

THE INTRODUCTION OF NON-ACADEMIC CURRICULA ON A  
TRADITIONAL COLLEGE CAMPUS: A STUDY OF THE  
DIFFERENTIAL ACCEPTANCE OF DIVERSE PROGRAMS  
BY ADMINISTRATORS, FACULTY, AND STUDENTS

Thesis for the Degree of Ph. D.  
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KENNETH FREEMAN LIGHT  
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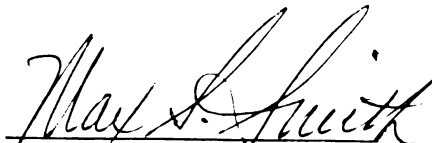
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presented by

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## ABSTRACT

### THE INTRODUCTION OF NON-ACADEMIC CURRICULA ON A TRADITIONAL COLLEGE CAMPUS: A STUDY OF THE DIFFERENTIAL ACCEPTANCE OF DIVERSE PROGRAMS BY ADMINISTRATORS, FACULTY, AND STUDENTS

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#### Statement of the Problem

This study was concerned with the acceptance of non-academic curricula of study on a traditional college campus. The non-academic curricula studied were the Manpower Development and Training Act programs being conducted at Michigan Technological University at Houghton, Michigan.

It was the purpose of this investigation to (1) determine if non-academic MDT programs are accepted at the University, (2) to determine if certain groups differ in their degree of acceptance, and (3) to find if there are certain characteristics that can be identified which relate to the degree of acceptance of these non-academic programs.

### Procedure

The data for this study were obtained from the administrators, faculty, and students of the Michigan Technological University. The sample consisted of 114 administrators and faculty, and 414 students in the regular baccalaureate and graduate programs. A complete administrator-faculty survey was made while a stratified random sample was selected from the student body. Both the administrator-faculty and student sample were from the three major areas of engineering, science, and business administration-liberal arts.

The following demographic data were obtained from the samples selected: sex, age, rank (or class standing), political orientation, father's occupation, length of service (faculty), teaching level (faculty), tenure (faculty), degrees, education of father and mother, membership in organizations, and area of specialization.

The questionnaire developed for this study had two functions: (1) to indicate whether the respondent accepted or rejected the non-academic MDT programs at the University, and (2) if he accepted or rejected values which were the subject of each hypothesis or sub-hypothesis.

The accept-reject variable was the major independent variable in the hypotheses and sub-hypotheses. The data obtained from these variables were analyzed using the chi square statistic, with the five per cent (.05) level of significance arbitrarily defining the level

of acceptance or rejection of the hypotheses under analysis.

The various operationally testable sub-hypotheses guided empirical efforts of this study.

### Findings

1. The non-academic MDT programs are accepted by the majority of the administrators, faculty, and students of Michigan Technological University.

2. Those who hold a traditional orientation regarding the purpose of the University are more likely to reject the non-academic MDT programs than those with a land grant orientation. This finding was more attributable to the administrators and faculty than to the students.

3. Those with a cosmopolitan latent identity are more likely to reject the non-academic MDT programs than those with a local latent identity. This finding was more attributable to the administrators and faculty than to the students.

4. Those who have aspirations for the University to provide a liberal education are more likely to reject the non-academic MDT program than those who do not.

5. Social mobility of the respondent apparently had no effect on the acceptance or rejection of the non-academic MDT programs.

6. Those who perceive the University as a source of prestige are more likely to reject the non-academic MDT programs.

7. The degree of involvement of the administrators and faculty

in the non-academic MDT programs is not likely to affect their acceptance or rejection of these programs.

8. It appears to make no difference on the acceptance or rejection of the non-academic MDT programs whether or not the respondent had established interpersonal relations with those in the programs.

9. Those who feel that the non-academic MDT programs interfere with the regular programs are more likely than others to reject the programs.

10. Attitude toward federal subsidy to education does not affect the acceptance or rejection of the non-academic MDT programs by the administrators and faculty, but does affect the response of the students toward these programs. Negative student attitudes toward subsidy engender negative attitudes toward MDT programs.

11. How the respondent views the ability of the MDT student appears to have no bearing on his acceptance or rejection of the non-academic MDT programs.

12. How the respondent views the ambition of the MDT student appears to have an effect on the acceptance or rejection of the non-academic MDT programs. This is more frequently the case for administrators and faculty than for students.

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## CHAPTER I

### INTRODUCTION

In an era of prosperity there are still those who are faced with want and poverty. Unemployment is a constant specter for the hundreds of thousands of Americans who work in our rapidly changing industries. Unskilled, semi-skilled, and even skilled workers are often displaced by changing technology. Recognizing that industry generally is unable to provide the necessary retraining, the federal government passed the Manpower Development and Training Act in 1962 to help the tens of thousands who were in need of new skills. Various public institutions are conducting retraining programs today under this Act. For the most part, these are high schools and vocational schools with an occasional community or junior college also offering programs. In only rare instances are four-year institutions operating programs under the MDTA.

Because of a paucity of adequate opportunities in its service area for retraining, Michigan Technological University, a four-year degree-granting institution, provides an extensive MDTA retraining program on campus where the MDTA students and faculty mingle with the regular students and faculty of the University. How these programs, students, and faculty are absorbed into a four-year university

setting is of vital concern to the University and is the purpose of this study.

### Statement of the Problem

This study is concerned with the acceptance of non-academic curricula of study on a traditional college campus. It will examine some anticipated problems confronting administrators in higher education in facing the demands for curricular offerings for diverse programs.

### Significance of the Study

This study will be significant to the extent that it contributes to a better understanding of the problems involved in bringing non-academic programs to a university campus. For this investigation, the non-academic programs studied will be the MDTA programs presently being conducted at Michigan Technological University. These non-academic retraining programs represent an anomaly at the University as they run contrary to the established programs of the institution.

As in all engineering and science schools, the over-all trend of the professional academic curricula has been one of upgrading with increasing emphasis on basic science and mathematics. Coupled with this has been a resurgence of research and a faculty faced with demands for further professional preparation. Into this University setting the non-academic MDTA programs have been introduced. Of interest is the fact that these programs are using regular university



facilities and, in many cases, regular faculty. This study will attempt to assess whether the regular administrators, faculty, and students accept the MDTA programs or if they feel that they are an intrusion on a campus already pressed for facilities and staff. It will be of interest, also, to see if certain philosophical differences are apparent concerning the role of the University, and whether the administrators, faculty, and students are aware of the social and economic pressures that make adult retraining of vital concern to society.

It is considered valuable for the purpose of this study to survey the evolution of higher education in this country to show how it has developed in response to a desire to serve various clienteles. It will be found that many social forces and pressures also have molded the ultimate structure of higher education. Many of these forces and pressures have historical precedence and are still pervasive. Others are products of the present. Each has a role to play in shaping the growth and change in higher education. For the purpose of this study, it is important to provide this historical perspective so as to place the problem to be investigated in its proper context.

This study will not only view the broad field of higher education but will examine the role of the institution in society. In turn, this study will examine the various clienteles that look to the institution to serve their needs. These clienteles exert pressures which will be examined to see what effect they have had on the ultimate structure of the institution.

Turning from the institutions of higher education, it is also necessary to understand something about the individuals involved in these institutions. Any programs, baccalaureate, graduate, or non-academic, may be accepted or rejected by individuals who come from diverse backgrounds, and who bring a variety of attitudes and feelings to bear on the acceptance of these programs. Therefore, it is also important for this study to understand something about the complex motivations of individuals.

As in many social organizations in complex urban societies it is anticipated that there will be great heterogeneity in the background of the respondents regarding socio-economic status, political orientation, education, ethnic heritage, religion, and other demographic variables. It may be anticipated that where heterogeneity exists within a population that attitudes also may be divergent. This study will be concerned with this heterogeneity to see if attitudes toward MDT programs at the University emerge out of diverse socio-economic backgrounds, current academic status, and conceptions concerning the role of the University.

The definition of an attitude as used in this study is stated as follows: "The degree of positive or negative affect associated with some psychological object."<sup>1</sup> Or as a further amplification:

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<sup>1</sup> Thurston, L. and E. Chave, The Measurement of Attitude (Chicago: The University of Chicago Press, 1929), p. 54.

