combine to accelerate the need for more teachers. Increasing dependence on colleges and universities to acquaint young men and women with the significance of the past and the complexities of the present; to teach professional and technical skills; to extend the frontiers of knowledge; and to initiate programs for the solution of world problems, together mandate the academic profession to seek the highest quality of personnel it can possibly attract.

Introduction

Innumerable studies dramatize the need for more college teachers in the years ahead. With only a few dissenting opinions, most educators agree that something drastic must be done to avert a serious shortage of qualified teachers--indeed, many say the problem has already reached

crisis proportions. James T. Rogers completed a comprehensive study of projected staffing needs for a five year period ending in 1969. This survey of the nation's colleges and universities indicated that the projected number of doctoral graduates would meet less than one-third of the projected need for professional personnel (21). Raymond Maul reported that in 1964, 940 colleges and universities out of 1,084 sampled by the N.E.A. thought the teacher shortage was "critical," and 826 predicted the shortage would become even more severe in the future (18:264).

Quality of faculty is much more difficult to assess. But higher education has been slow to recognize that no profession, regardless of current personnel supply and demand, can afford to limit efforts to increase the quality of its membership. For well-known reasons, most small colleges have more difficulty recruiting high-quality faculty than do prestige colleges and universities. But even students in many of our major universities increasingly voice dissatisfaction with the quality of teaching they receive. The point to be made here is simply this: increasing the quality of faculty members ought always to be a major concern of higher education.

Proposals to combat the problem of inadequate supply and quality of college teachers come forth with predictable regularity. These proposals suggest many courses of action for individual colleges and universities: restrict

enrollment; increase class size; make broader use of technological aids; hire retired people; use more part-time teachers; increase emphasis on independent study; develop terminal degrees less demanding than the Ph.D.; require pre-service and in-service training for college teachers. All of these proposals have considerable merit, and many people have committed time, talent, and money to their development.

The solution proposed by this study, however, requires more farsighted and imaginative action than most of the proposals mentioned above; namely, to increase the supply of qualified college teachers through identification and recruitment programs at the undergraduate level. The academic profession today works at early recruitment of prospective personnel most irresponsibly. Institutions of higher education have little cause for complaint when a laissez-faire system of supply, dependent primarily on self-selection, results in personnel resources inadequate to their needs.

So it seems important to explore the possibilities of better recruitment practices at the undergraduate level. But before recruitment programs can be planned, it is essential that an assessment be made of the perceptions of college teaching now held by students with high academic achievement, i.e., those with the potential for college teaching. And since the recruitment of prospective college teachers depends in large part on faculty support, the

faculty's expression of need for and interest in undergraduate recruitment ought also to be measured.

Purpose

The chief purpose of this study, then, is to discover new information which might define the need for and suggest the direction of an organized, institutional recruitment program for prospective college teachers. More specifically, the purpose is to identify current career decisions of superior upperclassmen at Michigan State University, and to gather and analyze these students' perceptions of college teaching as a career. Ancillary to this main purpose is the objective of gathering observations of department chairmen at Michigan State concerning their staffing problems and the prospect of undergraduate recruitment as a partial long-range solution.

Assumptions and Hypotheses

No research hypotheses are to be tested experimentally in this study, but the thesis rationale and design are predicated upon certain assumptions and tentative hypotheses. The assumptions are listed here to provide background and lend perspective to the chapters which follow:

1. The academic profession is in constant need of qualified personnel, both to meet the requirements of staff turnover and to increase the total number

of college teachers during a period of rapidly expanding enrollments.

2. To attract its share of the nation's talent, the academic profession will have to increase recruiting efforts in order to compete successfully for qualified manpower with business, industry, and government.
3. The academic profession does far less than it could to interest capable undergraduates in college teaching careers.
4. For the supply of high-quality college teachers to approximate future demand, colleges and universities must themselves accept increased responsibility for recruiting prospective college teachers from among their most gifted undergraduate students.

It may be possible to question the formulation of these assumptions, but in substance they are accepted by most educators concerned with academic recruiting and hiring. An attempt to document these assumptions is made in the next chapter, for to this study they are basic.

Tentative hypotheses, developed through a review of the literature, a series of interviews with undergraduate students, and personal experience, provided the major direction for the design of the research described in Chapter III. Although these hypotheses represent more than mere conjecture,

they are not yet developed sufficiently to withstand statistical determination of acceptance or rejection. Therefore, they can serve only as guideposts for the research design and suppositions against which the data can be evaluated.

1. Many academically superior undergraduates never seriously consider college teaching as a viable career choice.
2. Wide differences of opinion about preparation, qualifications, roles, and responsibilities of college teachers exist in the minds of the best undergraduates.
3. Superior undergraduates are not provided with adequate information about college teaching as a profession, but many would like to have this information.
4. Most undergraduates who have already decided on a college teaching career did so in their junior or senior year in college.
5. The main reason many students reject the academic profession is not low salaries, as is often suggested in the literature.
6. Faculty members, through personal influence, represent the greatest single potential for recruiting undergraduates to an academic career.

Definitions of Terms

There are several terms used throughout the study which are clarified here:

1. Superior Student: A student at Michigan State University who had at least a 3.20 cumulative grade average (on a 4.00 scale) and from 100 to 160 total credits at the end of Fall quarter, 1966, and who enrolled as a full-time student Winter quarter, 1967.
2. Perception: A current image, attitude, or opinion formed by one's knowledge and past experiences.
3. College Teacher: A person employed by an institution of higher education whose primary task is classroom teaching and related functions.
4. Recruitment: In this study, a broadly defined, but organized, process of providing information, orientation, and experience relating to a specific vocation--not to include the actual process of hiring a person for a particular job.

Overview of the Study

The next chapter includes a review of significant literature dealing with the supply and demand of college teachers, studies of faculty, studies of students, and current efforts at undergraduate recruitment of prospective college teachers. The population for the study, selection

of the sample, instrumentation, data collection, and method of analysis are presented in Chapter III. The presentation of findings comprises Chapter IV, followed by a summary of the research and conclusions in Chapter V. Recommendations for future recruiting efforts at the undergraduate level are suggested in the last chapter.

CHAPTER II

REVIEW OF THE LITERATURE

Only that literature reviewed which proved most pertinent to the dissertation is mentioned in this chapter. Some knowledge of faculty supply and demand seems necessary to capture the full import of undergraduate recruitment; a brief overview to that end is included. Following that are sections devoted to studies of faculties, studies of students, literature pertaining to undergraduate recruitment, and discussion and implications for the research described later in the study.

Faculty Supply and Demand

The National Education Association publishes a biennial report on the supply and demand of college and university faculty. Its most recent study indicates that in 1963-64 there were 14,490 doctoral graduates, 48.4% of whom continued in or entered college teaching. This percentage of new doctorates available to higher education has remained fairly constant over the past decade. The sample of 1,084 degree-granting institutions employed 16,059 new (first-time) teachers in 1964-65, 27.2% of whom had a doctor's degree.

The percentage of newly employed teachers holding a doctorate has decreased a small amount in each of the past several years (25:13-59). Ray Maul, the director of this N.E.A. investigation, reported that over 86% of the institutions in the 1964-65 survey termed the shortage "critical" and some 76% looked to an even more acute situation in the future (18:264-265).

The most comprehensive study of current staffing and projected staffing needs in colleges and universities covered 1,809 institutions, together enrolling 97.1% of all students at American colleges and universities in October 1963. This U.S.O.E. study reported that in 1963, these institutions employed a total of 349,386 professional staff: 264,613 full-time and 84,773 part-time. Of the total, 40.3% held the doctorate. The institutions reported that they would need 199,138 full-time professional staff, 51,438 for replacements and 147,700 for additions, from November 1963 through October 1969 (22). A little figuring demonstrates that, keeping the percentage of doctorates at 40.3, the colleges and universities would need some 80,253 new doctorates entering the field of higher education during this time span--an average of 13,375 per year. Since Maul reported that only 7,000-plus doctoral graduates continued in or

entered college teaching in 1963-64, the serious staffing shortage appears indisputable.¹

There is, however, a respected minority dissent to the grave predictions promulgated by Mr. Maul, the U.S.O.E. et al., that should not be ignored. Allan M. Cartter suggested in 1966 that, "there is, indeed, some cause for concern about the next several years, but the long view clearly indicates that the present academic year represents the peak of our difficulties, and that the situation is likely to improve over the next decade" (5:99). His confidence is due, in part, to an estimation of the teacher replacement rate at 2% or less each year rather than the 4% or 6% commonly mentioned by others. He also suggests that once the rate of increase in enrollment subsides, the demand for new teachers will ease during succeeding years so that in some fields even a surplus of teachers might exist.² Some reasons for

¹For additional literature which highlights the teacher shortage, see: John W. Gustad, Faculty Supply, Demand, and Recruitment (Massachusetts: New England Board of Higher Education, 1959); Oliver C. Carmichael, Graduate Education: A Critique and a Program (New York: Harper & Bros., 1961); Earl J. McGrath, The Quantity and Quality of College Teachers (New York: Teachers College, Columbia University, 1961); The Flight From Teaching (New York: Carnegie Foundation for the Advancement of Teaching, 1964); and David G. Brown and Jay L. Tontz, "The Present Shortage of College Teachers," Phi Delta Kappan, XLVII (April, 1966), 435.

²For another optimistic view of the nation's long-run staffing problem, see: Bernard Berelson, Graduate Education in the United States (New York: McGraw-Hill Book Co., 1960).

the seeming contradiction of views are suggested later in the chapter.

Studies of Faculty

John E. Stecklein and Ruth E. Eckert published one of the first comprehensive studies of factors influencing faculty members to join the academic profession. Some 706 faculty members from 32 public and private institutions in Minnesota responded to their questionnaire in 1957. An initial report was published in 1958 (24), followed by a Cooperative Research Monograph in 1961. Several of the findings reported in the latter publication are listed here:

1. They had not seriously considered college teaching as a career goal until rather late in their schooling. . . . Nine percent said they had given some thought to this career before they entered college, and 38 percent had begun to think seriously about it while still undergraduates, but only 1 faculty member in 8 reported this as his actual career goal at the time he graduated from college.
2. College teachers had suggested this career to about a fourth of them; a similar proportion, overlapping considerably with the first group, stated that some college administrator or counselor had talked to them about career prospects in this field.
3. In recommending measures that might encourage capable young people to enter college teaching, they overwhelmingly stressed higher salaries. Other suggestions included a wider search for promising candidates, more information on the advantages of academic life, broader scholarship and financial aid, and better counseling for prospective teachers.

4. Highly satisfied teachers had usually chosen this field quite early, and had received more active encouragement in this direction from parents and teachers (9:79-82).

Stecklein and Eckert concluded from these results, among other things, the following:

1. Many college teachers, it seems, drift into this field rather than enter it by clear design. . . . The present findings point up the need for a well-organized effort to identify and enlist promising candidates for future service as college teachers.
2. College teachers are serving, for the most part, in institutions similar to those in which they took their undergraduate work. This suggests the need for special recruitment measures in each type of college, if the future of that program is to be soundly assured (9:82-83).

In a separate article, Eckert reported that the faculty members in this study agreed that any recruitment effort should be focused only on students who give promise of becoming effective teachers and scholars. Teachers themselves emphasized the need for greater involvement on their own part in the recruitment effort (8).

Another major study of college faculty members was completed in 1960 by John W. Gustad for the Southern Regional Education Board. Both present and former college teachers of chemistry, English, and psychology from several colleges and universities in the South participated in the study. The major influence on the decision to enter the academic profession for those in the sample was traceable

to their own college teachers. Concerning this decision, Gustad reported the following:

The entry process appears to be the end product of drift with little or no attempt being made in most cases to guide able students in the direction of teaching. It is impossible to estimate how many potentially able college teachers are lost through this haphazard recruitment process. The number is probably large. Considering the present and anticipated shortages of teachers, it would appear to be high time to look into better guidance and recruitment practices (11:6).

This quotation, which reads as if it were written expressly for this dissertation, is tempered somewhat by other observations in the Gustad report. Although college teachers did tend to drift into the profession, their entrance was not purely by chance, but it was the result of much less planning than went into decisions for law or medical careers. The academic decision is often a result of certain patterns of values learned through many experiences related to scholarship, often beginning at an early age, such as parental and school rewards for academic achievement, peer group associations, etc. Nevertheless, the entire report implicitly, if not openly, suggests that much more can be done to increase the number of decisions to enter college teaching, and that teachers themselves are primary role models who can influence significantly such decisions.

Studies of Students

The single most widely cited research on undergraduate attitudes toward college teaching as a career was done by Mary Kinnane in 1960, under the sponsorship of the New England Board of Higher Education. She sampled 4,000 sophomores, juniors, and seniors who had at least a B average, from 45 colleges and universities in 6 New England states. Following are quotations from her report:

1. The dominant image these students have of the college teacher is that of the lecturer.
2. They rate research and publication as the principal basis for promotion.
3. Graduate school training should be geared primarily to producing an articulate person who teaches and communicates effectively.
4. In general, students seem to be misinformed on the existing salary rates for college professors.
5. Most college students feel that the general public rates [the prestige of] the college teaching profession below medicine and law. Fifty-two percent of . . . [the college students] rate it equal to or higher than medicine and law.
6. Fifty-nine percent of the total group think the decision [to enter the teaching profession] is made in the last two years of college.
7. An overwhelming majority of students believe that the person principally influencing students to a career in college teaching is the college professor.
8. Only 14% indicate that college teaching is now their first choice. However, one third of the respondents place college teaching as their first, second or third choice (15:7-21).

Kinnane later discovered that these perceptions agreed substantially with those of graduate students on Woodrow Wilson fellowships (16).

In another study, fifty senior men from three Minnesota colleges reportedly had generally positive attitudes toward an academic career, but differed in their characterizations of good and poor college teachers. These B or better students revealed that decisions to enter college teaching came at different times according to major fields, and that the prospect of college teaching was more appealing to humanities students than to those in the sciences. In all, one-third of the sample actively planned academic careers, but 57% of the humanities majors were planning on college teaching. More than 80% of the prospective college teachers regarded college faculty members as their most important counselors on career matters; most students minimized the importance of their family in career planning (6). A follow-up study of this same group of students was made after their graduation. While 4 of the original 50 had decided on college teaching during high school and 17 reported similar decisions in their senior year of college, the follow-up study revealed that 19 were planning at that point to become college teachers (17:6).

Several studies by the National Opinion Research Center have contributed to our knowledge of career decision-making processes. College male seniors, in one of these

studies, were 20 percent more likely to expect academic careers if their fathers had at least some college education than if their fathers had no more than a high school education. Jews were more likely than Protestants, and Protestants more likely than Catholics, to choose academic careers. Graduates of high quality colleges and universities were considerably more likely to expect academic careers than those of lesser quality schools (26). Thus, social background, religion, and college environment are identified as factors operative in the decision to enter the academic profession.

Recent research in Michigan, concentrating on male college seniors in 5 liberal arts colleges, concluded that it is possible to identify prospective college teachers during the undergraduate years. Prospective college teachers tend to come from a lower socio-economic background than business-oriented students; to have high academic records; to participate in cultural and intellectual activities; to value themselves as individualists and as leaders who possess insight about themselves. They perceived themselves as rather far from where they would like to be in friendliness, attractiveness, competence, intelligence, and breadth of interests. Of this group, 53% reported that faculty members had been the major influence on their career choice, but only 19% of the business-oriented students viewed the faculty in this way (1:15-17).

Undergraduate Recruitment

Of the many suggested solutions to college staffing problems, undergraduate recruitment is usually more recognized in the literature than practiced on the campus. The substance of much of this literature is adequately summarized in the following appraisal by Max Wise of the Danforth Foundation:

Colleges, by and large, have maintained a passive role in helping to develop needed faculty. . . . Except for arranging an occasional meeting to interest undergraduates in college teaching as a possible career . . . college faculties have shown little imagination in stimulating the interest of able undergraduates in college teaching.

Few colleges have developed long-range programs to meet predictable needs for faculty. Most colleges recruit faculty when a need arises, or even afterwards. This seems to be in sharp contrast with the practices of major industries in the United States (even of some governmental agencies).

It is my belief that if major segments of American industry had shown as little imagination and as little initiative in attempting to plan ways to meet their needs for trained personnel, they would long ago have collapsed (27:2-3).

For the most part, active recruitment programs have originated not from individual faculties, but from national and regional education organizations such as the Woodrow Wilson Fellowship Foundation; the Danforth Foundation; the Association for Higher Education; the Ford Foundation's Three-Year Master's Degree Program; and the College Teacher Project of the North Central Association. Several of these

and other organizations have published pamphlets on the college teaching profession and sponsored conferences to stimulate recruitment on the college and university campus.

The best survey of campus recruitment programs was done by the Association of American Colleges, which reported that some 284 out of 599 responding institutions indicated they were actively engaged in projects for the "identification and motivation" of future college teachers (20). The North Central Association reported that 71 of 283 institutions it surveyed described some sort of program for the identification and recruitment of promising undergraduates (7). Several institutional members of the Western Interstate Commission for Higher Education likewise are said to be engaged in similar efforts (14). These three publications indicate at once a significant number of individual programs, yet point dramatically to the vast number of institutions which have not made any commitment whatsoever to the recruitment of prospective college teachers.

These campus programs vary drastically, from "our faculty members talk informally with their good students about graduate study and college teaching" to highly organized programs including undergraduate seminars on higher education and the academic profession, undergraduate teaching assistantships, and academic internships. Typically, the more structured programs also include means of informing undergraduates about financial aids for graduate study and

helping students select a graduate school. Overall, the informal, unstructured recruitment programs--if they can be called that--far outnumber the well-thought-out and dynamic programs.

Discussion and Implications

It is, of course, impossible to make precise predictions of the supply and demand for college teachers in the future. Before estimations can be calculated, several basic decisions must be made, many of which can be no more than value judgments or the result of guesswork, such as: the proper student-teacher ratio to use; the percentage of college-age youth who will desire higher education in the next decade; the percentage of doctorates in the profession necessary to maintain the current level of quality; the replacement rate, representing those lost through transfer out, retirement, or death; the emphasis which higher education will itself place on the doctor's degree as a requirement for college teaching; and the degree of competition for Ph.D. graduates which business, industry, and the government will provide in the future. With such elusive variables, one is able to significantly affect predictions for both supply and demand depending on how he manipulates these variables.

One additional weakness in many predictions is the relatively small number of institutions surveyed before conclusions are drawn--less than 800 in Cartter's study. The

outlook for the better accredited colleges and universities is understandably much brighter than for the hundreds of other four-year and community colleges. The crisis, if there be one, will be confronted most by the small and developing institutions.

Regardless of the outcome of the debate over supply and demand of college teachers, the academic profession must still maintain an interest in upgrading its personnel to the highest level possible. But a profession lacking in manpower can hardly be as selective as it must be if it wishes to add only fully qualified personnel to its ranks. Thus, it would appear that increasing supply, up to and beyond the calculated need, is one means of helping to increase quality.

Studies of faculty and of students reported earlier contribute much to an understanding of the way academic career decisions are made and, in turn, to possible directions undergraduate recruitment might take. Kinnane, Eckert, Grey, and Gustad all discovered that the individual faculty member is a most significant external influence on decisions for an academic career. And the National Opinion Research Center declared that the social background of students and the quality of the institution (measured, in part, by the quality of the students it admits) play an important role in an eventual academic career decision. If, then, the students, the faculty, and the institution are all important variables in this process, it follows that recruiting

efforts should not only be locally inspired, but should begin with an assessment of what is and what could be at a particular institution, in terms of recruitment, given its unique student and faculty population. Consequently, a study of superior students' perceptions of college teaching as a career (at least for purposes of developing institutional recruitment programs) might best be limited to students on one campus rather than include a great number of students scattered throughout many diverse campuses. This rationale influences to a considerable degree the research design outlined in Chapter III.

CHAPTER III

DESIGN OF THE STUDY

The research portion of the study is described in this chapter, including discussion of sampling procedures, instrumentation, data collection, and methods of analysis. A separate survey, involving department chairmen at Michigan State, is described in the last section.

Population and Sample

The population of this study included only undergraduate students who might be considered potential college teachers. As mentioned in the last chapter, previous research identifies several collegiate variables, including student mix, as perhaps the most significant variables which affect decisions to enter college teaching. Furthermore, much of the literature indirectly suggests that recruitment programs could make the most significant impact when they are focused primarily on the campus. For these reasons--the primacy of institutional factors on student perceptions toward college teaching and the need to focus recruiting efforts on the individual campus--this study concentrates on students at one campus, Michigan State University.

Limitation of the population to one campus also allows more precise analysis of data because there are fewer uncontrolled variables to account for.

A second consideration in defining the population was class level, or year in school. Faculty members who were consulted on this point agreed that a person usually decides upon a major field of study before seriously considering the profession of college teaching. Consequently, freshmen and sophomores were excluded from the population, since at Michigan State a student may easily change majors or remain "no-preference" until he reaches junior standing.

Finally, some measure of academic potential was required. Grade point average served as the measure of this variable because it is common to all students, it is based upon several terms of work for upperclassmen, and access to grade averages is easily achieved through data processing equipment. A cumulative average of 3.20 on a 4.00 scale was the minimum grade average accepted in this study, primarily because most students with such an academic record could be accepted into graduate school--assumed, for purposes of this study, a prerequisite for prospective college teachers.

The sample to which questionnaires were sent included most of the students described in the population, with certain exceptions. Only students enrolled full-time on the campus during Winter quarter, 1967, were included on the assumption that this criterion eliminates most of those

adults already settled in the world of work, but attending the University for a course or two each quarter. In addition, boundaries of 100 and 160 total credits earned at the end of Fall quarter, 1966, effectively eliminated first-term juniors (to be certain everyone in the sample was secure in a major) and last-term seniors (who are too busy for questionnaires and might be overly biased by a recent commitment to a particular job or graduate program).

Once the sample was thus defined in operational terms, the M.S.U. office of Data Processing produced a list of 975 students who met all the criteria. This list included name, student number, local address, phone number, class, sex, level, and curriculum for each student.

Instrumentation

No instrument adequate to the needs of this study was found in the literature, thereby requiring the development of something new. A fixed-response questionnaire was decided upon because of the ease of administration, the comparability of data received, and the more precise analysis of information which it allows. To accomplish the task of developing a new instrument, several resources were called upon: past research, literature on questionnaire construction and design, faculty members experienced in social science research, and other members of the University community.

Objectives

The objective set for the research instrument was primarily to investigate the six tentative hypotheses presented in Chapter I. Additional clarity of purpose for the questionnaire resulted from attention to several more general objectives, listed here in question form:

1. In what career fields do superior students now plan to enter? When, and under what influences, were their decisions made?
2. How do students perceive the necessary preparation, roles, functions, and remuneration of college teachers? What has influenced these perceptions?
3. When did superior students first consider college teaching as a career for themselves? Under what conditions would they be more interested in the college teaching profession? How do they perceive themselves as prospective college teachers?

Student Interviews

A rather long series of questions was developed, after consultation with several students and faculty members, to put the objectives of the survey instrument into operative form. These questions provided the framework for planned, semi-structured interviews with selected students. The purpose of these interviews was simply to gain information which would make the final questionnaire more relevant to the objectives of the study and, in so doing, establish

a higher degree of validity than might otherwise have been possible.

Twenty students were randomly selected from all of the degree-granting colleges that had juniors and seniors and were invited by letter to meet for an interview. The sample included eight women and twelve men, all of whom had at least junior standing and a 3.20 grade average. Each student was interviewed for approximately one hour. (A copy of the introductory letter and an interview schedule can be found in Appendix A.) Conversation was guided by the interview schedule, but often extended into different dimensions of career planning and unanticipated areas of college teaching. During the interview brief notes were made on the interview sheet, but soon after a complete report of the interview was put on Dictaphone tape, later to be typed and carefully analyzed.

As a result of these interviews, new areas of inquiry emerged and many of the initial questions proved unimportant. For the investigator, sensitivity to the use of certain terminology and expression was increased. The level of knowledge about college teaching common to most students was more clearly understood. Certainly, the validity of the final form of the instrument was enhanced by this phase of the study.

Questionnaire

The interview results injected direction and relevancy into the construction of a questionnaire. Several drafts were drawn, criticized by others, and drawn again. Having decided to exclude open-ended questions, one of the most difficult tasks was insuring that the fixed answers provided for all predictable responses, and that these fixed answers would project the same meaning to all students.

Finally, a draft of the questionnaire met the approval of several faculty consultants. Mimeograph copies were distributed with a cover letter (Appendix B) to a pilot group consisting of 20 students and 6 faculty members. These 26 were not selected randomly, but rather because they were known and could be expected to give serious thought to their reactions. All respondents wrote comments in the margins of the questionnaire; most discussed them in person as well.

This last phase, the pilot study, proved to be the most useful phase in the construction of the questionnaire. The faculty consultants, having reacted to earlier drafts, found little to criticize at this point. But the students identified several weak questions, misleading responses, and unclear terminology. Careful scrutiny of their comments resulted in a reduction of questions from fifty-three to forty-eight. The questionnaire, as it was finally printed, and a copy of the answer sheet appear in Appendix C.

Data Collection

Questionnaires were sent to 961 students; 14 students who participated in the pilot study were listed originally in the sample, but were not sent questionnaires. Seven envelopes came back by return mail, indicating that these students had withdrawn from school or had moved without leaving a forwarding address. Thus, the effective total sample was 954. Of these, 444 lived in residence halls and 510 off-campus. There were 456 Honors College students and 498 not in the Honors College. The distribution by college and sex was as follows:

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Agriculture	36	2	38
Arts & Letters	76	117	193
Business	89	17	106
Communication Arts	20	22	42
Education	5	99	104
Engineering	45	0	45
Home Economics	1	40	41
Natural Science	114	56	170
Social Science	114	89	203
Veterinary Medicine	<u>7</u>	<u>5</u>	<u>12</u>
Total	507	447	954

Eight days after the first mailing, 68% of the questionnaires had been returned. Although the announced deadline was yet a few days away, reminder letters (see Appendix D) were sent at this point to the remaining 328 students.

Fourteen days were given in total to data collection, at the end of which 843 answer sheets, or 88.4% of the

mailing, had been returned. Females had a higher return (90.2%) than males (84.8%); Honors College students had a higher return (89.7%) than those not in the Honors College (86.1%). The return by degree-granting college varied from 75% in Communication Arts to 100% in both Engineering and Veterinary Medicine.

After eliminating 5 blank or incomplete answer sheets, the remaining 838 were submitted to the Office of Evaluation Services for scoring on the IBM 1230 Optical Scanner Scoring Machine. Evaluation Services also punched the answers into data processing cards.

Analysis of the Data

The exploratory nature of this study precluded elaborate statistical analysis of the information gathered through use of the questionnaire just described. Rather, the descriptive profile of superior students in relation to perceptions of college teaching as a career had to be evaluated somewhat subjectively with constant reference to the guidelines presented in Chapter I. Statistics supplemented this evaluation, but could not in themselves prove or disprove anything, for no hypotheses were put forward in testable form.

As mentioned earlier, the validity of the questionnaire was enhanced by an initial series of interviews and a pilot study. After the questionnaires were returned, a

comparison was made between what those who were interviewed said in the interview and what they reported subsequently on their answer sheets. The reliability proved high between the two responses.

Once the information was transferred from answer sheets to punched cards by Evaluation Services, the Computer Center analyzed the data on the Control Data Corporation 3600 computer. A program entitled Analysis of Contingency Tables (ACT) had previously been determined the most effective program since it included chi-square computations (23). The non-parametric statistic chi-square was selected as the best way to expose statistical association between variables because of the nature of the data, the large sample size, and the independence of each response (13:589-97). The data were analyzed with the ACT program from six different perspectives:

1. Male vs. female
2. By degree-granting colleges
3. By sex within each college
4. Honors College students vs. non-Honors College students
5. By career choice (from item 7, higher education vs. all other career choices)
6. By colleges grouped
 - a. Education (all those who answered no. 3 on item 7 plus all College of Education majors)

- b. College of Arts and Letters
- c. College of Natural Science
- d. College of Social Science
- e. All other colleges.

All students who predicted for themselves a career in elementary or secondary education in item 7, regardless of their major field, were put in one category in the "Colleges grouped" analysis because of the assumed similarity of their career goals and attitudes toward teaching.

Both theoretical and observed frequency, frequency percentage, and chi-square were reported for each cell in the contingency tables. The .05 level was selected prior to receiving the data as the point of declaring statistical significance for association between the variables within each of the six perspectives outlined above.

Survey of Department Chairmen

This last section explains a small survey, ancillary to the main focus of the thesis, but nonetheless important to a more complete understanding of the total problem. Much of the research reviewed in Chapter II indicated that faculty members must play an integral part in any successful recruitment program for prospective college teachers. To capture the faculty's attention and interest, a real need for recruiting efforts must be clearly and forcefully demonstrated. These two observations led to the development of a

brief, but pointed, questionnaire for department chairmen at Michigan State University.

The questionnaire was sent with a cover letter to each of the sixty-nine department chairmen at Michigan State who have a responsibility for undergraduate programs (see Appendix E). Each chairman was asked to respond to four questions, inquiring about: (1) Problems of recruiting qualified staff from a national prospective; (2) Local recruiting problems; (3) Activities in the department aimed at the recruitment of prospective college teachers; and (4) The need for the University to do more than it does to identify and recruit prospective teachers and possible directions such effort might take. Following each question, space was provided for the chairman to respond in his own words.