An individual who has associated positive affect or feeling with some psychological object is said to like that object or have a favorable attitude toward that object. An individual who has associated negative affect with the same psychological object would be said to have an unfavorable attitude toward the object.<sup>1</sup>

How the non-academic programs were introduced at the University may have some implications for this study. Actually, they were contracted for by the Division of Continuing Education with the approval of the chief administrative officer. The general line administrators and faculty were not consulted when the decision was made to introduce these programs. Thus, the non-professional programs were introduced into a relatively ambiguous atmosphere in which no attempts were made to clarify the objectives of the University as they relate to these types of programs.

At a time when institutions of higher education are being pressed to expand their facilities to accommodate ever increasing numbers of students, and to expand their services to accommodate the varied needs of these students, this investigation could have significance in determining the role of colleges and universities in MDTA training and possibly other non-academic programs.

#### Statement of Purpose

It is the purpose of this investigation to (1) determine if non-academic programs are accepted on a four-year university campus, (2) to determine if certain groups differ in their degree of acceptance,

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<sup>1</sup>Allen L. Edwards, The Techniques of Attitude Scale Construction (New York: Appleton Century Crofts, Inc., 1951), p. 2.

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and (3) to find if there are certain characteristics that can be identified which relate to the degree of acceptance of these non-academic programs.

### Statement of Hypotheses

The statement of hypotheses at this point will necessarily be broad and inclusive. These hypotheses are directed toward a number of variables which theory and past research suggest may affect attitude toward the introduction of new curricula and toward change generally. One such set concerns reference groups. Another involves socio-economic background and professional status. A third concerns knowledge about the programs, and a fourth relates to the various stereotypes of government, training, and poverty. After the development of the background of theory and research restatements of the hypotheses are made in a form which allows operational tests of the general hypotheses, specifying the discrete variable under analysis.

#### Hypothesis I

Acceptance of such programs as MDT is directly related to the respondent's reference group orientation, his commitment to professional skills, and his loyalty to the University.

#### Hypothesis II

Acceptance of such programs as MDT is directly related to the economic and social background of the respondent, his patterns of social mobility, and his aspirations for social and professional status.

### Hypothesis III

Acceptance of such programs as MDT is directly related to the respondent's knowledge of and involvement in the non-academic programs.

### Hypothesis IV

Acceptance of such programs as MDT is directly related to stereotypes held by the respondent.

### Assumptions

1. The sample is adequate for the research problem.
2. It is possible to determine the degree of acceptance of these non-academic programs by the questionnaire method.
3. It is assumed that the respondents will fully express their true attitudes on the questionnaire, rather than conform to what they may feel is expected of them.

### Definitions of Terms

1. MDTA or MDT: Manpower Development and Training Act  
This federal act was passed in 1962 to train or retrain adults 18 years of age and older. No formal educational level was stated for admittance to the benefits of this act. When the training itself is being referred to the abbreviation used will be MDT.
2. BS-MDTA Administrator: Those regular university administrators who are closely identified with MDT programs and who make

decisions concerning their operation.

3. **BS Administrator:** Those regular university administrators who are not involved in MDT programs and who are concerned only with regular degree programs.

4. **MDTA Instructor:** An instructor hired by the University for instruction in the MDT program only. This person is not considered a permanent employee and will not attain professorial rank nor accrue tenure.

5. **BS-MDT Instructor:** A regular full-time instructor of the University who has or is eligible for professorial rank and tenure.

6. **BS Instructor:** A regular full-time faculty member of the University who has or is eligible for professorial rank and tenure.

7. **MDTA Student:** A student in one of the MDT programs with a high school education or its equivalent.

8. **BS-MDTA Student:** A baccalaureate student who has a regular faculty member instructing him who also teaches in the MDT programs.

9. **BS Student:** A baccalaureate student who has a regular faculty member instructing him who does not teach in the MDT programs.

10. **Non-Academic Programs:** Various non-baccalaureate degree programs that are not taken for credit.

#### Limitations of the Study

1. Because of a limited response by colleges and universities to

the opportunities for service presented by the MDTA, only Michigan Technological University has a substantial number of programs on campus. Therefore, the lack of opportunity to extend this study to other campuses is a definite limitation.

2. The literature on problems found in establishing non-academic programs on a college or university campus, and faculty reaction to this change, is very limited.

3. The nature of the baccalaureate programs at the Michigan Technological University will probably have some bearing on how the MDT programs are accepted. As Michigan Tech is primarily a science and engineering school, and most of the faculty have many years of industrial experience, they may perceive value in the MDT programs that other faculties in other types of institutions may not see. Thus, the findings of this study will be meaningful only at Michigan Tech, or perhaps, at schools of a similar nature.

4. As Michigan Tech has a large number of students from modest socio-economic backgrounds, this could influence the attitudes of the respondent toward non-academic programs.

### Overview of the Study

In Chapter I the study is introduced, hypotheses stated, significance of this study explained, and the definitions of terms and limitations of the study listed.



In Chapter II, the evolution of higher education is traced to provide a perspective from which to view the problem under study. Various social forces and problems will be reviewed to give some appreciation of the situation facing the college administrators today. Chapter III will be concerned with the institution as a social system and its means of fulfilling its objectives. Also, psychological and social psychological theory and research will be examined to give some overview of those complex variables which appear to be related to attitude formation. Chapter IV will deal with the design of the study. In this chapter will be found the procedures used to derive the samples of the populations used. The instrumentation is also specified and the hypotheses restated. In Chapter V, the findings from this investigation are gathered and analyzed. Chapter VI will be concerned with the interpretation of the data with conclusions and implications for further research.

## CHAPTER II

### RELATED IDEAS AND LITERATURE

In order to provide a perspective for the topic under investigation and place it in the framework of higher education, it is perhaps best to start with an overview of the historical development of higher education in this country. Only by understanding the development of higher education, and the forces which have uniquely shaped it, is it possible to place non-academic programs in their proper context. It will be found that many of the forces that earlier gave rise to the need for higher education are the same forces, updated and changed to be sure, that give rise to the need for various non-academic curricula today. It also will be found that the college administrator is beset by special interest groups who make demands upon the university's resources to further their specific causes. One group could be those concerned with non-academic programs.

The administrator is also concerned with the many conflicts and problems facing our society. He must lead the university to help ameliorate these problems and to supply leadership for our country's growth. All of these matters must be weighed by the administrator as he assigns the university's resources in the most effective manner.

Consequently, they do have a bearing on the commitment the university could have to non-academic programs.

This chapter, then, is concerned with historical antecedents, forces influencing higher education, the many publics of the college administrator, and the conflicts and problems facing higher education. This overview will provide the background from which to approach the problem under study.

### Historical Antecedents

Since America was settled in its early years by the English and other Europeans it is to these early immigrants that we owe many of our concepts as to the dignity of man, his basic freedoms and rights, and many aspects of our educational structure. The thinkers of our Revolutionary period drew upon progressive eighteenth century European thought for many of their ideals and these, in effect, were incorporated into the educational structure of our country. It has often been written that the ideas expressed by Thomas Jefferson in 1779 were the ideological beginnings of American education. While Jefferson's plan met with little success, his writings helped establish educational provisions in many states at that time and later.

The demand for higher education was evident early in the new world. Colonial colleges were founded in this country before the Revolutionary War and were established mainly for the purpose of supplying

an adequately trained clergy. The curriculum in these colleges was modeled after the British pattern of education and was tied to the classics. Another purpose of education at that time, in addition to supplying clergy for colonial pulpits, was to preserve the general culture.

The number of new colleges formed in America before the Civil War was reported by Tewksbury to be over 500. However, only about one in five have survived. These new institutions were mainly private liberal arts collèges often controlled by religious foundations with extremely limited faculty.<sup>1</sup> These early colleges performed their tasks well and provided many clergy for the various sects of the time. However, change in the guise of the European Enlightenment was beginning to be felt during the 18th century among the educated classes, and the American concern for the useful and practical was growing.<sup>2</sup>

#### General vs. Special Education

From the earliest times a conflict has existed over whether education should be general in nature or aimed at a special competence. The decade of the 1820's was critical in the struggle between the generalist versus the specialist approach to university education. Jefferson, in

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<sup>1</sup> D. C. Tewksbury, The Founding of American Colleges and Universities Before the Civil War (New York: Bureau of Publications, Teacher's College, Columbia University, 1932), p. 55.

<sup>2</sup> Richard Hofstadter and C. DeWitt Hardy, The Development and Scope of Higher Education in the United States (New York: Columbia University Press, 1958), p. 5.

an attempt to introduce a special competence for the students at the University of Virginia, established separate colleges of mathematics, chemistry, medicine, and law. Each college had its own curriculum, although a student could take courses in another college. This was a departure from the liberal arts tradition of the past and supplied an opportunity for specialization.

### The Elective System

Another factor that helped shape higher education in this country was the elective system. The growth of the elective system in American colleges commenced from about 1825 at which time Harvard expanded its curriculum to allow the student greater choice of subjects. The elective system broke the rigid dominance of the classics but also gave them a new lease on life. Morrison, a Harvard historian, felt that the elective system was abused and that the student was deprived of his classical heritage. However, classical education was based upon the aristocratic education of Greece and Rome, which permeated the stratified society of Europe, and was not attuned to the dynamic American scene. The indigenous quality of the American university after 1862 was its declared faith in equalitarianism. This is what Jackson had propounded in the 1820's and the 1830's but it had not come to pass until after the Civil War because of the prestige of the classics and the

built-in conservatism and inertia of the academicians.<sup>1</sup>

Some idea of how inappropriate the curricula of some state universities were before the Civil War can be gained from the following:

Michigan was the leading western state university of the time in 1843-1844, and of the 50 term courses offered 26 were in Latin and Greek and Mathematics, 9 in natural sciences, 5 in "intellectual science" (that is logic, philosophy, and psychology), 3 in morals and religion, 3 in political science, and 4 in English. Until the applied science which the country most needed, i. e., agriculture and engineering were taught, universities were far out of touch with the frontier society. The liberal arts was the minority study appropriate to an aristocracy, no matter what claims were made about its value as a general training of the mind.<sup>2</sup>

#### Demands for Practical Education

Over the years, however, a demand developed for education of a scientific and practical nature. Public leaders, including Franklin and Jefferson, had from the earliest times advocated a system of education for practical use. This culminated in the passage of the Morrill Act in 1862 which provided grants of lands to endow, support, and maintain state colleges that would devote time to the agricultural and mechanic arts to "promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."<sup>3</sup>

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<sup>1</sup> Stewart Campbell, "The Place of Higher Education in a Changing Society," The American College, ed. Nevitt Sanford (New York: John Wylie and Sons, Inc., 1962), p. 925.

<sup>2</sup> Ibid., p. 924.

<sup>3</sup> Edgar W. Knight, Education in the United States (3rd ed. rev.; Boston: Ginn and Company, 1951), pp. 149-150.

The Morrill Act had many long range effects. It provided leadership, training, and research in fields that were of great importance for the nation's growth. It also had a profound influence on the pattern of American education because it provided for a liberal and practical education. The two were combined rather than being studied as separate entities. While the classical studies and the vocational studies were combined, both were taught without any sense of inferiority.<sup>1</sup>

As the universities were supported by tax monies and dedicated to serve the people of the state, they opened the doors of higher education to a far greater segment of the population than ever before, and removed forever the idea that higher education was for a select few.

The act also gave importance to the practical aspects of daily living--stressing the mechanic arts and agriculture. It gave prestige to the programs of a vocational type and caused some of the college level courses to be taught not just for their own sakes but as instruments for a better society.

It has been said of land grant institutions that where there is a valid educational need no program is beneath their dignity. However, as large land grant universities have grown over the years, many of them have slowly changed from a philosophy of service to a philosophy of selective excellence, and have since eliminated many of the programs

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<sup>1</sup> Ibid.

that assisted them in obtaining the status they have in society.

In a sense, then, for a college or university to offer non-academic curricula where they have been slowly eliminating such programs would seem to represent a definite regression of educational effort. It would mean establishing once again the types of programs they had started with in their earlier history.

### Education After the Civil War

The growth and development of American higher education from 1862 on was characterized by the emergence of the land grant university, the re-examination of the role of liberal arts, and the expansion of graduate education. After the Civil War the great emphasis in American universities was on specialist education. The liberal arts were placed in a defensive position and had to struggle to maintain an adequate place in the university.

German education at the university level influenced American education in the later years of the 19th century. Not only was research included as an important university function, but an increased range of subjects in the sciences and social sciences led to an expanding liberal arts program.

John Hopkins University was established in 1876 as a graduate school where investigation in arts, sciences, and medicine could be carried on. Other graduate schools followed in swift order. The



impetus for research and graduate education was found in the fact that it was estimated that over ten thousand Americans had taken a German Ph. D. degree during the period up to 1914.<sup>1</sup>

American education, then, stems from essentially two different philosophical approaches. One is the tradition of the liberal arts college with its emphasis on humanities and the enlightenment of man. The other is represented by the land grant philosophy prevalent in our large state universities where the overriding aim has been one of service to the public.

#### Forces Influencing Higher Education

American education has been subjected to many social forces throughout its development. As educational institutions, particularly the land grant universities, have responded to the demands of society, many profound changes have occurred in their curricular offerings. Some of the forces that have shaped American education have been industrialization, urbanization, transportation, and immigration. It is appropriate for this study to sketch some of these forces in their historical development--as each of these has had an important implication for the educational structure of this country.

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<sup>1</sup>Campbell, op. cit., p. 929.

## Industrialization

Perhaps the greatest force that has affected American education on a sustained basis over the last century has been industrialization. American industrialization had its beginning with the advent of the cotton loom during Colonial times. Industrialization and the factory system was in its infancy in 1825, and even as late as 1850 the bulk of manufacturing in the United States was carried on in the individual household by members of the family--or in a shop with a solitary proprietor. However, after the Civil War industrialization expanded to great heights. This changed the structure of employment in America. Gone were the individual artisan and home industry. Native inventiveness and advances in science and technology improved the production methods of American industry. Some idea of the scope of the industrial revolution and its growth at an unprecedented rate can be gathered from the number of patents issued in the United States. In 1870, 80,000 were issued, while by 1930 the number had reached 421,000 per year.<sup>1</sup> This industrial revolution produced goods cheaper, more swiftly, and of better quality than the previous methods, and made available to the American citizen a better standard of living and greater leisure than any previous society had ever enjoyed.

The rapid growth of technology had profound implications for the

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<sup>1</sup>Edward Newton and Herman G. Richey, The School in the American Social Order (Boston: Houghton Mifflin Co., 1963), p. 395.

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curricula of the colleges and universities of America. Particularly in the land grant universities were such areas as engineering and science expanded to provide the work force for industry.

Mass production and interchangeability of parts have created a work force that is highly trained and highly specialized. This very specialization has created great social problems. One of these in particular is appropriate for the purpose of this study: obsolescence of the working force. Great social problems exist when the work force is displaced because of changing technology.

Federal assistance in vocational education. -- The demands of society to retrain and rehabilitate the unemployed have resulted in active federal legislation for this purpose. Federal aid to vocational education had its inception with the Morrill Act in 1862 which was designed to provide for the needs of agriculture and industry at the college level. This led to the establishment of many land grant colleges and universities in many states. The Hatch Act of 1887 and the Smith-Lever Act of 1914 were also designed to expand the area of vocational education at the college level. The Manpower Development and Training Act of 1962 and its predecessor, the Area Redevelopment Act, are milestones in society's concern for those technologically displaced. It is appropriate to note that many of the universities and colleges in the country today who view MDT programs as not worthy of attention had their start in the area of vocational education.

Perhaps the most meaningful legislation of this century was the **Smith-Hughes Act** of 1917. This act provided for a permanent appropriation of 7 million dollars annually for vocational education in agriculture, trades, home economics, industry, and for teacher education. This act has continued since that time and has been extended by the **Vocational Education Act** of 1963. It provided the basic framework for vocational education for almost 50 years. The legacy of this act is found in the high schools and technical schools across the country. Without this act our high schools would still be primarily offering only traditional college oriented programs. This act opened the door for vocational education at the secondary level.

The **George Reed Act** of 1929, a temporary measure, allocated an additional one million dollars annually to expand vocational education in agriculture and home economics. This act expired in 1934. The **George-Deen Act** was passed in 1936 and provided a continuing appropriation of fourteen million dollars for vocational education in agriculture, home economics, trade and industry, and for the first time in distributive occupational areas.