Sixty-four chairmen (92.7%) returned the questionnaire. Responses to the first two questions were analyzed to assess the department chairmen's perceptions of staff supply and demand. Answers to the last two questions provided an indication of current recruiting activity and openness to additional recruiting efforts. Although such analyses lack the precision of a more objective survey, some categorization of responses is attempted in Chapter IV.

Summary

Some 954 upperclass students at Michigan State University with at least a B-plus grade average were sent a 48-item questionnaire and answer sheet. The questionnaire, designed especially for this study after a series of student interviews, investigated the tentative hypotheses proposed in Chapter I and sought additional information concerning present career choices of superior students. Answers from the 838 returned questionnaires were punched on data processing cards and analyzed using chi-square to identify statistical association between student responses and pre-determined variables, mainly, sex, college major, and career choice.

To investigate the faculty's analysis of the teacher shortage, to discover what is now being done at Michigan State to identify and recruit undergraduates to the academic profession, and to assess the faculty's acceptance of such recruitment programs, a brief questionnaire was sent to 68 department chairmen, 64 of whom responded.

CHAPTER IV

PRESENTATION OF FINDINGS

Results of the research surveys are presented in this chapter under two main headings: Superior Student Questionnaire and Department Chairman Questionnaire. In the first section, data are grouped according to demographic information, present career decisions of superior students, each of the six tentative hypotheses listed in Chapter I, and data relevant to the personal appeal college teaching as a career had for this sample of superior students.

Superior Student Questionnaire

The original intent of the Superior Student Questionnaire was to gather information illustrative of all talented, upperclass students without segmenting the data into small categories. In the research design, however, sex was presumed to be a primary variable which would affect the responses, because fewer women than men traditionally complete doctoral programs and enter the college teaching profession. For this reason, the results for males and females are reported separately in each table.

Notwithstanding the early decision to report student responses according to each sex, the questionnaire results were also tabulated on the CDC 3600 computer from five other perspectives (see Chapter III). This was done solely to provide additional information which might contribute to new insights and to supply data for future analysis. The responses of the 185 students who indicated future employment in higher education furnished such a useful comparison to the total sample, however, that most tables were built to include this information. Furthermore, when data from other perspectives (such as academic college or Honors College membership) seemed especially pertinent to the study, those data were also reported.

Chi-square was selected initially as the best statistic to identify significant associations (at the .05 level) between the various responses within each of the six perspectives previously mentioned. But because the sample was so large and the number of cells in each contingency table was so great, ranging from 8 to 50, only slight variance in the percentage of students who selected a certain response often emerged as a statistically significant difference (or association). Consequently, those questions which were practically significant were automatically statistically significant far beyond the .05 level, but not vice versa. Since there were no experimental hypotheses to be tested purely from a statistical point of view--the interest being solely to discover

differences among various categories of respondents which were practically significant--the chi-square figures are not reported for each table. Even though chi-squares are not reported here, however, they did prove valuable to the investigator by making it easier to identify the most significant deviations from expected frequencies in each contingency table prepared by the computer. These large statistically significant deviations became those data which are mentioned in this chapter as having practical significance for the study.

Except for the first table, results are presented as percentages. This technique was possible without surrendering accuracy because of the very large sample. It also makes comparisons between tables easier. To help the reader as much as possible, percentages were rounded to the nearest whole number in such a way that each column always totaled 100%, since no actual result was affected more than 3 or 4 students in either direction by so doing. In some tables, the total N is smaller than 838 because a few students did not answer the question to which that table addressed itself. For most tables, the number of the question(s) upon which the table was built is noted in the lower right-hand corner of the table, under the border.

The first six questions on the Student Questionnaire sought useful demographic information about these superior students at Michigan State. The distribution of respondents

by sex and marital status was surprisingly even, with 51% of the sample male and 49% female. Of the males, 14% were married; 15% of the females were married. Honors College students represented 49% of the 838 students. Over half, 52%, of the total sample reported they were attending the University on some scholarship.

The distribution of student responses according to college major and sex is set forth in Table 1. Since most of the tables include figures for male and female responses in total, it is well for the reader to note in this table the distribution of each sex by college. In the male group, 57% of the students majored in Arts and Letters, Natural Science, or Social Science; 59% of the females majored in one of these colleges.¹ There was no practical difference between males and females in the number of times they changed majors. Although 38% of the total sample had never changed majors, 42% had changed once, 13% twice, 5% three times, and 2% four or more times.

¹Although 90 females and 5 males are listed as majors in the College of Education, an additional 59 females and 13 males from other colleges indicated in question 7 that they expect careers in elementary or secondary education. At Michigan State, students working for a secondary teaching certificate are dually enrolled in the college of their major and the College of Education. These students are listed in Table 1 according to the college of their major.

Table 1. Distribution of student responses by college and sex

College	Male (N)	Female (N)	Total (N)
Agriculture	34	6	40
Arts & Letters	60	107	167
Business	71	14	85
Communication Arts	17	15	32
Education	5	90	95
Engineering	46	0	46
Home Economics	1	34	35
Natural Science	94	51	145
Social Science	95	81	176
Veterinary Medicine	<u>7</u>	<u>5</u>	<u>12</u>
	430 ^a	403 ^b	833

^a1 male did not respond to question 3-4. Ques. 3-4

^b4 females did not respond to question 3-4.

Almost 65% of the superior students in this sample began their education at Michigan State and had attended continuously, except for summers, since their freshman year. Another 8% had interrupted continuous attendance for one or more terms, half of them to study at some other institution before coming back to the University. Ten percent of the sample transferred to MSU from a community college; 17% transferred from another 4-year institution.

Career Choice of Superior Students

Several questions were included in the questionnaire to discover what kinds of decisions students had already

made concerning careers. Table 2 categorizes into five areas the careers in which superior students expected to be employed 10 to 15 years in the future. Almost 39% expected to be employed by that time in some level of education, 22% in higher education. Not reported in Table 2 is the noteworthy fact that 30% of all Honors College students expected a future career in higher education, while only 14% of the non-Honors College students looked forward to academic careers. In the College of Arts and Letters 59% of the students who did not plan on elementary or secondary teaching anticipated careers in higher education. The distribution of career choices by college is presented in Appendix G.

Table 2. Career areas in which superior students expect to be employed 10 to 15 years in the future

Response	Male (%)	Female (%)	Total (%)	Total (N)
Business, industry, or professional service ^a	58	28	44	365
Government or military service	12	3	7	60
Elementary or secondary education	4	30	17	138
Higher education	26	18	22	185
Housewife, full-time	<u>0</u>	<u>21</u>	<u>10</u>	<u>86</u>
	100	100	100	836

^aOther than education or government.

Ques. 7

Females tended to be more certain about their career choices than males; 58% of the females were "absolutely certain" or "quite certain," but only 50% of the males. Almost 10% of the females reported they were "not at all certain" about their career choice, but 17% of the males expressed such uncertainty. Those who expected to be in higher education in 10 or 15 years were more uncertain about their career choice than the others. Only 44% felt "absolutely certain" or "quite certain" about their choice of higher education, and 15% reported they were "not at all certain."

Students were asked in question 9 when they made their present career decision, regardless of their certainty about it. The results by sex are reported in Table 3. Career decisions for males came somewhat later than for females. Significantly, 70% of the total group made their present career decision after they entered college.

Table 3. The point in life when superior students made their present career choice

Response	Male (%)	Female (%)	Total (%)
High school or before	25	35	30
Freshman year in college	19	16	17
Sophomore year in college	32	24	28
Junior or senior year in college	<u>24</u>	<u>25</u>	<u>25</u>
	100	100	100

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Three questions were devoted to identifying the major influences on career choice. No meaningful differences emerged between males and females concerning the influence of various people on their career decision. College teachers, counselors, or administrators had the most influence on 27% of the sample, followed closely by 22% who identified parents or relatives as most influential. This question was poorly designed in that 29% of the students chose the nondescript answer, "some other person or group of people." Table 4 summarizes the results of the questions which asked students to identify the single factor which had the greatest amount of influence on their thinking about careers and, using the same fixed responses, which factor had the least amount of influence. Males and females answered somewhat alike, except for the influence of financial security, which was identified as least influential by a significantly greater number of females. Very few males or females selected financial security as the most influential factor in their career decision.

Tentative Hypothesis I

Many academically superior undergraduates never seriously consider college teaching as a viable career choice.

Question 13 asked when, if ever, the student first gave serious consideration to college teaching as a career.

Table 4. Factors having the greatest amount and least amount of influence on superior students' thinking about careers

Response	<u>Greatest Influence</u>			<u>Least Influence</u>		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Financial security	12	5	9	28	45	36
Working conditions	12	5	8	28	31	30
Personal strengths and weaknesses	32	37	35	9	5	7
Potential for intellectual challenge	26	23	24	10	6	8
Opportunity for meaningful service to others	<u>18</u>	<u>30</u>	<u>24</u>	<u>25</u>	<u>13</u>	<u>19</u>
	100	100	100	100	100	100

N = 834

N = 834

Ques. 11

Ques. 12

The data in Table 5 substantially support the first hypothesis by demonstrating that 37% of the males and 46% of the females had never seriously considered college teaching as a potential career choice. It was also significant that 49% of non-Honors College students never considered college teaching, but only 33% of the Honors College students. Of all students, only 10% had considered college teaching prior to high school graduation; but of those going into higher education, 25% had considered college teaching during high school or before. No single year in college stands out as

Table 5. The point in time when superior students first gave serious consideration to college teaching as a career

Response	Total Sample			Higher Education ^a (%)
	Male (%)	Female (%)	Total (%)	
Never have	37	46	41	0
High school or before	11	8	9	25
Freshman year in college	14	9	12	22
Sophomore year in college	19	14	17	28
Junior or senior year in college	<u>19</u>	<u>23</u>	<u>21</u>	<u>25</u>
	100	100	100	100

N = 837

N = 185

^aIncludes the 185 students who indicated future careers in higher education by their answers to question 7.

Ques. 13

being the most significant year for considering college teaching, although fewer did so during the freshman year than any other time.

Question 35 was a statement with which the students were to agree or disagree according to a four-part key. The statement was: Most undergraduates never give serious consideration to college teaching as a career. The answers to this and all the other statements from the last section of the questionnaire are reported in separate columns for males, females, students going into higher education, and total group response in Table 6. Combining the "strongly agree" and "tend to agree" columns (which is done often in this

Table 6. Percentage distribution of responses to items 32 through 48 on the Superior Student Questionnaire for males, females, those planning careers in higher education, and the total sample

Statement	Strongly Agree (%)			Tend to Agree (%)			Tend to Disagree (%)			Strongly Disagree (%)			Tot. % For Each Column
	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	
32. Normally, undergraduates who want to be college teachers should attend graduate school immediately following graduation.	25	16	26	20	55	50	55	53	17	30	17	23	100
33. In the future, more college teachers will become more involved in politics and government service.	12	8	14	10	63	60	59	61	22	30	23	26	100
34. Many people are teaching in college because they could not or would not be successful in other professions or businesses.	5	4	2	5	18	13	15	16	42	42	37	41	100
35. Most undergraduates never give serious consideration to college teaching as a career.	25	17	20	21	52	57	56	54	20	21	18	21	100
36. I believe that I am intellectually qualified for college teaching.	43	30	56	37	44	53	43	49	10	15	1	12	100
37. Faculty members generally have more time with their families than most professional people.	12	8	7	10	52	42	45	47	32	46	44	39	100
38. There is still some discrimination against women by many of those who hire college teachers.	5	10	12	8	46	47	52	46	45	39	32	42	100
39. Colleges and universities could do much more than they now do to interest good undergraduates in the college teaching profession.	57	61	55	59	37	35	36	36	4	3	6	4	100

Table 6--Continued

Statement	Strongly Agree (%)			Tend to Agree (%)			Tend to Disagree (%)			Strongly Disagree (%)			Tot. % For Each Column
	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	M.	F.	H.E. Tot.	
40. I can see myself eventually writing journal articles in my field.	20	8	27	14	42	32	50	38	28	35	19	31	100
41. In my department, it would not really be necessary for one interested in teaching only undergraduate courses to have a Ph.D. degree.	16	18	13	17	35	44	30	40	25	25	26	25	100
42. If salaries were higher, I would be more interested in college teaching as a career than I am now.	17	4	14	10	29	16	24	23	36	48	42	42	100
43. College teachers have less prestige in our society than lawyers and medical doctors.	16	15	16	15	42	42	45	42	33	34	29	34	100
44. Graduate students planning to teach in a college should be required to learn about teaching methods and learning theory.	32	39	20	36	38	38	35	38	18	15	26	16	100
45. It is quite easy for a good student to get financial aid for graduate study.	11	12	12	11	56	57	60	57	28	27	25	28	100
46. If there were less emphasis on research and publication, I would be more interested in college teaching as a career than I am now.	15	17	13	16	36	38	35	37	38	32	43	35	100
47. If I had a chance to be an undergraduate assistant to a good teacher in my department, I would accept it.	47	45	70	46	35	31	21	33	15	20	6	17	100
48. If I had the desire, I think I could be a better college teacher than many whom I have had for courses.	47	37	52	42	40	42	39	41	12	20	8	16	100

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chapter), 75% of the total sample agreed that most undergraduates never give serious consideration to college teaching as a career.

Of the 20 students interviewed during the early stages of the research, 11 had never seriously considered college teaching. Most of these did not really know why they had never done so, but many attributed it to a lack of information. One said, "If I don't like the accounting field, I might consider coming back for graduate work and teaching." Another said he had not given much thought to college teaching, but that he "might wind up there if I can do something first outside that makes me a leader in my field."

Tentative Hypothesis II

Wide differences of opinion about preparation, qualifications, roles, and responsibilities of college teachers exist in the minds of the best undergraduates.

Each of the several questions asked in relation to this hypothesis sought to discover student thought about some particular phase of the academic profession. The majority of items related to this hypothesis were statements which appear in Table 6. Although the results can be most clearly discerned by scanning over Table 6, a few of the more significant responses are repeated here for emphasis.

Almost three-quarters of the sample thought that students planning on college teaching should attend graduate school immediately after graduation. Over half felt that it

was not necessary in their department to have a Ph.D. if one wanted only to teach undergraduate courses. Some 74% of the total group thought graduate students planning to teach at the college level ought to be required to learn about teaching methods and learning theory; only 55% of the students going into higher education agreed with this statement, however.