During **World War II** the training of defense workers was spurred with legislation for war production training. Appropriations exceeded one hundred million dollars by the end of the war. This program terminated with the war's end in 1945.

The **George-Deen Act** was superseded by the **George-Barden Act**

of 1946. This act provided for appropriations of fourteen to twenty-two million dollars annually. Funds were provided for vocational education in agriculture, home economics, trade and industry, and distributive education. Funds were also available for guidance, teacher training, and research in vocational education. This marked the first time that guidance was recognized as an important aspect of vocational education.

After World War II the "G. I. Bill of Rights" provided almost unlimited funds for the education of veterans. Many vocational education programs were established to accommodate these veterans and this act gave impetus to vocational education in this country.

The federal government became interested in the field of public health in 1956 and passed the Health Amendment Act which provided for an appropriation of five million dollars annually for five years to expand and improve practical nurse training. This law was extended for three years, and was to terminate in 1965, but was included in the new legislation.

Even the fishing industry was recognized as needing assistance and an amendment to the George-Barden Act was passed in 1956. It authorized, on a continuing basis, \$375,000 annually to states for vocational training in fishing trades, and various distributive industries associated with it.

With the advent of Sputnik, American education underwent careful scrutiny and re-evaluation. One result was the National Defense

Education Act of 1958. Title VIII of this act (made Title III of the George-Barden Act) authorized \$15,000,000 annually for the training of highly skilled technicians. This act has been extended in the Vocational Education Act of 1963.

While the act made it possible for the offering of highly demanding college level curricula, it stated that such work must not be accorded baccalaureate credit. This qualification affected the field of technical education and resulted in most technical training programs having little or no transfer credit to baccalaureate engineering programs. In the true sense, then, technician training is not the first two years of engineering education; it is a comprehensive program that parallels much of the engineering education, but is taught at a different level, with different objectives.

With the advent of the Area Redevelopment Act, the government at last recognized its responsibility to provide vocational training and retraining for unemployed adults living in depressed economic areas. This was truly a milestone in federally sponsored vocational education. For the first time funds were granted to establish training programs for adults and at the same time provided them with funds to help defray the cost of attending these programs. It was the first act designed to help solve the problems of the unemployed with a constructive plan for retraining.

The Manpower Development and Training Act of 1962 expanded and

strengthened benefits of the **ARA**. It was designed along the lines of the **ARA** but was more adequately funded and granted greater benefits in terms of length of training and training allowances. Trainees under this act were given a training allowance equal to their unemployment benefits. They were also given a subsistence allowance if they had to attend an institution away from their home. The length of the programs was extended from sixteen weeks under the **ARA** to fifty-two weeks under the **MDTA**--and this has subsequently been amended to allow up to two years of training. The **MDTA** should, in time, when it can be fairly evaluated, take its place with the **Smith-Hughes Act** as a truly significant piece of legislation. It places no restriction on those who enter into the training, save that they can benefit from it, and that there be a reasonable chance of their placement upon completion of the program.

The **MDTA**, allowing up to two years of training, makes it feasible to establish programs where the attainment of skill is possible, and many programs to train machine operators, welders, and other technical skills are now being offered. In addition, it is also possible to offer fairly high level technical programs of the "engineer aide" variety. Indeed, some persons feel that these programs almost attain the level of the training designed under Title VIII of the **National Defense Education Act**. It is these high level programs that made **Michigan Technological University** realize that it had a role to play in the **ARA** and **MDTA**.



To complete the survey of federal legislation it is necessary to include the Trade Extension Act of 1962 which provides for the training of displaced workers, the Public Welfare Minimum Act of 1962 designed to aid certain welfare cases, and finally the Vocational Education Act of 1963.

The Vocational Education Act of 1963 is the latest piece of legislation, and it is truly a capstone of all federal programs aimed at vocational education. In an all-encompassing sweep it takes up the Smith-Hughes, NDEA, ARA, MDTA, and other special acts into a comprehensive program of vocational education. During the forty-eight year history of federal aid to vocational education, millions of persons have been assisted in entering the labor force--yet in terms of 1965 this effort is entirely too small. A greatly expanded working force, including more women, greater job proliferation and sophistication, and greater mobility has caused a need for greater federal assistance.

The Vocational Education Act of 1963 provides funds for all types of training, construction, equipment, and other ancillary services such as teacher training, evaluation, special demonstration and experimental programs, development of instructional materials, state administration and leadership, program assessment, and research.

In all federal programs two intentions are apparent: (1) to meet the needs of the individual as he attempts to adjust to a changing



technology in a variable economy, and (2) to meet the needs of business and industry.

This federal legislation was passed with the idea that American educational institutions would rise to the occasion to be of service to society. However, the institutions of higher education have not responded to this entreaty to the extent that secondary schools have. Indeed, as an example, only a few colleges or universities in Michigan conduct these retraining programs, and only Michigan Tech has a sizeable number of these programs on its campus.

It is quite apparent that the demands of industry influence American education. Despite the lack of interest in MDT programs, scientific and engineering studies occupy an even greater place than previously in colleges and university offerings. Technological programs of the two-year type are assuming greater prominence, and even terminal courses are being offered at some colleges and most community colleges. It can be seen that the demands of industry are a potent force, frequently shaping the structure of American education, and one that occupies the attention of the college administrator.

A problem associated with the response of colleges and universities to the training needs of industry has been the difficulty of keeping current what is being taught, and also not to teach for specific occupations, but rather for a family of occupations--of teaching the broad underlying principles rather than a narrow acquisition of facts. Also, the changes

in technology have created a need for continuing education on the part of all personnel. This is particularly true of those in the lower educational brackets. Thus, we have great layoffs and displacement where those in the lower skill levels are unable to adjust.

### Urbanization

Industrialization carried with it not only immigration but also vast urbanization. By 1890 over three-fifths of the population of the North Atlantic States were in the cities. This urbanization resulted in increased demands for education in human relations, health, and safety. Urbanization created chaos in many areas--illiteracy, drunkenness, disease, and crime were present. However, urbanization and industrialization also created centers of wealth, and made possible the financing of a program of public education, a program that was not possible in an earlier eighteenth century rural economy.

This urbanization gave rise to the need to study society in all its aspects and created the demand for an expansion of the social sciences at institutions of higher education. To this day the problems of urbanization challenge the colleges and universities of this country, and the solution of such social ills as poverty, ignorance, disease, crime, riots, social inequality, and others has yet to be attained. Urbanization,

then, is also a problem, or a force, shaping the education of our country, and one that the college administrator must strive to cope with in addition to all others. But this is one of primordial importance, for it deals with the essence of our civilization itself.

### Immigration

As the expansion of American industry took place, it was necessary to obtain manpower from the most ready source--Europe. Millions of Europeans migrated to the United States to work on the railroads, in the mines, and in factories. It was not uncommon for as much as one-fourth to one-third or more of the residents of American cities to be foreign born, and by 1900 more than one million immigrants were reaching our shores each year. The enormous numbers of immigrants from Europe had a tremendous impact on American education.

Before 1882 the bulk of immigrants to the United States came from northwestern Europe and particularly from such countries as England, Ireland, Germany, and Scandinavia. After the 1880's the character of the American immigration changed significantly. At this time most of the immigrants came from the southern and eastern parts of Europe. Conditions have become somewhat better in north and northwestern Europe, but in contrast, they had become difficult in southern and eastern parts. The inhabitants found it to their political and economic advantage to migrate. By the last decade of the nineteenth century some

8.8 million persons reached American shores from these parts of Europe.<sup>1</sup> These new immigrants, unlike the older ones who settled on farms, flocked to the metropolitan areas and remained for the most part in the new cities of the northeast. They settled in self-contained communities and perpetuated the languages and customs brought over from their homelands. The schools of this era were looked upon not only to teach the language of this country, but also to assist in the Americanization and assimilation of these foreign-born peoples.

Often the immigrants, but more frequently their offspring, looked to higher education for economic and social mobility. The sons and daughters of foreign born parents were quick to realize that in the loosely structured milieu of America it was possible to rise quickly up the economic and social ladder if one had the proper credentials, and education was an important credential. Education, to these people, was looked upon not only to provide training for a livelihood but also to give the social graces that those of a higher social class expected if one were to associate with them.