Although 57% agreed that college teachers have less prestige in our society than lawyers and medical doctors, the quality of college teachers was generally upheld when 79% disagreed with the statement that many people are teaching in college because they could not or would not be successful in other careers. Slightly more than half of the sample thought there is still some discrimination against women on the part of those hiring college teachers. A larger percentage, 64%, of the group going into higher education thought such discrimination existed.

Questions 36 and 40 provided some indication of how superior students felt about their own qualifications for an academic life. Eighty-six percent believed that they were intellectually qualified for college teaching. When asked if they could see themselves eventually writing journal articles in their field, 62% of the males, 40% of the females, and 77% of those going into higher education agreed that they could.

As demonstrated by Table 7, both males and females considered interest in working with students the most important trait by far for college teaching, among five possible alternatives. Only 1% considered this trait least important. The importance of good writing, brilliant intellect, and interest in research were given only token support. This would undoubtedly not be true if the students could have selected more than one response. The 185 superior students who expected careers in higher education varied only a few percentage points from all others on these two questions.

Table 7. Students' perceptions of the most important and least important traits for college teaching

Response	<u>Most Important</u>			<u>Least Important</u>		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Brilliant intellect	6	6	6	19	14	16
Interest in working with students	65	61	63	1	1	1
Clear and forceful lecturer	26	30	28	2	1	2
Good, prolific writer	0	0	0	59	67	63
Interest in original research	<u>3</u>	<u>3</u>	<u>3</u>	<u>19</u>	<u>17</u>	<u>18</u>
	100	100	100	100	100	100

N = 832

N = 833

Ques. 15

Ques. 16

No significant difference existed between males and females in their perception of the time spent by college teachers in various activities. Forty-nine percent of the total sample said "Other personal study and research" consumes the most time in college teachers' workweeks. The next most selected response was "Class preparation," 29%. Surprisingly, 14% thought committee meetings and administrative duties consumed the most time. Likewise, agreement existed among all students on question 23. Some 55% estimated that full-time faculty members spend 5-10 hours per week in the classroom at M.S.U. and similar institutions. Thirty-five percent estimated this time to be 10-15 hours.

Figures in Table 8 illustrate the substantial difference between how students perceive the importance of research and publications for faculty advancement and the importance they think should be attached to this part of academic life. In total, 65% thought more importance is placed on research and publications than on teaching ability, but only 13% thought these things should be more important than teaching ability for purposes of faculty advancement. Of those going into higher education, 75% thought more importance was put on research and publications than teaching ability, but, like the total sample, only 13% thought that this should be the case.

Table 8. The importance that is and should be placed on research and publications for faculty advancement as perceived by superior students

Response	<u>Is Placed</u>			<u>Should Be Placed</u>		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Very much	37	30	34	6	5	5
Somewhat more than teaching ability	33	29	31	10	5	8
Weighted about the same as teaching ability	16	16	16	27	25	26
Only one of several considerations	12	22	17	52	59	56
Hardly considered at all	<u>2</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>6</u>	<u>5</u>
	100	100	100	100	100	100

N = 835

N = 835

Ques. 18

Ques. 19

Data were sought about how superior students perceive the preparation necessary for college teaching by asking students to first compare their grade average with what they estimated most current teachers earned when they were undergraduates and, second, to select the highest level of formal education they thought they would need to be a college teacher. As illustrated in Table 9, most superior students considered their own grade average to be about the same as that which present college teachers once achieved, although 26% suggested theirs might be slightly higher. The responses of those going into higher education formed almost a carbon copy of the total distribution.

Table 9. Superior students' comparison of their own grade average with what they think current college teachers achieved as undergraduates

Response	Male (%)	Female (%)	Total (%)
Mine is significantly higher	7	5	6
Mine is slightly higher	26	26	26
Mine is probably about the same	50	57	54
Mine is slightly lower	16	10	13
Mine is significantly lower	<u>1</u>	<u>1</u>	<u>1</u>
	100	100	100

N = 832

Ques. 25

Question 26 asked students about the level of formal education they thought they would need to be a college teacher. The males, as indicated in Table 10, considered training through the doctorate more necessary than did the females. As a group, slightly more than half thought education through the doctorate and beyond would be necessary. But 74% of those going into higher education thought they needed at least the doctoral degree.

Overall, the differences in opinion on these questions were less evident than those which emerged during the student interviews. For example, among the 20 students interviewed, there was no agreement on the estimated percentage of all full-time college teachers with an earned doctoral degree--the range extended from 20% to 80%. Interesting differences also emerged when these students were asked

Table 10. Level of formal education superior students think they would need if they were to become a college teacher in their field

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Bachelor's degree	1	1	1	0
Master's degree	17	30	23	10
Post-master's work	18	31	25	16
Doctoral degree	57	35	47	66
Post-doctoral work	<u>6</u>	<u>3</u>	<u>4</u>	<u>8</u>
	100	100	100	100

N = 835

N = 184

Ques. 26

to describe the type of persons who are most likely to enter college teaching. Consider this sample of quotes taken from the interview record sheets:

Some go into it because there is nothing else to do. . . . One who is dedicated, interested, and introverted. One who withdraws from the larger world. . . . A person interested in specialization; an elementary teacher teaches people, a college teacher teaches subject matter. . . . A concerned person; a highly motivated person. . . . An intelligent, curious, interested person who wants to study all his life. . . . One who sees study as everything in life. One who is not outgoing, not interested in society.

It is easy to understand why the interviews, which allowed students complete freedom to answer questions as they wished, often provided better insight into certain aspects of student perceptions of the academic profession than could be hoped for with a multiple-choice questionnaire.

Tentative Hypothesis III

Superior undergraduates are not provided with adequate information about college teaching as a profession, but many would like to have this information.

Students were asked how many faculty members or administrators had singled them out to encourage them to consider college teaching as a career. Table 11 is most revealing, for it illustrates the significant difference between the student sample as a whole and those going into higher education. While 72% of the total sample reported that no one on the faculty had ever singled them out to encourage them to consider college teaching, only 47% of those going into higher education reported the same--neither figure is encouraging, but the difference is instructive.

Table 11. Superior student responses to the question asking how many college teachers or administrators had singled them out to encourage them to consider college teaching as a career

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
None	72	71	72	47
One	15	16	15	22
Two	6	6	6	12
Three	3	3	3	6
Several	<u>4</u>	<u>4</u>	<u>4</u>	<u>13</u>
	100	100	100	100

N = 836

N = 184

Ques. 27

The next question on the Superior Student Questionnaire asked how many times the student had been in a group situation where orientation to the college teaching profession was a planned activity. In this case, 92% of the total reported that this had never happened to them; 90% of those going into higher education indicated they had never been in such a situation. Only 1% of the total sample had experienced more than once a group activity where careers in higher education was part of the planned agenda.

Questions 39 and 47, reported in Table 6, provided some indication of the students' assessment of recruiting efforts put forth by institutions of higher education and how these students would respond to an opportunity to gain some first-hand information about the academic profession. In the first question, 95% of all students agreed that colleges and universities could do much more than they now do to interest good undergraduates in the college teaching profession. In question 47, students were asked if they would accept a chance to be an undergraduate assistant to a good teacher in their department. It could be expected that 91% of those going into higher education would react positively to this, but surprisingly, 79% of the total sample indicated that they, too, would accept such an opportunity.

Students were also asked during the interviews whether they wished that they had more information about the college teaching profession, when such information could best

be given to them, and what kinds of experience or information would be most beneficial. Almost all of these students thought the profession could do more than it does, but only 13 out of the 20 felt that they could use additional information. Four of these thought the best time to inform students was in high school. One fellow, however, first expressed a desire to know more about the academic profession and then said,

But literature on careers never helped me much. The best kinds of information would be firsthand exposure to teaching. This could not be done before college. There is too much of a stereotype about teachers at that stage. A student also does not think of all the many factors involved in a career decision while he is in high school.

Most students seemed to agree generally with a social science major who stated, "Most students need more information; there is a gap between the mystic and the real. Information should be given all along the educational process."

Tentative Hypothesis IV

Most undergraduates who have already decided on college teaching careers did so in their junior or senior year in college.

When asked to identify the career area in which they expect to be employed some 10 or 15 years down the road, 185 superior students--112 males and 73 females--selected higher education. Even though 15% of these students said they were uncertain about their careers and an additional 40% were only fairly certain, this group of 185 students is referred to in this report as "those going into higher education."

These students indicated, in answer to question 9, that their present career decision was made later, on the average, than the decision of the total sample (see Table 3). Seventeen percent made the decision to enter the academic profession during high school or before; 19% decided in their freshman year of college; 29% in their sophomore year; and 35% in their junior or senior year. The various times when these 185 students first gave serious consideration to college teaching are recorded in Table 5. Together, all of these figures only moderately support the above hypothesis.

Tentative Hypothesis V

The main reason many students reject the academic profession is not low salaries, as is often suggested in the literature.

Since most individuals determine whether a salary is low or high in relation to some other salary, question 24 asked students how they thought average salaries for college teachers compared with salaries received by others with comparable educational preparation and job responsibilities. Clearly, as illustrated in Table 12, college teachers come out a poor second in the students' estimation. Almost 89% decided college teachers are paid, on the average, less than those in other occupations with comparable training and responsibilities.

Table 12. Superior students' estimation of how average salaries of college teachers correspond to salaries of others having comparable educational preparation and job responsibilities

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
College teachers receive substantially less money	25	32	29	34
College teachers receive somewhat less money	63	54	59	59
College teachers receive about the same as others	10	13	11	6
College teachers receive somewhat more money	2	1	1	1
College teachers receive substantially more money	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	100	100	100	100

N = 836

N = 185

Ques. 24

But when asked if higher salaries would make them more interested in college teaching than they were at the time they answered the questionnaire, only 33% indicated they would be (see Table 6). Interestingly, 38% of those going into higher education thought they could be even more interested than they were at that point if higher salaries prevailed. Evidently, salary is not much of a factor by itself to either attract (or detract) the uninterested to college teaching, or to keep away the interested. Although

one is considerably freer to disregard the impact of the dollar when looking into the future than when actually considering a job, Table 4 is noteworthy in that only 9% of the total sample identified financial security as the greatest influence on their thinking about careers, and 36% reported this factor as being least important. To many, this probably seemed the only proper way to answer.

Tentative Hypothesis VI

Faculty members, through personal influence, represent the greatest single potential for recruiting undergraduates to an academic career.

Students were asked to identify those who influenced them most in their thinking about careers in general and, later, to identify those who had most influenced their perception of college teaching as a career. Each of these questions uncovered significant differences between the response of the total sample and those anticipating academic careers. Table 13 reveals a possible weakness in question 10, as 29% of the total sample answered, "Some other person or group of people." Next in importance was the 27% who thought college teachers, counselors or administrators had exerted the greatest influence on their thinking about careers. But 52% of those going into higher education identified this group of college personnel as the most influential.

Table 13. People influential in superior students' thinking about careers in general

Response	Total Sample			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Parents or relatives	21	23	22	12
Peers	12	10	11	5
High school teachers, counselors or administrators	10	12	11	8
College teachers, counselors or administrators	29	25	27	52
Some other person or group of people	<u>28</u>	<u>30</u>	<u>29</u>	<u>23</u>
	100	100	100	100

N = 833

N = 183

Ques. 10

Question 14 inquired more directly into the influence various people have had on students' perceptions of college teaching as a career. The responses to this more specific question are summarized in Table 14. Here, the influence of the faculty is clearly predominant. The important figures to note are the percentages for "One or two college teachers specifically." For the total sample, 34% marked this response while 50% of those going into higher education did so, strengthening the above hypothesis.

A similar question, question 29, was asked with somewhat different responses to check the major influences on student perceptions of college teaching a second time.

Table 14. The most important influences on superior students' perceptions of college teaching as a career (Question 14)

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Family or relatives	7	8	7	9
High school teachers or counselors	3	2	3	2
One or two college teachers specifically	34	34	34	50
One or two college administrators or staff personnel	3	4	3	2
College faculty and administrators in general	<u>53</u>	<u>52</u>	<u>53</u>	<u>37</u>
	100	100	100	100

N = 825

N = 185

Ques. 14

Again, as demonstrated in Table 15, the influence of certain faculty members and the influence of the general college experience together contributed the most to student perceptions of college teaching as a career. Half of those going into higher education pointed specifically to a few faculty members as being most influential, while about the same percentage of the total sample thought "simply attending college," was the most important influence.

Table 15. The most important influences on superior students' perceptions of college teaching as a career (Question 29)

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Reading books, magazines and newspapers	3	1	2	3
Knowing certain faculty members personally	28	34	31	50
Personal experiences related to teaching	13	9	11	14
Other specific college activities	2	2	2	3
Simply attending college	<u>54</u>	<u>54</u>	<u>54</u>	<u>30</u>
	100	100	100	100

N = 835

N = 185

Ques. 29

The Appeal of College Teaching

The last category of questions dealt with the general appeal college teaching had for all students, not just those who had already decided to pursue a career in higher education. Several of the questions were couched in hypothetical terms, such as question 20, which asked which combination of teaching and research would appeal most to the student if he were to be a college teacher. Table 16 clearly illustrates that most students would desire at least 50% of their time devoted to teaching--a good many 75%--but very few preferred total commitment to teaching. This level

Table 16. Combination of time commitment to teaching and research which seems most appealing to superior students should they become college teachers

Response	Total Sample			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
100% teaching	7	12	9	4
75% teaching; 25% research and writing	40	51	45	40
50% teaching; 50% research and writing	36	30	33	43
25% teaching; 75% research and writing	15	6	11	13
100% research and writing	<u>2</u>	<u>1</u>	<u>2</u>	<u>0</u>
	100	100	100	100

N = 837

N = 185

Ques. 20

of desire for teaching was about the same for those going into higher education.

Two questions asked which of several aspects of college teaching had maximum appeal and minimum appeal to the student. In Table 17, the interesting fact is the diversity of response. Campus environment and cultural activities had more appeal than any other aspect of teaching at the college level, although it captured only 30% of the responses. Among the same five aspects of teaching, flexible schedule was voted least appealing by 40%. Again, teaching in the classroom came out quite well, especially among those planning a career in higher education.