### Transportation

Another force affecting American education was the expansion of transportation. Railroads had crisscrossed the entire nation by 1900.

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<sup>1</sup>R. Freeman Butts and Laurence A. Cremin, A History of Education in American Culture (New York: Henry Holt & Co., 1953), pp. 306-307.

Following this expansion of transportation were large groups of land-hungry native Americans and foreign born immigrants who settled on the rapidly diminishing frontier--opening new territories and expanding to the far reaches of our country the desire and demand for education. The new lands were made available by the Homestead Act which made it possible for a person twenty-one years of age or over to receive 160 acres of land by living on it for five years and making certain improvements. Railroads, too, were given tremendous acreages by the government. Altogether they received over 183 million acres, and these vast areas were also used for the establishment of farms and villages.<sup>1</sup>

Into these vast areas the demand for education was carried and reached fruition in the establishment of a system of education that started at the elementary level and reached its culmination with the state university. Often, too, private or parochial colleges were established on the new frontier. Thus American education expanded to include the continent.

The newly established colleges and universities were looked upon to furnish teachers, agricultural experts, engineers, and training in other trades and professions vital to a newly emerging region. On

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<sup>1</sup>Richard N. Current, T. Harry Williams and Frank Freider, American History, A Survey (New York: Alfred A. Knopf, Inc., 1961), pp. 471-472.

these newly founded campuses could be found many courses and programs of simple utility--the university was attuned to its public. This was the heyday of the land grant university.

Today many of the great universities have terminated these programs that were vital in an earlier era. In many cases this was necessary as times and conditions have changed.

Unfortunately, these programs were sometimes terminated because of faculty pressure to "upgrade" instruction on the campus. It seems that a subtle but pervasive pressure in academic circles is the desire to make more rigorous and more academically respectable all programs of instruction. And woe be to the program of simple utility! Perhaps this pressure has reached to the community colleges of America.

American community colleges usually support the following functions: transfer programs, vocational-technical programs, general education programs, community service, and guidance programs. A comprehensive community college is supposed to support all five functions. Often in the past transfer programs gained most of the support and interest. Recently, in most community colleges an increasing amount of attention is being directed toward vocational-technical programs.

Philip Selznick expresses his concern over the comprehensive community college by stating:



On theoretical grounds, it is hard to believe that, in the long run, we can combine the true transfer student with the true vocational student, and then lump together a serious effort to educate these two classes of students with the entirely different function of counseling.<sup>1</sup>

Further in the same discussion he states: "I wonder whether we will not have to reverse the trend toward the general community college."<sup>2</sup>

This summary of some of the historical forces that have shaped American education is somewhat brief and inconclusive, but for the purpose of this study does point out those that have been recognized as having significance. It is now appropriate to change our perspective to the present time to examine additional forces with which the university administrator is concerned.

#### The Many Publics of the College Administrator

The college administrator has a diversity of pressure groups to contend with today. These groups represent a spectrum of power and influence, and they are accorded attention roughly in proportion to their importance. These groups are either unorganized or loosely organized, or are highly structured and professionally staffed. The pressures brought to bear upon the college administrator by parents,

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<sup>1</sup> Philip Selznick, "A Sociologist Views Junior College Administration," Journal of Secondary Education, XXXVI (January, 1961), 38.

<sup>2</sup> Ibid.

alumni, students, and employers are most likely to be loosely organized and often present little threat, although on some campuses, Berkeley for example, students can become quite militant and exert great pressure.

Formal pressure groups tend to be professionally staffed and organized with the intent to control and influence the operation of the college. These are unions, faculty associations, faculty senates, chapters of national organizations dealing with specific causes, professional associations such as AAUP, and others. In many cases these formal pressure groups have a history of sanctions against any college administration with which they become embroiled. In the case of unions the ultimate weapon is the strike, but with the AAUP the publication of censure is practiced. Each of these pressure groups influences the administrator's actions and is considered when a course of action is to be decided upon.

### The Faculty

The faculty is also a source of pressure on the college administrator. As a group they often wish a greater voice in the administration of college affairs--and this may go beyond usual academic matters--since in most instances today faculties are given the opportunity to contribute to academic planning. The North Central Association of Colleges and Secondary Schools clearly states its position regarding

faculty relationship to the college administration in the following:

Like other types of organization, a college or university operates within a hierarchical structure in which the various positions, each with a defined area of responsibility and authority, are related to each other through a chain of command. The hierarchical structure is further characterized by a formally organized system of rules and regulations which govern the making of decisions and their implementation.

But the college or university differs from most other types of organization in the place of its personnel in the structure of the institution. The personnel of an institution of higher education--the faculty--are not regarded as employees occupying designated positions in a hierarchy. Rather, the faculty member operates to a significant degree as an independent entrepreneur engaging in decision-making outside of the hierarchical structure. Indeed, his interests and commitments often identify him with his discipline as much or more than with his institution. The individual faculty member is an expert in his scholarly field of interest; his competence as a specialist is judged by his peers rather than his superordinates. He operates with little supervision, and the concepts of academic freedom and tenure tend further to limit the extent to which he is subject to organizational discipline. He and his colleagues, operating as a faculty, are responsible for many decision-making activities which in other types of organization would be carried on by the officers in the hierarchy.<sup>1</sup>

It can be surmised that the North Central Association views the college as operating in a hierarchical arrangement through the administrative levels until the faculty is reached--and here the line of authority becomes selective and diffused. The administrators have certain prerogatives regarding faculty actions, and in turn the faculty has prerogatives regarding planning and policy-making that in another type of

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<sup>1</sup>North Central Association of Colleges and Secondary Schools, Guide for the Evaluation of Institutions of Higher Education (Chicago: North Central Association of Colleges and Secondary Schools, 1963), p. 13.

organization could be handled by the administrative officers.

In any organization where there is a poorly defined boundary between relative areas of responsibility and authority conflicts will exist as each group attempts to assume a greater role in the conduct of organizational affairs. It is in this poorly defined area that conflict exists in most colleges.

### Local, National, and International Clientele

The college, at its inception, must identify with certain clientele that it wishes to serve. It has been said that the newer American colleges and universities resemble those of various religious denominations. They start with an appeal to special clientele, regional or local, from narrow social layers that agree in certain fundamentals. Later, as they move toward universality or wider influence, they shed some of their former clientele and try to attract new ones; they try to expand the boundaries of their zone of influence and as a result lose their unanimity as to the essential truths and take on a multitude of aims.<sup>1</sup>

Such an expansion creates a multitude of tensions or conflicts arising around the institutional aims and direction. Academic aims are curtailed or expanded, staff procured, promoted, released, or moved.

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<sup>1</sup>Frank Pinner, "The Crisis of the State Universities; Analysis and Remedies," The American College, ed. Nevitt Sanford (New York: John Wiley & Sons, Inc., 1962), p. 940.

Relative emphasis is readjusted, and areas once blessed with funds and attentions are allocated a position of lower importance. Research is either stressed or given other relative priority. Usually, however, it is stressed, as is evidence of scholarship by the writing of books and articles.

Pinner points out that many colleges are seemingly ashamed of their former provincialism and eagerly seek programs that expand the faculty's interest to national or international affairs. Typical are such programs as those aimed at developing nations.

Yet, while the universities reach out for wider horizons, they dare not alienate the local or regional support base. The local groups expect continued involvement with the college or university and apply pressure to secure it.

Another conflict is created by the need of the university to satisfy one of its important functions: service to its local publics. Often the programs which are of service to its publics are in direct conflict with the aims of the university to achieve excellence and be regarded as "distinguished." In a public institution, the local legislator may very well understand the university training technically proficient persons for business and industry, but has little sympathy for a university that wishes to become involved in programs of a "prestigious or international type."<sup>1</sup>

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<sup>1</sup> Ibid.

Often, too, as the university attempts to expand its influence and reputation it must, of necessity, attract and hold distinguished faculty. This aim is expressed in their recruitment policies, which usually result in much weight being given to academic titles and honors. This "strengthening" of faculty usually results in a divergence of the older faculty with respect to the new.