Table 17. Aspects of college teaching which are most appealing and least appealing to superior students

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
<u>Most Appealing</u>				
Campus environment and cultural activities	31	34	32	30
Flexible schedule	21	15	18	15
Teaching in the classroom	17	18	18	22
Time and resources for personal research	18	12	15	18
Meeting and counseling with students	<u>13</u>	<u>21</u>	<u>17</u>	<u>15</u>
	100	100	100	100
<u>Least Appealing</u>				
Campus environment and cultural activities	21	10	16	17
Flexible schedule	28	33	30	40
Teaching in the classroom	16	15	15	9
Time and resources for personal research	23	34	29	20
Meeting and counseling with students	<u>12</u>	<u>8</u>	<u>10</u>	<u>14</u>
	100	100	100	100

N = 836

N = 184

N = 832

N = 183

Ques. 21, 22

Students were asked in question 30 to identify the type of institution at which they would most like to teach if ever they should become a college teacher. The results in Table 18 agree with previous research which concluded that most college teachers prefer to teach in institutions similar

Table 18. The type of institution at which superior students would most like to teach if ever they were to become a college teacher

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Community college	5	8	7	7
Small, church-related college	2	5	4	0
Small, non-church-related college	10	13	11	11
Medium-sized public college or university	36	33	34	35
Large public university	<u>47</u>	<u>41</u>	<u>44</u>	<u>47</u>
	100	100	100	100

N = 835

N = 184

Ques. 30

to their own undergraduate colleges or universities. Forty-four percent of the total sample preferred a large public university; another 34% also preferred a public college or university, only in the medium-sized range. Not one student who planned to make a career in higher education selected a small, church-related college as first choice.

The student interviews provided an interesting commentary for this last question. Each student was asked if he could think of any characteristic which might differentiate university teachers from teachers at small colleges. The comments followed a pattern, evident in this sample of responses:

The more noted professors would be in large universities. There is not as much student contact in large universities. . . . Teachers at small schools are more interested in teaching. . . . At larger schools, teachers are more progressive, confident, aggressive, and bright. . . . Teachers are younger at the large institutions and the quality of teachers is higher. . . . Small college professors may have more time to know students. . . . There is greater interest in teaching and in students at the small college. . . . The bigger the school, the more specialized the teacher.

The last multiple-choice question, question 31, asked students frankly what chance there was of their becoming a college teacher. The results, shown in Table 19, vary somewhat from the responses to question 7. In that question, 26% of the males and 18% of the females thought they would be employed 10 to 15 years from then in higher education.

Table 19. The responses of superior students when asked the likelihood of their becoming a college teacher

Response	<u>Total Sample</u>			Higher Education (%)
	Male (%)	Female (%)	Total (%)	
Strong; that is my first choice	20	15	18	75
It is now my second choice	18	14	16	17
There is a small possibility	46	45	45	8
Absolutely no chance at all	<u>16</u>	<u>26</u>	<u>21</u>	<u>0</u>
	100	100	100	100

N = 833

N = 183

Ques. 31

In Table 19, only 20% of the males and 15% of the females indicated that college teaching was their first career choice. The reasons for this disparity are explored in the discussion section of this chapter. Not to be overlooked, however, is the important fact that only 21% of the students were willing to declare no possibility of their becoming a college teacher--meaning, in one sense, that 79% could be considered "recruitable."

The last question on the student questionnaire was mainly one of personal interest. It allowed whatever presumption these superior students owned to expose itself in force. Eighty-three percent of the total sample (91% of those going into higher education) thought that, given the desire, they could become better college teachers than many whom they had had for courses. This observation on their part might, for some, be the motivation necessary for a commitment to the academic profession.

Department Chairman Questionnaire

The purpose of sending a questionnaire to department chairmen was to gain a general impression of their assessment of faculty supply and demand, to discover what departments are now doing to encourage careers in college teaching among their better undergraduates, and to learn whether they would be receptive to a more organized university undergraduate recruitment program. A completed questionnaire was

received from all departments with the exceptions of Forestry; Hotel, Restaurant and Institutional Management; Political Science; Anthropology; and the Natural Science department of University College. Several of the sixty-four chairmen who did respond wrote lengthy letters in addition to answering the questionnaire; a few, of course, wrote the briefest possible reply.

Because the questionnaire included only four open-ended questions (and because some of the busiest people on campus were asked to complete it), there was considerable variance in both breadth and depth of response. Categorization was often difficult, requiring fairly subjective decisions. In several instances, however, a phone call to the department helped to clarify the response. In a few cases, it was obvious that the chairman did not fully understand the question; that is, he might have explained a graduate student seminar in answer to question 3, which asked about undergraduate recruitment programs in the department, or in questions 3 and 4 he might have interpreted recruitment to mean part of the actual hiring process, thus missing the real intent.

Question 1. From a national point of view, does your academic discipline face any particular problems, with which other disciplines might not have to contend, in recruiting qualified college teachers?

Question 2. If your department has experienced difficulty in the last few years recruiting faculty of the quality it desires, what seem to be the main factors contributing to this difficulty?

Answers to questions 1 and 2 were categorized by college into one of three main columns in Table 20: (1) Definite Problem, (2) Moderate Problem, representing those chairmen who reported some difficulty recruiting qualified faculty, but tended to minimize the problem, and (3) No Real Problem. This task was done as carefully as possible, but many cases called for subjective judgment between a Definite Problem and a Moderate Problem. Those recorded under the No Problem column were more easily identified, although several of them could almost have been recorded as Moderate Problems. It should also be pointed out that the answers to the first two questions are presented in Table 20 under the same classification, even though the wording of the questions does not make them exactly parallel in meaning.

Table 20. Department chairmen's assessment of the problems in recruiting staff for their discipline

College	<u>Definite Problem</u>		<u>Moderate Problem</u>		<u>No Real Problem</u>		Total No. Depts.
	Nat'l	MSU	Nat'l	MSU	Nat'l	MSU	
Agriculture	5	4	1	2	6	6	12
Arts and Letters	4	4	4	4	1	1	9
Business	4	2	0	0	1	3	5
Communication Arts	4	2	1	0	0	3	5
Education	3	3	0	0	0	0	3
Engineering	2	1	1	0	2	4	5
Home Economics	3	4	1	0	0	0	4
Natural Science	7	6	4	2	1	4	12
Social Science	5	5	0	0	1	1	6
University College	<u>2</u>	<u>2</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>3</u>
Total	39	33	12	8	13	23	64

The reason cited most often for recruiting problems from a national point of view was a shortage of qualified candidates, due to increasing competition from industry and government as well as an overall shortage of Ph.D.'s. In the College of Agriculture, several chairmen mentioned that the decreasing number of undergraduate majors in some fields of agriculture results in too few students eventually pursuing graduate study. Another reason for recruiting difficulties, given by many in the professional schools, was a preference for teachers with practical experience in the field as well as graduate study--it is difficult to find people with both.

While 39 chairmen reported definite recruiting problems at the national level, only 33 so reported for their own department. Of these, some 24 attributed their problem to a shortage of teachers. Other problems listed were inadequate funds, poor facilities, and the Mid-western location of the University. At the same time, 23 department chairmen indicated no real recruiting problems for their own department; but only 13 suggested their discipline had no real problem from the national perspective.

Question 3. Please describe any activities within your department which help to identify and recruit prospective college teachers from your undergraduate students.

No table is required to report question 3, for 95% of the department chairmen indicated no special effort was being made to inform superior undergraduates about or give

them first-hand experience in college teaching. Some 22 chairmen reported that nothing whatsoever was being done; an additional 35 said that informal effort was put forth by the faculty to encourage good students to go on for graduate study. A few had planned seminars or special conferences with selected students to discuss graduate study. Two chairmen misunderstood the question to mean efforts at actually selecting undergraduates for eventual teaching positions in the department. It should be said that many of the chairmen who reported efforts to encourage their good students to pursue graduate study view these efforts as a contribution to the recruitment of future college teachers.

Four departments reported more formal efforts to encourage students to consider college teaching. One, in the College of Agriculture, informs its good students about the academic profession through its departmental student club, a senior seminar (as one small aspect of the course), and by personal interviews between the students and the department chairman. Two departments in the College of Natural Science allow selected seniors to work as teaching assistants in certain introductory-level laboratory sections. These lab assistants are often Honors College students in the department. Finally, faculty in one department of the College of Education actively promote college teaching as a career in many of their classes. Obviously, this occurs on an unorganized basis, but for purposes of this inquiry it

represented an active departmental commitment to the idea of recruiting prospective college teachers from the undergraduate student body.

Question 4. Do you believe the University should consider a more organized program than it now has for identifying and recruiting prospective college teachers from the undergraduate student body? If so, what direction might such a program take?

Answers to question 4 fell more easily into descriptive categories, as shown in Table 21. There were 38 chairmen who answered the question in the affirmative; 16 replied negatively; 6 had no opinion; and 4 misunderstood the question. Of the 38 who did think the University should do more than it now does to identify and recruit prospective teachers, 5 stipulated such programs should be organized only at the department level.

Table 21. Department chairmen's response to the question whether the University should have a more active college teacher recruitment program for undergraduates

College	Yes	No	No Opinion
Agriculture	8	3	1
Arts and Letters	6	1	2
Business	3	1	1
Communication Arts	4	0	1
Education	1	2	0
Engineering	2	3	0
Home Economics	4	0	0
Natural Science	6	3	3
Social Science	2	2	2
University College	<u>2</u>	<u>1</u>	<u>0</u>
Total	38	16	10 ^a

^aFour of these misunderstood the question.

Most of the chairmen who supported a more active role in recruiting prospective college teachers did not offer specific recommendations. The use of teacher assistants and increased financial aid for prospective teachers to attend graduate school were two suggestions often mentioned. Other suggestions included: undergraduate seminars on college teaching as a career, articles in the student newspaper, open meetings for students interested in the academic profession, and brochures on graduate study and college teaching. Three suggested that any formal recruitment program might properly be centered in the Honors College.

Of the 16 chairmen who did not believe the University should consider a more organized undergraduate recruitment program, 15 indicated in question 2 that their department had no real difficulty getting faculty of the quality it desired. This observation confirms one of the initial contentions, i.e., faculty members would need to be convinced that a staffing problem (quantity or quality) existed before they could be expected to actively support undergraduate recruitment programs.

Discussion

As mentioned earlier, contingency tables were developed according to student responses by academic college and, in many cases, significant differences appeared. But the intent of this study was exploratory, to seek information from a broader scope than ten individual colleges. Considering the use to which the data would be put, it was decided to present the results according to the sex of the student. Later, the decision was made to include in the tables the results of that group which predicted for themselves employment in higher education. Nevertheless, when a college or individual department decided to plan some recruitment activities, it would be advantageous to study the responses only of its own students.

The finding that 62% of the total sample changed majors at least once needs additional comment. At Michigan State a student is entirely free to enter the University in the "No Preference" category and may remain administratively uncommitted to a major until he reaches junior standing. It is therefore feasible that many of the 42% who changed majors only once simply changed from "No Preference" to a major in one of the academic departments.

Even so, the amount of indecision on the part of many students seemed especially evident. Not only did many students change majors once or twice, but the fact that 70%

made their present career decision after they entered the university should be of interest to high school and college vocational counselors. Add to this the uncertainty that these juniors and seniors had about their career choice--only 58% of the females and 50% of the males were certain enough to doubt that they might change--and the value of increased career guidance for all fields at the college level seems beyond question. Certainly we can not assume that the bright student knows where he is headed by the time he reaches junior standing.

The discovery that 30% of the Honors College students in this sample looked forward to future employment in higher education versus only 14% of the non-Honors College students is not completely explainable from the data received, but several possible explanations come to mind. First, the colleges which had the largest percentages of students expecting careers in higher education (Arts and Letters, Social Science, and Natural Science) also had the largest concentrations of Honors College students in the sample. Second, it would be safe to say that the Honors College students in the sample averaged higher grade points than the others, mainly because all of them had to have at least a 3.50 at the end of their freshman year to be admitted to the Honors College. Still, since all of the sample had at least a 3.20, it was assumed that the significance of

grade differences beyond that point would be minimal. Third, it is possible that many Honors College students receive more individual attention from the faculty and the Honors College staff. The data did indicate that significantly more Honors College students listed college teachers, counselors, or administrators as most influential in their thinking about careers than other students. They also reported more instances of faculty members singling them out to encourage them to consider college teaching as a career. Finally, a higher percentage of Honors College students than others estimated their grade point to be higher than the average undergraduate record achieved by current teachers, and more of them also felt intellectually qualified for college teaching. These latter observations might be a result of the self-confidence many students gain by virtue of their membership in the Honors College.

One other finding needs further explanation, namely that 185 students indicated future employment in higher education, but only 146 reported college teaching as their first career choice in question 31. Several students in the interviews said they wanted to work for a few years and then possibly teach at the college level. Students with this in mind could easily predict employment in higher education 10 to 15 years in the future, but not select college teaching as their present career choice. Also, the term "higher

education" (used in question 7) represents a broader career area than "college teaching" (used in question 31). Some of the students might hope to become student personnel workers, full-time administrators, or full-time researchers; if so, many of them might not have listed college teaching as their first choice.

CHAPTER V

SUMMARY AND CONCLUSIONS

The problem and research methodology are reviewed in capsule form in the first section of this chapter. Following that are listed the major findings and conclusions drawn from the results of both the Superior Student Questionnaire and the Department Chairman Questionnaire. Limitations of the study, from the investigator's point of view, are then outlined as well as recommendations for future research.

The Problem and Methodology

The entire study was predicted upon the general proposition that the number and quality of college teachers could and must be increased in the future if higher education is to meet the challenges imposed upon it by twentieth-century society. Many of the methods used in the past to meet the challenge implicit in this proposition have enjoyed considerable success, but others have failed for lack of acceptance or slipped into disuse for lack of leadership.

The method examined in this study was that of increasing the supply of college teachers through planned, campus-centered recruitment programs at the undergraduate

level. Recruitment means here an organized approach to the identification and motivation of prospective college teachers through various voluntary student programs. These might include several activities, ranging from informational meetings open to any interested student to a closely supervised teacher-intern program for a selected few. Today, such undergraduate recruitment efforts are enthusiastically endorsed in professional literature, yet taken seriously far too seldom on the campuses.

The intent of this study was to seek additional information which would help document the need for undergraduate recruitment programs and suggest directions such efforts might take. To this end, a study was designed to investigate career plans of superior students and their perceptions of college teaching as a career. A separate, less elaborate survey of department chairmen at Michigan State University was also included in the research to investigate current staffing problems, department activities aimed at the identification and recruitment of prospective college teachers, and department chairmen's attitudes toward an undergraduate recruitment program as a feasible concern of the University.

Six tentative hypotheses were drawn to provide direction for the study and to serve as a basis for data evaluation; they were not sufficiently formulated to allow statistical acceptance or rejection. The Superior Student

Questionnaire was then designed after numerous faculty consultations, a series of interviews with 20 undergraduates, and a small pilot study. The final format consisted of 48 fixed-response questions.

Because the broader purpose of the questionnaire study was not only to discover student perceptions of college teaching as a career, but to gain insight into an appropriate institutional undergraduate recruitment program, students at only one institution, Michigan State University, were included in the sample. The questionnaire was sent to 961 juniors and seniors who had at least a 3.20 grade average and were full-time students Winter quarter, 1967. Slightly over 88% of the sample responded, including 431 males and 407 females.

A separate questionnaire was sent to 69 department chairmen at Michigan State, asking each to respond in his own words to four brief questions. Information provided by the 64 returned questionnaires supplemented considerably the data received from the large student sample. The results of both of these questionnaires provided enough information to support rather clear-cut conclusions.

Findings and Conclusions

The major findings and conclusions that emerged from the research just described are presented as concisely as possible in this section. Most of them are relevant only to superior upperclassmen at Michigan State University; any generalization to other students and other universities should be done with care and remain tentative at best.

Several findings, especially those related to the preparation, qualifications, and responsibilities of college teachers, were presented clearly enough in Chapter IV to not require mention again. Numerous findings, however, take on added meaning when they are isolated and considered in relation to other findings.

- I. Findings related to general career planning of superior upperclass students:
 - A. Seven out of ten make their career decision after college enrollment.
 - B. A sizeable minority are still quite uncertain about their career plans.
 - C. Financial security is rated low on the list of factors influential in the career decision-making process.
- II. Findings related to superior students and the college teaching profession:
 - A. Four out of ten have never seriously considered college teaching as a career possibility.
 - B. Seven out of ten have never been singled out by a faculty member and encouraged by him to consider the academic profession.

- C. Nine out of ten have never been in a group situation where orientation to or information about the college teaching profession was a planned activity.
 - D. More than nine out of ten believe that colleges and universities could do much more to interest good undergraduates in the academic profession.
 - E. Eight out of ten would accept an opportunity to be an undergraduate assistant to a good teacher in their department if it were offered to them.
 - F. Virtually all superior students at Michigan State would prefer to teach at a public college or university if they were ever to become college teachers.
 - G. Interest in working with students is viewed as being much more important for a college teacher than a brilliant intellect, ability to write, or interest in original research.
 - H. In the eyes of these students, more emphasis is placed on research and writing than on teaching ability for purposes of faculty advancement; most do not agree with this emphasis.
 - I. College teachers are the greatest influence on perceptions of college teaching as a career, especially for those planning to enter the academic profession.
 - J. Almost one out of five identified college teaching as their present career choice; an additional three out of five leave open the possibility of college teaching.
- III. Findings related to department chairmen's assessment of staffing problems and undergraduate recruitment:
- A. A large majority of department chairmen reported problems in finding enough qualified college teachers, both from a national perspective and, somewhat to a lesser degree, from experience in their own departments.
 - B. With a few minor exceptions, no special effort is made by departments to encourage able students to consider college teaching as a career possibility.

- C. Sixty percent of the department chairmen feel that the University should consider a more organized undergraduate recruitment program.

These findings need little elaboration or comment. They combine to adequately support the following statement of conclusion:

A large number of potential college teachers are not being challenged to consider the academic profession in their undergraduate years, although most of them desire firsthand knowledge about this career area and think the university could do more to meet this desire.

Faculty leaders, meanwhile, recognize a substantial problem staffing their departments with qualified teachers and most agree that a partial solution would be undergraduate recruitment programs. For some reason, however, the faculty, individually or collectively, are not taking the initiative to work out this solution.

Certainly a need has been identified. More than enough interested superior students and department chairmen at Michigan State University were uncovered by this research to convince the skeptical and the apathetic that more positive action would be well received. Hopefully, those already committed to the idea of identifying and recruiting prospective college teachers from among talented undergraduates have been encouraged by this study and challenged to pursue their interests with renewed enthusiasm.

Limitations of the Study

Limitations of any research project are more easily recognized in retrospect than in the planning stage. The limitations of this study are, first of all, those normally associated with exploratory research in the social sciences, especially when a questionnaire is used to collect the data. In this case, the use of fixed-response questions to investigate phenomena as imprecise as perceptions and attitudes compounded the normal limitations. Although much care and several drafts went into the final copy of the questionnaire, several students mentioned that they felt somewhat restricted on certain questions. Perhaps in the best of all worlds, i.e., abundance of time, money, and qualified personnel, interviews supplemented by student records and other factual data would provide the most accurate insight into the questions dealt with in this study.

Some contend that the absence of experimental hypotheses weaken studies of this kind. Nevertheless, the investigator was supported on this count by several faculty consultants who agreed that the work done previously in this particular area was not sufficiently developed to support experimental hypotheses. Even if this were not the case, the use of non-parametric statistics to analyze the questionnaire results would still leave too much room for doubt--even after null hypotheses had been statistically rejected.

Not so obvious is the limitation of not being able to point to results of undergraduate recruiting efforts, since no segment of the sample was exposed to anything like a comprehensive recruitment program. Still, many different college experiences have an influence (recognized or not) on all students' perceptions of college teaching as a career. Another limitation, then, is the lack of any measure of how the influence of the University itself had changed student perceptions since the students first enrolled.

Finally, the four-item questionnaire sent to the department chairmen proved, in retrospect, to be of less value than interviews might have been. Also, a better understanding of the faculty's attitude toward undergraduate recruitment could have been gained by including in the sample more than department chairmen only. The limitations of this part of the research, however, do not bother the investigator much, for the simple questionnaire which was used provided a very adequate general evaluation--and that was all it was asked to do.

Recommendations for Future Study

Several recommendations for further research related to this study could be suggested, but are here limited to two: (1) A study designed to measure the change in perceptions of college teaching which takes place between the senior year in high school and college graduation. (2) A

controlled experiment on one campus whereby two matched groups of high-ability freshmen would be selected, one as a control group and the other to be exposed to a broad and dynamic recruitment program; the impact of a good recruitment program could then be measured more precisely.

The first of these proposals would not just investigate students' perceptions of college teaching and their career plans at one point in time, but would provide a measure of the influence four years of college experience has in this particular area. By including students from several colleges in the study, the institutional variables could be more easily assessed. It is not difficult to discover how many college teachers certain institutions produce, but we are not sure whether the result is due to the nature of the input (first-year students) or the nature of the college experience itself.

The second recommendation is likewise a longitudinal study. Here, the quality of the students and the shared college experience could hopefully be isolated and a measurement made of the impact a good recruitment program had on selected individuals. The control group and the experimental group should both be fairly large; the students in the control group should be kept unaware of their involvement in the study, if possible. One obvious measure would be a follow-up study several years after graduation to see how

many of each group entered college teaching, possibly interviewing those who did. The details of each of these two suggested research projects are left to the imagination of the reader.

CHAPTER VI

IMPLICATIONS FOR ACADEMIC RECRUITMENT

Two implications of this research stand out, for the investigator, above all others: (1) A sufficient number of superior undergraduates are already anticipating careers in higher education to warrant special programs for them of orientation to the academic profession. (2) Enough superior students are undecided about their career plans and express interest in discovering more about the college teaching profession to justify a vigorous undergraduate recruitment program. The two are not mutually exclusive, as many students would not fall clearly into one group or the other. Rather, similar programs and activities could meet the needs of both.

The first observation is one which was unanticipated at the beginning of the study, recognized only after several reviews of the data and many conversations with students who thought they wanted to be college teachers. To allow juniors and seniors a closer look at the profession to which they aspire would be beneficial to them and to the profession. After participation in seminars and colloquia on college teaching and first-hand experience in the classroom, some would be forced to reconsider their desire for an

academic life. Others would deepen their commitment to teaching and proceed to graduate school with greater motivation and a better understanding of the multitudinous tasks they will eventually face as a college professor. The methods by which these students could get exposure to the teaching profession are limited only by human imagination. They might include departmental seminars focused on teaching in a particular discipline, a student-organized Future College Teachers club, a teacher-intern program, a library on college teaching, and any number of other things. The important point is that the faculty recognize an opportunity, if not an obligation, to encourage and inform undergraduates who look forward to joining them in the academic profession.

The second statement above is more directly related to the hypotheses set forth in the research design. The data suggest that a very large number of able students would be interested in learning more about college teaching as a prospective career. A recruitment program would in no way need to coerce students into taking a look at college teaching--more than enough are already interested and waiting.

What follows, then, are some general suggestions for an undergraduate recruitment program. Some of them do not stem directly from this research, but were formed on the basis of all the information that was gathered before, during, and after the data were collected. The recommendations are meant to apply to large universities similar to Michigan

State University. Several, however, could serve as a point of departure for discussion about undergraduate recruitment at any institution.

- I. Institution-centered recruitment programs are most effective because: (1) Faculty members are the greatest influence on a student's perception of the academic profession and, therefore, the most valuable resource for a recruitment program. (2) Students can be personally and continuously involved in various aspects of academic life on the campus.
- II. A university coordinator should be appointed to stimulate, help organize, and coordinate recruiting efforts at all levels. This person ought to have teaching experience on the faculty and be responsible to the chief academic officer of the institution. Although his duties as coordinator might not consume all his time, this person should consider the task a major responsibility--and the university must also recognize it as such by providing necessary support.
- III. An all-university research study, similar to that which was the heart of this dissertation, should be one of the first projects of the university coordinator. The purpose of such a study would be to provide current information pertinent only to the students and staff of that institution. It should investigate career plans of students, their perceptions of college teaching, and their interest in certain suggested activities related to college teaching. A measurement of the interest faculty members have for working with students in this context would also be valuable. All this data should be evaluated separately for students and staff in each academic department and personally presented to the department chairman with program suggestions.
- IV. Some operating guidelines which the coordinator ought to consider are:
 - A. Begin programs wherever the most interest is expressed. Eventually, each department might have a liaison person appointed by the chairman.
 - B. For both students and faculty, all programs should be completely voluntary.

- C. Several different activities should be available at once, from open meetings for any interested student to an organized club with an active program for students already decided on a career in college teaching.
 - D. Much informal recruiting will take place if faculty members are kept informed about graduate school requirements, financial aid for graduate study, number of doctorates awarded in each field, demand for teachers in each field, data on salaries for college teachers, etc.
 - E. Considerable help can be found through academic professional associations and some foundations.
- V. Examples of programs and resources which might be included in a comprehensive recruitment program are:
- A. Provision for dissemination of general information about the academic profession through:
 - 1. Series of articles in the campus newspaper
 - 2. Movies, film strips, or video tapes available on request
 - 3. Listing of faculty members willing to speak about their profession to groups or individuals
 - 4. Books and pamphlets distributed in lounges and reading rooms.
 - B. Special events or programs directed primarily at superior undergraduates such as:
 - 1. Annual series of lectures by nationally prominent educators
 - 2. Institution-sponsored fellowships and teaching internships awarded to outstanding seniors who show interest in college teaching
 - 3. Planned visits to other universities and research centers
 - 4. Meetings to help students plan for graduate study.



- C. An all-university, or better, individual college, organization for future college teachers. Such an organization should be completely led by undergraduates, but adequately advised and supported by faculty members, so that the special interests of these future teachers are recognized and met. The students themselves could do much on the campus to create interest in college teaching. The organization might make arrangements for its members to:
 - 1. Visit different types of institutions--community colleges, liberal arts schools, technical institutes--to talk with faculty representatives
 - 2. Visit meetings of professional associations when they convene nearby
 - 3. Study in depth educational issues such as learning theory, evaluation, curriculum building, and scholarly research and publication.
- D. A credit seminar for juniors and seniors on the history, philosophy, and current issues in higher education.
- E. A teacher-intern (or teacher assistant) program in several departments to allow qualified undergraduates an opportunity to participate in classroom teaching and related activity under close supervision.

All of the foregoing are merely suggestions to indicate the seriousness of purpose and scope which ought to be evident in a comprehensive recruitment program. It is unfortunate that the term "recruitment" often carries with it negative connotations, as if it were something beneath the dignity of a distinguished center of higher learning. Indeed, maybe "recruitment" creates the wrong image and should be substituted by a more neutral term. Whatever

terminology is used to describe them, the recommendations listed heretofor do not seem at all antithetical to the purposes of a university. Selection of a career is highly important; it should always be an individual decision, free of undue pressure from any direction. But students ought to have accurate, comprehensive information about careers so that their career decisions can be reasoned decisions.

I am convinced of the need to provide a better look at the academic profession for superior undergraduates. There is no adequate reason for delaying the kinds of opportunities mentioned in this chapter until graduate school. Students are ready before then to look seriously at higher education and the possibilities it holds for a career worthy of dedication and long hours in preparation. And if all of this is worth doing, it is worth doing well.

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APPENDIX A

LETTER OF INTRODUCTION

AND

STUDENT INTERVIEW SCHEDULE

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

THE HONORS COLLEGE • 405 LIBRARY

November 17, 1966

Mr. William Bayliss
1260 Little Road
Parma, Michigan

Dear William,

I am currently involved in a research project which deals, in part, with career choices of superior students.

You have been randomly selected as one with whom I would like to arrange an interview before the Christmas holidays.

We will be calling you in the near future to set an appointment that will meet with your schedule. I hope you will be willing to help out in this project.

Cordially,

Robert C. Andringa
Assistant Director
The Honors College

RCA:gp

INTERVIEW SCHEDULE

(MR.) _____
(MISS) _____ CLASS _____ COLLEGE _____

As you foresee the future, in what career area do you expect to be ten or fifteen years from now?

At what point in your life did you make this decision?

How sure do you now feel about this choice?

What would you say is the likelihood of your becoming a college teacher?

How much consideration have you given to college teaching as a career?

When did you first give serious consideration to college teaching?

Do you have any opinions about the types of people who are most apt to become college teachers?

What do you like most about the profession of college teaching?

Which aspects of college teaching do you like least?

What do you estimate the current supply and demand is for college teachers?

If it were possible to know the average GPA that all current college teachers achieved as undergraduates, what do you suppose it would be?

There are some 800 community colleges (junior colleges) in the United States. What percentage of full-time teachers in these institutions would you guess have completed a doctoral degree?

What would you guess the average annual salary for full-time teachers in these institutions to be?

How many hours per week do you suppose these teachers spend in the classroom?

Would you consider teaching in a community college?

Why?

Now let's think of college teaching at four-year institutions. What percentage of all full-time teachers at these institutions do you suppose have completed a doctoral degree?

What do you estimate the average annual salary for all first-year, full-time teachers at these institutions to be?

What about the average salaries of all full professors?

How many hours of classroom work per week would all teachers average in these institutions?

If you were to go into college teaching, at what type of institution would you most like to teach?

Why?

How necessary are research and publishing to a teacher's being promoted in your major field?

Do you think this is good?

If you did go into college teaching, how much education do you feel you would need to complete?

How many years from the date of your baccalaureate degree would you estimate it would take for you to complete a doctorate?

What would you guess is the average length of time for completion of a doctorate in your field?

What is the chance of a bright student in your field getting financial aid for graduate study?

What are your general impressions of the working conditions characteristic of the college teaching profession?

How do most people rate the prestige of college teachers?

What percentage of all college teachers do you suppose are women?

Do you think college teachers involve themselves in community activities as much as some other professional people?

How much should they?