The new faculty tend to scorn the too-practical courses and "applied research" of the older faculty. This influx of universalist values is often the unintended by-product for greater recognition. To the extent that the university must seek support from its local base this influx of universalist values helps to alienate the university from its public. Pinner puts it this way:

. . . the separation of the state university from its local publics has not occurred in spite of the improvement of its faculty but because of it. Where once there was a community, there are now two or more separate groups, where once there was explicit understanding of common purposes there are now many publics.<sup>1</sup>

Pinner further points out that the weaker the faculty, the less it is concerned with ultimate truth and the more likely it will make concessions to do those things the community wishes done. However, he states that if persons are brought to the university with better training, more deeply committed to their discipline and to the search for ultimate

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<sup>1</sup> Ibid.

truth, it will be found that a breach is bound to arise between these two groups.<sup>1</sup>

Again distinguishing between these groups, those with a local view feel that a tax supported institution is bound morally and politically to help the people of the state, while the universalists believe that an intellectual life can only flourish when divorced from the daily affairs of the community.<sup>2</sup>

Often administrators are caught between loyalty to the older faculty and esteem for the new. This, too, is presented as a source of conflict when priorities must be established and decisions made regarding personnel actions.

These concepts--provincialism versus universality, or the older faculty versus the newer "more distinguished" faculty, will be examined in this study to see if any pattern exists regarding their viewpoints toward the non-academic programs at the university. One could speculate that perhaps the older faculty would support the MDT programs and have a more provincial view of the responsibilities of the university.

#### Controversial Clientele

Another source of conflict that has had serious implications for

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<sup>1</sup> Ibid., p. 946.

<sup>2</sup> Ibid., p. 956.

the college administrator is the degree of freedom to be given to the public airing of unpopular causes or unpopular speakers. Witness the varying positions in the granting of speaking privileges to Communist, Nazi, or other unpopular groups. Administrators do not seem to have any ready solution for the controversial group or speaker. If they give in and allow a controversial speaker on the campus, various pressure groups supporting the opposite view will cry alarm--as will many parents. Yet if the controversial speaker is denied the privilege of speaking, various students, faculty, and outside pressure groups will similarly spring to the attack. Thus the harried college administrator can do no right but only satisfy one of two possible pressure groups.

### The Legislators

In addition to various pressure groups there are many other organizations that have a profound influence on the college or university. Among these could be committees or sub-committees of the legislature that hold hearings on budgets or capital outlay, or in some cases, state departments of education that act as coordinating or controlling agencies for higher education in the state.

### Accrediting Agencies

Perhaps the most important organization regarding curricular matters is the regional or national accrediting agency. In most colleges, today, it is possible, and most probable, to be accredited by a



regional and one or more national accrediting agencies. In the case of the entire college, accreditation is usually granted by a regional agency such as the North Central Association of Colleges and Secondary Schools. Also, in some instances a particular curriculum is accredited, such as Mechanical Engineering by the Engineer's Council for Professional Development, or the Business Administration Department by the Collegiate Schools of Business.

The accrediting agencies have played an important role in American education. These agencies were started in many cases to establish standards for high schools, and they have then turned to the accreditation of college and universities.

In 1885 the New England Association of Colleges and preparatory schools was established; this was the forerunner of various agencies seeking to standardize and improve educational programs throughout the United States. As colleges and universities usually require specific units of instruction for admittance, the practice of accrediting high schools grew out of their efforts to standardize the quality of the students preparation without requiring each student to take an entrance examination.

Various accreditation agencies are found. The most common and important is the regional association of colleges and secondary schools that specifies standards for teacher training, laboratory and library facilities, academic achievement, and building adequacy. In some

states, the state department of education acts as the accrediting agency. In other cases, it is a state university. There is general acceptance on the part of the colleges and universities of the standards established by accrediting agencies and lists of accredited schools and colleges are available.

The growth of accrediting agencies provided the necessary regulatory bodies to assure a minimum standard of adequacy of high school preparation and quality in college programs. In this sense, they have performed a valuable service.

#### Those Concerned with National Survival

Even though the American college or university is subject to accreditation and appears to be a fairly standardized institution throughout the country this is far from being the case. Actually, various groups subject the institution to much pressure for education to satisfy particular needs. Not only does one find proponents who claim that modern education should prepare the student for citizenship, for self-fulfillment, for vocational efficiency, for intellectual stimulation, and liberal education, but that it should also prepare the student for survival and the preservation of the American way of life. The questions to be answered from this latter frame of reference are concerned with how much national effort should be placed in education, the amount of education that should be made available to all, and the kind of education

needed to counteract the advance of the Communistic world. It is from those concerned with the question of national survival that the greatest criticism of contemporary American education has emanated. The best known is that of Admiral Rickover who would have modern American education modeled after the educational program of Great Britain. John Rosselli has this to say in reply to Admiral Rickover:

When a man wants his country to borrow some much admired institution from another country, he often fails to realize that what he wants borrowed is already dead or decaying in the country of origin. And just as frequently he appears to have no explicable reason for doing this, other than the fact that the grass looks greener on the other side.<sup>1</sup>

Thus, the testimony of Vice-Admiral Hyman G. Rickover before the House Appropriations Committee surprised some British readers by giving strong and unqualified support to features of British education which now are being modified or under fierce attack in Britain by many teachers and parents.

James Conant takes exception with those who would institute a crash program to emphasize education aimed at national needs and has stated in a recent speech: "Those who seek to put national need in opposition to individual development are guilty of drawing a false antithesis."

It can be surmised, then, that there are those who view the role of education to be much different than it is now. Each has his own

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<sup>1</sup> John Rosselli, "Where the Grass is Greener," NEA Journal, LI (December, 1962), 40-41.

curriculum to satisfy the needs he feels are the important ones to stress. In a country so full of educational prophets and proponents, so responsive to public pressure and criticisms, so vulnerable to public whim and fancy, it is a tribute to those in education that they have not vacillated more than they have as the educational pendulum swings to and fro in a world beset by tension and competition.

The American college or university as it now operates is designed for our democracy, and it is based upon the values and beliefs of the American people. That it has shortcomings is clear, that it lacks in specific areas when compared to special purpose institutions is understandable. However, that it is widespread and has the support and loyalty of the American people is a testimonial to the fact that it is answering the needs of the people. How difficult it is in a democracy to assist all in their development--the dull, the average, the bright; the poor, the middle-class, the rich; the black, the white, and the yellow skinned; the bored, the passive, and the intellectually curious; the rural, the small-town, and the city students with their divergent backgrounds--all these factors to be accepted and understood by the instructor in his tasks of helping each student progress to his own individual limits of attainment!

James Conant states:

We need not retreat one step from our own goal of providing education for all (and I mean all) American youth . . . Equality of opportunity for all . . . and the equality of respect among all

occupational groups are two doctrines that are significant for our future as for our past. These are the fundamental premises of American education.<sup>1</sup>

### Those Concerned with Secondary Education

The American high school is an integral part of the structure of higher education and it is assuming many of the courses that were once taught at the college level. The high schools themselves tend to restrict or enhance the offerings of the colleges of America by their willingness to assume greater academic challenges for their student body. Much criticism has been directed toward the American high school for its rigidity.

It is interesting to note that Bestor decries the lack of changes made in the curriculums of the high schools. He states:

In the twentieth century the sciences, and other branches of scholarship, the various professions, and the whole world of technology have undergone changes that are undeniably profound. The radical reconstruction of the curriculum in the American public schools has not, however, been in adjustment to these changes in intellectual life.<sup>2</sup>

In Bestor's opinion, the curriculum of the school at the beginning of the twentieth century was much more capable of satisfying today's needs--in it was foreign language study, mathematics through

<sup>1</sup>James B. Conant, The Citadel of Learning (New Haven: Yale University Press, 1956), p. 43.

<sup>2</sup>Arthur Bestor, The Restoration of Learning: A Program for Redeeming the Unfulfilled Promise of American Education (New York: Alfred A. Knopf, Inc., 1955), pp. 40-52.

trigonometry and in some cases even through calculus, a thorough study of English, a good grounding in the various separate sciences, and a comprehensive treatment of history. He concludes:

Had the full resources supplied by the American people been devoted to the orderly carrying out of the program that had been responsibly developed by the beginning of this century, educational progress in the United States during the past twenty-five or fifty years would have been so unmistakable that the present widespread discontent with the schools could hardly have arisen.<sup>1</sup>

### Conflicts and Problems Facing Higher Education

Some criticism of American education appears to be fully justified, for it must be realized that in no way has educational equality been reached across our land. Many disparities exist among the states and among districts within states. Finally, the urban dweller usually receives education superior to the rural dweller, and the northern, eastern, and western regions have a larger amount to spend on education than do the southern states. In addition to these conditions, minority groups, particularly the Negro, are even less well off as a result of public apathy and policy.