Can you think of any characteristics that might differentiate university teachers from those at small colleges?

What have been the main influences on your current perception of college teaching as a career choice?

Do you wish you had been given more information about the college teaching profession and had an opportunity to see more of the "inside" of this career field?

When should this come?

What kinds of experiences or information?

APPENDIX B

COVER LETTER

AND

QUESTIONNAIRE FOR THE STUDENT PILOT STUDY

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

THE HONORS COLLEGE • 405 LIBRARY

January 16, 1967

Mr. Stephen Haynes
430 West McDonel
Campus

Dear Steve:

As you may know, I have been working this year on my doctoral dissertation. The attached questionnaire will be a major part of my research, so before I put it in the mail I am anxious to make it as clear and "answerable" as possible.

Thus, I am asking if you would be willing to help me as part of the "pilot study." By taking a few minutes to do the questionnaire and commenting on it, you and a few others will be able to point out weak questions, unclear responses, etc.

Contrary to the instructions on the questionnaire, I would like you to return everything to me. Your comments can be written in the margins of the questionnaire itself.

I find myself having to meet an early deadline with the printer (as usual). Would January 20 be too early to ask that the questionnaire be returned? If you can not get it back by then, please call (5-2328) and I will be happy to pick it up from you before the weekend.

Thank you so much.

Cordially,

Robert C. Andringa
Assistant Director
The Honors College

RCA:gp

Enclosure

SUPERIOR STUDENT QUESTIONNAIRE
MICHIGAN STATE UNIVERSITY

Dear Student,

This letter is being sent to you and other upperclass students who have achieved at least a B-plus grade point average at Michigan State.

The purpose of the letter is to request your help in a University-wide research study which will contribute to our understanding of career decisions of superior students. We are especially interested in some of your thoughts about college teaching.

We would appreciate very much your completing this questionnaire, using the enclosed answer sheet, and returning it in the stamped envelope by February 17, 1967. The sample for this study is limited, as mentioned above. For this reason, it is especially important that each of you takes the necessary 15-20 minutes to complete the questionnaire.

Thank you for your cooperation.

Cordially,

Robert C. Andringa
Assistant Director
The Honors College

* * * * *

Instructions

Please look at the special answer sheet. There is no need for you to write anything except your response to each question. Use the special pencil which was enclosed and exercise some care in recording your response in the proper place. Notice that the items are listed horizontally on the answer sheet.

You do not have to be concerned with "right" or "wrong" answers. The best response is your own honest opinion. Please mark only one answer for each question. Do not omit any questions.

When you finish, please fold the answer sheet and return it in the stamped envelope provided. There is no need to return the questionnaire.

1. Please mark after item No. 1 on the answer sheet the response which applies to you.

- (1) Single male
- (2) Single female
- (3) Married male
- (4) Married female

- 2.-3. Using both items No. 2 and No. 3 on the answer sheet, record the college in which you are currently enrolled.

	<u>No.2</u>	<u>No.3</u>		<u>No.2</u>	<u>No.3</u>
Agriculture	1	1	Home Economics	2	2
Arts & Letters	1	2	Justin Morrill	2	3
Business	1	3	Natural Science	2	4
Communication Arts	1	4	Social Science	2	5
Education	1	5	Veterinary Medicine	3	1
Engineering	2	1			

4. Which one of the following categories applies to you this term?

- (1) Honors College student -- on scholarship
- (2) Honors College student -- not on scholarship
- (3) Not an Honors College student -- on scholarship
- (4) Not an Honors College student -- not on scholarship

5. Which one of the following categories applies to you this term?

- (1) Have attended MSU continuously (excluding summers) since freshman year
- (2) Have attended MSU only, but spent one or more terms (excluding summers) out of school
- (3) Began at MSU, but have since attended and transferred credits from another college or university
- (4) Began at a community college and transferred to MSU
- (5) Began at another 4-year college or university and transferred to MSU

6. Since you first entered college, how many times have you changed your major (include no-preference as a "major" if applicable)?

- (1) None
- (2) One
- (3) Two
- (4) Three
- (5) Four or more

7. As you foresee the future, in which of the following career areas do you expect to be employed 10 or 15 years from now?

- (1) Business, industry or professional service
- (2) Government or military service
- (3) Elementary or secondary education
- (4) Higher education
- (5) Housewife, full-time

1. Please mark the following items as applicable:

- (1) None
- (2) Slight
- (3) Fairly
- (4) Very

2. In the following items, mark the degree to which you agree or disagree with the statement.

Item	Strongly Agree	Disagree	Strongly Disagree
1. I am a person of high moral character.			
2. I am a person of high intelligence.			
3. I am a person of high energy.			
4. I am a person of high achievement.			

3. Please mark the degree to which you agree or disagree with the statement.

4. Please mark the degree to which you agree or disagree with the statement.

5. Please mark the degree to which you agree or disagree with the statement.

6. Please mark the degree to which you agree or disagree with the statement.

7. Please mark the degree to which you agree or disagree with the statement.

8. Please mark the degree to which you agree or disagree with the statement.

9. Please mark the degree to which you agree or disagree with the statement.

10. Please mark the degree to which you agree or disagree with the statement.

8. At what point in your life would you say you made your present decision about a career?

- (1) High school or before
- (2) Freshman year in college
- (3) Sophomore year in college
- (4) Junior or Senior year in college

9. How certain do you now feel about your career choice?

- (1) Absolutely certain
- (2) Quite certain; I doubt that I will change
- (3) Fairly certain; although I could change
- (4) Not certain; it is likely that I will change

10. Who has most influenced your thinking about a career choice?

- (1) Parents or relatives
- (2) Peers
- (3) High school teachers, counselors or administrators
- (4) College teachers, counselors or administrators
- (5) Some other person or group of people

11. Which one of the following would you say has had the greatest amount of influence on your thinking about careers?

- (1) Financial security
- (2) Working conditions
- (3) Personal strengths or weaknesses
- (4) Potential for intellectual challenge
- (5) Opportunity for meaningful service to others

12. Which one of the following would you say has had the least amount of influence on your thinking about careers?

- (1) Financial security
- (2) Working conditions
- (3) Personal strengths or weaknesses
- (4) Potential for intellectual challenge
- (5) Opportunity for meaningful service to others

13. When, if ever, did you first give serious consideration for college teaching as a career?

- (1) Never have
- (2) High school or before
- (3) Freshman year in college
- (4) Sophomore year in college
- (5) Junior or Senior year in college

What effect, if any, would you say you made your present decision
on the following factors:

- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

What effect, if any, would you say you made your present decision

- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

What effect, if any, would you say you made your present decision

- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

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- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

What effect, if any, would you say you made your present decision
on the following factors:

- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

College record

- (1) High school record
- (2) Social background
- (3) Family background
- (4) College record

14. Which of the following has most influenced your current perception of college teaching as a career?
- (1) Family or relatives
 - (2) High school teachers or counselors
 - (3) One or two college teachers specifically
 - (4) One or two college administrators or staff personnel
 - (5) College faculty members in general
15. Which of the following personal characteristics do you consider most important for one who plans to enter college teaching?
- (1) Good speaker
 - (2) Interested in helping others
 - (3) Good writer
 - (4) High IQ
 - (5) Independent worker
16. Which of the following personal characteristics do you consider least important for one who plans to enter college teaching?
- (1) Good speaker
 - (2) Interested in helping others
 - (3) Good writer
 - (4) High IQ
 - (5) Independent worker
17. Which of the following activities would you estimate consumes the most time in the good college teacher's workweek?
- (1) Classroom teaching
 - (2) Committee meetings and administrative duties
 - (3) Working individually with students
 - (4) Class preparation
 - (5) Other personal study and research
18. How important do you think research and publications are for advancement of faculty members in your field?
- (1) Extremely important
 - (2) Weighted more than teaching ability
 - (3) Weighted about the same as teaching ability
 - (4) One of several considerations
 - (5) Hardly considered at all
19. What do you consider to be the most outstanding characteristic of the best college teacher you have known?
- (1) Brilliant intellect
 - (2) Demonstrated interest in students
 - (3) Clear and forceful lecturer
 - (4) Hard worker who drives students to maximum effort
 - (5) Fair and equitable grader

13. What is the most important factor in determining your current position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

14. Which of the following is the most important factor in determining your position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

15. Which of the following is the most important factor in determining your position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

16. Which of the following is the most important factor in determining your position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

17. Which of the following is the most important factor in determining your position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

18. Which of the following is the most important factor in determining your position in the company?

- (1) Family or relative
- (2) High school or college
- (3) The way you work or study
- (4) The way you think or feel
- (5) The way you behave in general

20. If you were to be a college faculty member, which one of the following combinations of time commitment would have the most appeal to you?

- (1) 100% teaching
- (2) 75% teaching; 25% research and writing
- (3) 50% teaching; 50% research and writing
- (4) 25% teaching; 75% research and writing
- (5) 100% research and writing.

21. Which one of the following is most appealing to you about college teaching?

- (1) Campus environment
- (2) Teaching and working with young people
- (3) Flexible schedule and varied activity
- (4) Time and resources for research
- (5) Personal intellectual growth

22. Which one of the following is least appealing to you about college teaching?

- (1) Campus environment
- (2) Teaching and working with young people
- (3) Flexible schedule and varied activity
- (4) Time and resources for research
- (5) Personal intellectual growth

23. How many hours per week do you estimate full-time teachers average in the classroom at institutions similar to MSU?

- (1) Less than 10
- (2) 10 - 15
- (3) 16 - 20
- (4) 21 - 25
- (5) More than 25

24. How do salaries received by most college teachers correspond, in your estimation, with those in other occupations requiring comparable educational preparation and job responsibilities?

- (1) College teachers receive substantially less money
- (2) College teachers receive somewhat less money
- (3) College teachers receive about the same as others
- (4) College teachers receive somewhat more money
- (5) College teachers receive substantially more money

25. How would you compare your current cumulative grade average to that which you estimate all current college teachers earned when they were undergraduates?

- (1) Mine is significantly higher
- (2) Mine is slightly higher
- (3) Mine is probably about the same
- (4) Mine is slightly lower
- (5) Mine is significantly lower

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26. If you did decide to teach in your field at the college level, how much formal education do you think would be necessary?

- (1) Bachelor's degree
- (2) Master's degree
- (3) Post-master's work
- (4) Doctoral degree
- (5) Post-doctoral work

27. How many faculty members or administrators have taken the time to single you out to encourage you to consider college teaching as a career?

- (1) None
- (2) One
- (3) Two
- (4) Three
- (5) Several

28. How many times have you been in a group situation where orientation to the college teaching profession was a planned activity?

- (1) Never
- (2) One
- (3) Two
- (4) Three
- (5) Several

29. Which one of the following has contributed most to your current preception of college teaching as a career?

- (1) Reading books, magazines and newspapers
- (2) Knowing certain faculty members personally
- (3) Personal experiences related to teaching
- (4) Other specific college activities
- (5) Simply attending college

30. If you were to be a college teacher, at which one of the following types of institutions would you most like to teach?

- (1) Community College
- (2) Small, church-related college
- (3) Small non-church-related college
- (4) Medium-sized public college or university
- (5) Large public university

31. What would you say is the likelihood of your becoming a college teacher?

- (1) Strong; that is my first choice
- (2) It is now my second choice
- (3) There is a small possibility
- (4) Absolutely no chance at all

The remainder of the questionnaire consists of several statements.
Please respond to each statement according to this key:

- (1) I strongly agree with or accept the statement.
- (2) I tend to agree with or accept the statement.
- (4) I tend to disagree with or reject the statement.
- (5) I strongly disagree with or reject the statement.

- 32. Undergraduates who want to be college teachers should attend graduate school immediately following graduation.
- 33. In the future, more and more college teachers will become involved in politics and government service.
- 34. Many people are teaching in college because they could not or would not be successful in other professions or businesses.
- 35. Most undergraduates never give serious consideration to college teaching as a career.
- 36. I believe that I am intellectually qualified for college teaching.
- 37. Faculty members have more time with their families than most professional people.
- 38. There should be more women teachers at the college level.
- 39. I wish that I had more opportunities to know about the "inside" of college teaching as a career.
- 40. College teaching as a career appeals to a greater proportion of bright students today than it did several years ago.
- 41. Teachers at small, liberal arts colleges have a greater interest in students than most teachers at large universities.
- 42. If salaries were higher, I would be more interested in becoming a college teacher than I now am.
- 43. College teachers have less prestige than lawyers and medical doctors.
- 44. Too many college teachers live in an "Ivory Tower."
- 45. There are many full professors making over \$18,000 in annual salary.
- 46. Graduate students planning to teach in a college should be required to learn something about how to teach.
- 47. If there were less emphasis on research and publication, I would be more interested in college teaching as a career than I now am.
- 48. If I had a chance to be an undergraduate assistant to a good teacher in my department, I would accept it.
- 49. It is quite easy for a good student to get substantial financial aid for graduate study.
- 50. If I had the desire, I think I could be a better college teacher than many whom I have had for courses.

number of the questionnaire completed by each respondent in the study.

1. I strongly agree with the statement.
2. I tend to agree with the statement.
3. I tend to disagree with the statement.
4. I strongly disagree with the statement.

1. I am a person who is very organized and likes to have everything in order.

2. I am a person who is very organized and likes to have everything in order.

3. I am a person who is very organized and likes to have everything in order.

4. I am a person who is very organized and likes to have everything in order.

5. I am a person who is very organized and likes to have everything in order.

6. I am a person who is very organized and likes to have everything in order.

7. I am a person who is very organized and likes to have everything in order.

8. I am a person who is very organized and likes to have everything in order.

9. I am a person who is very organized and likes to have everything in order.

10. I am a person who is very organized and likes to have everything in order.

11. I am a person who is very organized and likes to have everything in order.

12. I am a person who is very organized and likes to have everything in order.

13. I am a person who is very organized and likes to have everything in order.

14. I am a person who is very organized and likes to have everything in order.

15. I am a person who is very organized and likes to have everything in order.

16. I am a person who is very organized and likes to have everything in order.

17. I am a person who is very organized and likes to have everything in order.

18. I am a person who is very organized and likes to have everything in order.

19. I am a person who is very organized and likes to have everything in order.

APPENDIX C

SUPERIOR STUDENT QUESTIONNAIRE

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ANSWER SHEET

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MICHIGAN STATE UNIVERSITY East Lansing, Michigan

Office of Institutional Research - Eustace Hall

SUPERIOR STUDENT QUESTIONNAIRE
MICHIGAN STATE UNIVERSITY

Dear Student,

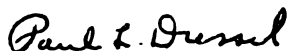
This letter is being sent to you and other upperclass students who have achieved at least a B-plus grade point average at Michigan State.

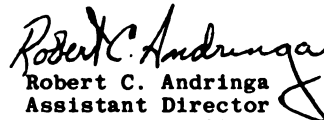
The purpose of the letter is to request your help in a University-wide research study which will contribute to our understanding of career decisions of superior students. We are especially interested in some of your thoughts about college teaching.

We would appreciate very much your completing this questionnaire, using the enclosed answer sheet, and returning the answer sheet in the stamped envelope by February 20, 1967. The sample for this study is limited, as mentioned above. For this reason, it is especially important that each of you takes the necessary 15-20 minutes to complete the questionnaire.

Thank you for your cooperation.

Cordially,


Paul L. Dressel
Director
Institutional Research


Robert C. Andringa
Assistant Director
The Honors College

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INSTRUCTIONS

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Please look at the special answer sheet. There is no need for you to write anything on it except your response to each question. Use the special pencil which was enclosed and exercise some care in recording your response in the proper place. Notice that the items are listed horizontally on the answer sheet.

You do not have to be concerned with "right" or "wrong" answers. The best response is your own honest opinion. Please mark only one answer for each question. Do not omit any questions.

When you finish, please fold the answer sheet and return it in the stamped envelope provided. There is no need to return the questionnaire unless you wish to make additional comments on it.

1. Please mark after item No. 1 on the answer sheet the response which applies to you.

1. Single male
2. Single female
3. Married male
4. Married female

2. Which one of the following categories applies to you this term?

1. Honors College student -- on scholarship
2. Honors College student -- not on scholarship
3. Not an Honors College student -- on scholarship
4. Not an Honors College student -- not on scholarship

3-4. The next two items on the answer sheet are needed to record your college. The following key tells which response to mark for both No. 3 and No. 4.

	Item No.3	Item No.4
Agriculture	1	1
Arts and Letters	1	2
Business	1	3
Communication Arts	1	4
Education	1	5
Engineering	2	1
Home Economics	2	2
Justin Morrill	2	3
Natural Science	2	4
Social Science	2	5
Veterinary Medicine	3	1

5. Which one of the following categories applies to you this term?

1. Have attended MSU continuously (excluding summers) since freshman year
2. Have attended MSU only, but spent one or more terms (excluding summers) out of school
3. Began at MSU, but have since attended and transferred credits from another college or university (including summers)
4. Began at a community college and transferred to MSU
5. Began at another 4-year college or university and transferred to MSU

6. Since you first entered college, how many times have you changed your major (include no-preference as a "major" if applicable)?

1. None
2. One
3. Two
4. Three
5. Four or more

7. As you foresee the future, in which of the following career areas do you expect to be employed 10 to 15 years from now?

1. Business, industry or professional service
2. Government or military service
3. Elementary or secondary education
4. Higher education
5. Housewife, full-time

8. How certain do you now feel about your career choice?

1. Absolutely certain
2. Quite certain; I doubt that I will change
3. Fairly certain, although I could change
4. Not at all certain

9. However certain you are, at what point in your life would you say you made your present decision about a career?

1. High school or before
2. Freshman year in college
3. Sophomore year in college
4. Junior or Senior year in college

10. Which one of the following has most influenced your thinking about a career?

1. Parents or relatives
2. Peers
3. High school teachers, counselors or administrators
4. College teachers, counselors or administrators
5. Some other person or group of people

11. Which one of the following would you say has had the greatest amount of influence on your thinking about careers?

1. Financial security
2. Working conditions
3. Personal strengths and weaknesses
4. Potential for intellectual challenge
5. Opportunity for meaningful service to others

12. Which one of the following would you say has had the least amount of influence on your thinking about careers?

1. Financial security
2. Working conditions
3. Personal strengths and weaknesses
4. Potential for intellectual challenge
5. Opportunity for meaningful service to others

13. When, if ever, did you first give serious consideration to college teaching as a career?

1. Never have
2. High school or before
3. Freshman year in college
4. Sophomore year in college
5. Junior or Senior year in college

14. Which of the following has most influenced your current perception of college teaching as a career?

1. Family or relatives
2. High school teachers or counselors
3. One or two college teachers specifically
4. One or two college administrators or staff personnel
5. College faculty and administrators in general

15. While all of the following may be important for college teaching, which one do you consider most important?

1. Brilliant intellect
2. Interest in working with students
3. Clear and forceful lecturer
4. Good, prolific writer
5. Interest in original research

16. While all of the following may be important for college teaching, which one do you consider least important?

1. Brilliant intellect
2. Interest in working with students
3. Clear and forceful lecturer
4. Good, prolific writer
5. Interest in original research

17. Which of the following activities do you estimate normally consumes the most time in college teachers' workweeks?
1. Teaching in the classroom or laboratory
 2. Committee meetings and administrative duties
 3. Meeting individually with students
 4. Class preparation
 5. Other personal study and research
18. How much importance do you think is placed on research and publications for faculty advancement in your field?
1. Very much
 2. Somewhat more than teaching ability
 3. Weighted about the same as teaching ability
 4. Only one of several considerations
 5. Hardly considered at all
19. How much importance do you think should be placed on research and publications for faculty advancement in your field?
1. Very much
 2. Somewhat more than teaching ability
 3. Weighted about the same as teaching ability
 4. Only one of several considerations
 5. Hardly considered at all
20. If you were to be a college faculty member, which one of the following combinations of time commitment would have the most appeal to you?
1. 100% teaching
 2. 75% teaching; 25% research and writing
 3. 50% teaching; 50% research and writing
 4. 25% teaching; 75% research and writing
 5. 100% research and writing
21. While all of the following aspects of college teaching may be appealing to you, which one is most appealing?
1. Campus environment and cultural activities
 2. Flexible schedule
 3. Teaching in the classroom
 4. Time and resources for personal research
 5. Meeting and counseling with students
22. While all of the following aspects of college teaching may be appealing to you, which one is least appealing?
1. Campus environment and cultural activities
 2. Flexible schedule
 3. Teaching in the classroom
 4. Time and resources for personal research
 5. Meeting and counseling with students
23. On the average, how many hours per week do you estimate full-time faculty members spend in the classroom at MSU and similar institutions?
1. Less than 5
 2. 5 - 10
 3. 10 - 15
 4. 15 - 20
 5. More than 20
24. How do average salaries of college teachers correspond, in your estimation, with those in other occupations which require comparable educational preparation and job responsibilities?
1. College teachers receive substantially less money.
 2. College teachers receive somewhat less money.
 3. College teachers receive about the same as others.
 4. College teachers receive somewhat more money.
 5. College teachers receive substantially more money.
25. How would you compare your current cumulative grade average to that which you estimate most current college teachers earned when they were undergraduates?
1. Mine is significantly higher
 2. Mine is slightly higher
 3. Mine is probably about the same
 4. Mine is slightly lower
 5. Mine is significantly lower
26. If you did decide to teach in your field at the college level, how much formal education do you think you would need?
1. Bachelor's degree
 2. Master's degree
 3. Post-master's work
 4. Doctoral degree
 5. Post-doctoral work
27. How many faculty members or administrators have taken the initiative to single you out and encourage you to consider college teaching as a career?
1. None
 2. One
 3. Two
 4. Three
 5. Several
28. How many times have you been in a group situation where orientation to (or information about) the college teaching profession was a planned activity?
1. None
 2. One
 3. Two
 4. Three
 5. Several
29. Which one of the following has contributed most to your current perception of college teaching as a career?
1. Reading books, magazines and newspapers
 2. Knowing certain faculty members personally
 3. Personal experiences related to teaching
 4. Other specific college activities
 5. Simply attending college
30. If you were to be a college teacher, at which one of the following types of institutions would you most like to teach?
1. Community College
 2. Small, church-related college
 3. Small, non-church-related college
 4. Medium-sized public college or university
 5. Large public university

31. What would you say is the likelihood of your becoming a college teacher?

1. Strong; that is my first choice
2. It is now my second choice
3. There is a small possibility
4. Absolutely no chance at all

* * * * *

The remainder of the questionnaire consists of several statements. Please respond to each statement according to this key:

1. I strongly agree with or accept the statement.
 2. I tend to agree with or accept the statement.
 3. I tend to disagree with or reject the statement.
 4. I strongly disagree with or reject the statement.
32. Normally, undergraduates who want to be college teachers should attend graduate school immediately following graduation.
33. In the future, more college teachers will become more involved in politics and government service.
34. Many people are teaching in college because they could not or would not be successful in other professions or businesses.
35. Most undergraduates never give serious consideration to college teaching as a career.
36. I believe that I am intellectually qualified for college teaching.
37. Faculty members generally have more time with their families than most professional people.
38. There is still some discrimination against women by many of those who hire college teachers.
39. Colleges and universities could do much more than they now do to interest good undergraduates in the college teaching profession.
40. I can see myself eventually writing journal articles in my field.
41. In my department, it would not really be necessary for one interested in teaching only undergraduate courses to have a Ph.D. degree.
42. If salaries were higher, I would be more interested in college teaching as a career than I am now.
43. College teachers have less prestige in our society than lawyers and medical doctors.
44. Graduate students planning to teach in a college should be required to learn about teaching methods and learning theory.
45. It is quite easy for a good student to get financial aid for graduate study.
46. If there were less emphasis on research and publication, I would be more interested in college teaching as a career than I am now.
47. If I had a chance to be an undergraduate assistant to a good teacher in my department, I would accept it.
48. If I had the desire, I think I could be a better college teacher than many whom I have had for courses.

MICHIGAN STATE UNIVERSITY

NAME _____ DATE _____ STUDENT NO. _____ SEX _____ M _____ F _____

COURSE NAME _____ COURSE NO. _____

SECTION _____ INSTRUCTOR _____

NAME OF TEST _____ FORM _____

BE SURE YOUR MARKS ARE HEAVY AND BLACK
ERASE COMPLETELY ANY ANSWER CHANGED

STUDENT NUMBER										
↓	0	1	2	3	4	5	6	7	8	9
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	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9

1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9																																																																																																																											
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APPENDIX D

REMINDER LETTER FOR THE STUDENT QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

The Honors College

February 17, 1967

Dear Student,

About seven days ago you should have received a questionnaire concerning your career plans and perceptions of college teaching.

Considerable time and effort have been expended on this research study. And because the sample is limited to upper-class students with high grade-point averages, your cooperation is most necessary.

If you have not yet returned your questionnaire, please do so immediately. If, however, you have already returned it, please accept our sincere gratitude for your help.

Cordially,

Robert C. Andringa

P.S. Please call me (355-2328) if you need another questionnaire.

• **Antibiotics** – **antibiotic resistance**

917

Trial	Control (n=10)	MCI (n=10)	AD (n=10)
1	75	85	75
2	80	85	80
3	85	90	85
4	85	85	80
5	90	80	70

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16

Trial	Control	MCI	AD
1	65	65	65
2	70	75	75
3	75	70	70
4	80	70	65
5	85	75	60

Condition	Percentage of correct responses
Control	~85%
100-item	~75%
50-item	~55%
25-item	~45%
10-item	~40%

The figure consists of two separate line graphs. The left graph plots 'Rate of reaction' on the y-axis against 'Temperature (°C)' on the x-axis. The curve starts at a low rate at 10°C, rises to a peak at 30°C, and then declines at 40°C. The right graph also plots 'Rate of reaction' on the y-axis against 'Temperature (°C)' on the x-axis. This curve shows a steep, exponential increase in the rate of reaction as temperature rises from 10°C to 30°C, and then the rate levels off or plateaus at 40°C.

APPENDIX E

COVER LETTER

AND

QUESTIONNAIRE FOR DEPARTMENT CHAIRMEN

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

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October 21, 1966

Dr. Harry H. Kimber
Chairman
Department of Religion
Campus

Dear Dr. Kimber,

My doctoral thesis is to be a study concerning recruitment of prospective college teachers at the undergraduate level. The main part of the research portion of the thesis will be a study of superior MSU students' perceptions of college teaching as a career.

A most valuable aspect of my initial investigation is to discover the current situation at the department level as it relates to this topic. I am not interested in particular departments as much as in identifying general patterns.

Would you be so kind as to answer the four short questions on the enclosed questionnaire and return it to me at the earliest possible date? I respect greatly the demand on your time and appreciate most sincerely your help.

Cordially,

Robert C. Andringa
Assistant Director
The Honors College

RCA:gp

Enclosure

QUESTIONNAIRE ON COLLEGE TEACHING
DEPARTMENT CHAIRMEN

(Please feel free to use the back or additional sheets if necessary)

1. From a national point of view, does your academic discipline face any particular problems, with which other disciplines might not have to contend, in recruiting qualified college teachers?

2. If your department has experienced difficulty in the last few years recruiting faculty of the quality it desires, what seem to be the main factors contributing to this difficulty?

3. Please describe any activities within your department which help to identify and recruit prospective college teachers from your undergraduate students.

4. Do you believe the University should consider a more organized program than it now has for identifying and recruiting prospective college teachers from the undergraduate student body? _____ If so, what direction might such a program take?

Please return to: Robert C. Andringa
The Honors College
Campus

APPENDIX F

REMINDER LETTER FOR DEPARTMENT CHAIRMEN

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

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November 4, 1966

Dr. Charles Blend
Department of Romance Languages
Campus

Dear Dr. Blend,

Several days ago I sent a letter requesting you to complete a brief questionnaire as part of a university-wide study. While the overall response has been gratifying, I need information from your department to make the data as representative as possible.

I would be grateful if you could take a few minutes to complete the enclosed form. If your schedule is too tight at the moment, I would be glad to have you call (355-2328) or ask one of your colleagues to respond. In any event I would very much like to have your department represented.

Cordially,

Robert C. Andringa
Assistant Director
The Honors College

RCA:gp

Enclosure

APPENDIX G

CAREER AREAS ANTICIPATED
BY SUPERIOR STUDENTS ACCORDING
TO COLLEGE MAJOR

Table G1. By academic college, distribution of career areas in which superior students expect to be employed 10 to 15 years in the future

	Business, Industry, Prof. Service		Government & Military		Elementary Secondary Education		Higher Education		Housewife		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Agriculture	23	57	10	25	1	3	4	10	2	5	40	100
Arts and Letters	25	15	7	4	43	26	73	44	19	11	167	100
Business	69	81	6	7	0	0	9	11	1	1	85	100
Communication Arts	19	60	3	9	3	9	4	13	3	9	32	100
Education	3	3	0	0	64	69	3	3	24	26	94	100
Engineering	36	80	3	7	0	0	6	13	0	0	45	100
Home Economics	14	41	1	3	10	29	3	9	6	18	34	100
Natural Science	79	55	3	2	11	8	38	26	13	9	144	100
Social Science	84	48	27	15	4	2	45	26	16	9	176	100
Veterinary Medicine	11	92	0	0	0	0	0	0	1	8	12	100
Total	363	44	60	7	136	17	185	22	85	10	829	100

Ques. 7

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