### Equality

As a result of the present struggle for educational equality of the Negro, and the segregation issue, fundamental changes are being made in southern education. Because of the southern white resistance to

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<sup>1</sup> Ibid.

integration, public placement laws in at least eight states have been passed to control if not restrain desegregation. Abolition of public schools has been authorized in six states as a last resort. Thus, the free public high school in some states is in a position where it may be abolished. Financial aid to students who wish to attend segregated, private, non-sectarian schools in the event public schools are either closed or mixed has been provided in four states. Further, curtailment of court attacks on segregation have been the aim of new laws in four states, and miscellaneous statutes have been enacted affecting compulsory attendance, teacher tenure, transportation, and the use of funds for desegregated education. The Negro, while a free man, has still to be accepted as an equal to the white man in the North as well as the South. Records show he earns less, is less educated, has a lower standard of living, commits more crimes, is ill more, and dies younger than the white man. Indeed, one of the greatest challenges to education is to inculcate in the white populace an awareness of the potential of a fully accepted Negro population, and to bring the Negro up to his full potential through education.

### The Scientific Revolution

There are many other forces present that will have a profound effect upon the curriculum of the college university now and in the future. One of the most important is the scientific revolution with its effect on

social structure. The effect of machines that replace man's mental and manual effort will result in great changes of employment. The need will be for greater education as fewer semi-skilled and unskilled workers are required by industry. More scientists, engineers, technicians, teachers, and others requiring post-high school education will be increasingly in demand. By 1970 there will be seventy-five percent more scientists than in 1959.<sup>1</sup>

Mathematics and science will be among the fastest growing fields, and so will chemistry and the biological sciences. This scientific revolution has brought with it a new way of thinking--the scientific method as compared to the scholastic and ecclesiastical thinking of earlier times. Scientific methods stress objectivity and rational selection of alternatives.

Education must help close up the serious gap between scientific progress and social uses of this progress. It must teach the wise use of scientific knowledge for the betterment of all mankind.

Rather than being awed or overwhelmed by the dizzy pace of scientific revolution, we should systematically analyze appropriate aspects of it to determine the educational implications. Then we need to make the decisions about the tasks of the school, taking into account our basic values and the reality of our situation.<sup>2</sup>

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<sup>1</sup>Ralph W. Tyler and Richard I. Miller, "Social Forces and Trends," NEA Journal, LI (September, 1962), 26-28.

<sup>2</sup>Ibid.



### Leisure Time

Leisure time is also a force affecting modern educational practices. Americans spend forty billion dollars every year, or eight per cent of the gross national product, on leisure activities. This leisure could be used to develop wholesome values and training for effective group life. Schools must develop interests in intellectual, social, and esthetic experiences for all.

### Urbanization

Urbanization, as in the past, is a force that must be recognized.<sup>1</sup> This force has created such problems as the movement to suburbia and the development of vast slum areas. Suburbia has mainly a middle-class social strata whose inhabitants value material success and mobility. They leave the city-center to the poorer socio-economic classes. This exodus draws leadership and money from the city-center, and it results in the depreciation of neighborhoods and the spread of slums as less money and interest become available to fight this blight.

### Unemployment

The slum dweller today, unlike those in earlier times, is less able to find his way out of the slum. In 1961 the unemployment rate among the non-school youth under twenty years of age was approximately three

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<sup>1</sup>Ibid.

times the national average. In some areas over one-half of the male youth were out of school and unemployed.

The obligation of society toward its unemployed is also a force that may have implications for the college administrator. To what extent are the college and university administrators aware of the problems of the unemployed? Do they know the number of unemployed? Are the psychological and sociological effects of joblessness apparent to them? If they were aware of the true significance of the unemployment problem would it have an influence on their attitude toward non-professional programs and their acceptance of these programs on the university campus?

Bonner summarizes the effects of being jobless:

We have seen that the need to maintain, if not enhance, one's status is important for every self. In the United States status is derived to an inordinate degree from economic success. Economic or occupational status is thus an extremely important value in American life. When this status is threatened by unemployment, the individual's position in the community and often in the family is dangerously undermined. Without status he has no prestige; and without prestige, his life begins to lose its former value. Thus, men accustomed to feeling secure in the eye of others are overwhelmed in their own eyes by the realization that they cannot maintain their former standard of living. This situation is exacerbated by the erroneous American belief that abilities are always adequately rewarded. Adverse reflection on an unemployed man's ability is further encouraged by the fact that, when his status is lost, discouragement depletes his initiative, energy and he gives the impression of a man devoid of ambition and resourcefulness.<sup>1</sup>

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<sup>1</sup>Hubert Bonner, Social Psychology (New York: The American Book Company, 1953), p. 313.

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The effects of joblessness are apparent in America today. It has been estimated that eighty to ninety per cent of the cases in juvenile courts come from the ranks of the thousands of jobless youth who are casting about with nothing to do.<sup>1</sup> Job discrimination also creates problems for the Negro, frustrated in his desire for an equitable distribution of the fruits of labor. And there are those who because of a changing technology find themselves without ready employment and with no salable skill. There is the woman of middle age who, her children grown, has time on her hands, and who desires to return to a more productive life outside her home.

Perhaps the greatest problem facing America today is the vast number of young men and women under twenty-two who have left schools and are not at work. It has been estimated that at any one time thirty per cent of the high school graduates will average fifteen per cent unemployment. This clearly indicates that there is little room in the labor market for the undereducated or unskilled young worker.

In addition to unemployment, there is also youth underemployment, and this is also of vital concern to society. It is important for those who are working to find jobs that give them a feeling of accomplishment, an opportunity to work toward promotion, and ultimate success. Instead, there are many jobs at the entry level that require hardly any education

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<sup>1</sup> Grant Venn, Man, Education and Work (Washington: American Council on Education, 1964), p. 11.

or skill. These jobs are dead end in the sense that there is little opportunity for promotion. This causes the job-holder to become dissatisfied and to seek other work. Job turn-over among those under twenty-two is high for this reason.

It has been recognized that education has become the crucial issue in determining who will be successful in society. Secretary Wirtz has this to say of the undereducated and untrained:

The reason for the increasing concentration of unemployment among unskilled workers is that machines are taking over the unskilled jobs. These are the jobs which have, up to this time, absorbed the casualties of the educational system: those who for one reason or another have left school without having added to the strength which is in their arms and backs the skill it takes to do something more than "common labor." This wasn't too bad when there were enough common labor jobs around. Now there aren't.

Today, unskilled workers make up five per cent of the work force, but almost 15 per cent of the unemployed are in this group. Unemployment is over twice as high among the young worker groups and among non-white workers--the two groups in which there are the largest percentage of unskilled workers . . . than it is in the work force as a whole.<sup>1</sup>

The relationship between education and work as it relates to occupational entry and upgrading is definite and inexorable.

It is estimated that the number of workers displaced each year by automation exceeds one and one half million.<sup>2</sup> These people are added to a labor market that is troubled with those who are already unemployed. This figure, too, is being compounded by the increased number of job

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<sup>1</sup>Ibid., pp. 16-17.

<sup>2</sup>Ibid.

seeking youth who are graduated each year or who leave school.

At the same time that technological unemployment grows it has been estimated that four million unfilled jobs exist in the country today.<sup>1</sup> While technology destroys jobs it also creates new ones. The newly created jobs are unlikely to be filled by the displaced worker-- unless he has the opportunity to be retrained for the new job. Whether the displaced worker can be retrained depends upon his background of basic education and skill. The problem, then, is to match the labor force with the jobs, and where there is a problem of matching, the workers must be retrained.

It was once believed that because the economy is growing at a rapid rate enough jobs would be created to absorb the unemployed. However, because of a change in the type of employment created this has not happened, and consequently today there are a great number of jobs waiting for properly trained people.

#### Changing Character of Employment

The manpower needs at all levels, with the exception of the unskilled and semi-skilled levels, are readily documented. The needs at the professional level for scientists and engineers are well known. Not only is there a need for more professional people, but there is also a shortage of supporting personnel for these professionals. This is

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<sup>1</sup>Ibid.

particularly true with the technician. It is estimated that industry will need at least sixty-eight thousand more each year to meet the needs by 1970.<sup>1</sup> There is also a shortage of persons in the skilled occupations category. It is estimated that in the next decade 5.2 million jobs will open up at this level.<sup>2</sup> While apprenticeships are expected to provide for approximately half of the need, there will still be an annual shortage of one-half million skilled craftsmen in the next ten years.

Another variable is the changing character of the population. Because of the post World War II population explosion more young people will be completing their education within the next few years than ever before. For every three young persons entering the world of work during 1963, there will be five in the years beyond 1965. The number of those seeking jobs will increase rapidly while the number of traditional jobs that were available for this age group is decreasing. Consequently, large numbers of youth will probably be unemployed and this may create various social and psychological problems.

The magnitude of the number of students entering the labor market each year can be gathered from the fact that there are nearly a million non-college bound high school graduates, and several hundred thousand

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<sup>1</sup>Norman C. Harris, Technical Education in the Junior College (Washington: American Association of Junior Colleges, 1964), p. 28.

<sup>2</sup>Venn, op. cit., p. 22.

college dropouts.<sup>1</sup> This represents somewhere between seventy-five to eighty-five per cent of all of this country's youth. Only a small part of the youth, however, have any occupational preparation.

### Lack of Occupational Education

American education today has not recognized the fact that technology dictates the role that education must play in preparing a man for the world of work. Unfortunately, the educational system, in the main, has its attention concentrated on the twenty per cent of our youth who go on to college. The eighty per cent who will not graduate from college are left behind because they have been committed to the road leading to the baccalaureate degree since they were in junior high school. The attrition in our educational system is tremendous. Thirty-five per cent of our youth are lost during high school. Forty-five per cent of the high school graduates never go on to college, and finally, forty per cent of those who enter college fail to complete their education. Perhaps the main reason for this attrition is a lack of interest. The students are simply not willing to work toward a baccalaureate degree--or else they do not fit into the present college track method of education. These are the people that Labor Secretary Willard Wirtz called "push-outs."

What is the composition of this large number of young workers?

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<sup>1</sup>Ibid., p.123.



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Contrary to the popular image of the dropout, it has been found that there is no substantial difference in intelligence between the dropout and his age group as a whole. It has been found that two-thirds of them have an intelligence quotient of 90 to 109.<sup>1</sup>

The same difficulties are experienced by the high school graduate. In addition to the fact that fifteen per cent of them are unemployed, a higher percentage are in jobs where they are underemployed. This age group must find their work where it is available, and as has been previously cited, the number of unskilled and semi-skilled jobs is very small. Consequently, this group will be forced to find their work in middle level positions of a technical, semi-professional, or skilled occupations area. It may mean that in order for them to make this transition additional education of one form or another is practically mandatory.

From these figures it can be surmised that the scope of the unemployment problem is vast and challenging, and that education plays the vital role of providing the training necessary for successful job placement. This vast number of job seekers are presently beyond the reach of secondary institutions, and are considered members of the adult segment of our society. It would, therefore, seem appropriate for post-high school institutions to answer the need for additional vocational and

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<sup>1</sup> Loc. Cit.

technical education for this age group.

Venn expresses a similar view:

Technological change has, rather suddenly, thrown up a dramatic challenge to this nation's political, economic, social, and educational institutions. Though the full scope of this challenge may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of all American education. All levels of education, and particularly post-secondary education, must quickly move to assume greater responsibilities for preparing men and women for entry into the changed and changing world of technological work. Unless far more and far better education on a semi-professional, technical, and skilled level is soon made available to greater numbers of citizens, the national economy and national structure will suffer irreparable damage.

These sentiments have an implication for this study. To what extent are the administration, faculty, and students aware of the large numbers of persons in need of additional training? To what extent do they feel that the university has a legitimate role to play in adult re-training?

Many persons feel that the community colleges of this country are the institutions that have unique capabilities to provide for the adult needs. The philosophy of the community college is to assist all students, youths or adults, with their open-door policy to become economically sufficient by various occupationally oriented programs. Thus, a careful scrutiny of the role of the four-year and two-year colleges should be made before determining the site for various non-academic programs.

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<sup>1</sup> Ibid., p. 1.

### Growth in Population

Population growth is another force that has profound implication for changes in American education. One birth every seven and a half seconds in the United States is partially counteracted by a death every nineteen seconds; one immigrant every one and one-half minutes is counteracted by one emigrant every twenty-three minutes. This means that the United States is increasing in population at a rate of three million each year.

The population is likely to grow from 196 million in 1965 to 260 million by 1980, and 350 million by the turn of the century. This increase in population will result in classroom shortages--as there will be 8.1 million additional youth in the 60's. In 1959 American schools had a shortage of 135,000 classrooms. In 1960 it was 142,000. There are almost two million children in overcrowded classrooms and 685,000 are attending curtailed or half-day sessions in their present schools.<sup>1</sup>

There are serious ill effects of this overcrowding--less instructional time, more discipline problems, and inadequate physical conditions for learning. In addition, there is a chronic shortage of adequately prepared teachers. While new teaching devices are of assistance, they do not replace the qualified teacher in the classroom.

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<sup>1</sup> Tyler and Miller, op. cit., pp. 26-28.



### Interdependence

A last force affecting contemporary American education is international interdependence and conflict. America is not isolated but is more involved now than ever with the rest of the world. International issues and understanding are as important as local issues used to be.<sup>1</sup>

The college should stress objective analysis and evaluation of issues--not just uncritical acceptance. A student must be taught to reason with himself.

The major task of the college, then, is to develop a citizen capable and willing to accept the challenge of the future.

These various forces will have to be accounted for and will shape the future education of our country, but the colleges also have an obligation of leadership. Not only is public education responsive to the societal setting in which it finds itself, but it must also be an instrument for future progress of that society. The college must be aware of these changes and not only reflect but also assist in these changes--assuming they are for the betterment of man.

### Goals

There are many goals for our society which have implications for education. The first goal could be the realization of a more perfect democracy--one in which men not only have a full measure of material

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<sup>1</sup> Ibid.

wealth, stable political affairs, a full esthetic and intellectual development, but also one that retains a full regard for the individual man and his personal rights.

Necessary for the realization of these conditions are the following:

(a) Citizens must be given the opportunity to practice democracy--to hear the facts, to argue, to compromise, to decide on a course of action, and to be governed by the majority. (b) Society must grant intellectual freedom for man to explore for the truth without fear or censure. (c) Every man must be given equal opportunity for self-development in accordance with his talents and abilities. Every man must be born equal with certain inalienable rights. (d) Society must accept the belief that man is logical and human and wishes for his fellow man that which he wants for himself. (e) Man must submit to certain restraints for the common good. He must, for his liberty and rights, show self-restraint and responsibility. He must subordinate his own self-interests for the common good. (f) The gains of society must be accorded to all, regardless of social position. (g) Man has a right to be different and show his individuality within the framework of approved social conduct. He does not have to be a follower; he has the right to lead or to strike off by himself. (h) There must be belief in the perfectibility of man and his institutions, that there is hope for progress in this direction.<sup>1</sup>

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<sup>1</sup> Edwards and Richey, op. cit., pp. 652-655.

The second goal which will have an implication for education is to see that all peoples and nations have security and equality. This can be attained by seeing to it that the have-not nations and societies attain those things necessary for a happy and full life. Education will be a vital part of this drive for equality. It will be necessary in any country to surrender certain rights in return for certain benefits--thus, to surrender certain economic freedoms so that all share in the abundant life. Complete freedom in economic life in a country usually means immense wealth for the few and large masses of poor. Yet in surrendering some economic freedom, other freedoms must not be lost in turn.

The third goal is the need for higher ethical and esthetic standards. This is desirable if man is to improve his society and his world. Man must live more than for bread alone; he must find ways of improving himself and his society.

The fourth goal is to have a carefully considered plan for the future. Society should anticipate problems and design social institutions to handle these problems rather than use stop-gap, short term solutions. We must make social progress keep pace with technological progress.<sup>1</sup>

The aims of modern education have been subject to a re-examination, particularly since World War II. This was brought on because of the

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<sup>1</sup>Ibid., p. 651.



dynamic changes in technology, in world leadership, in professional manpower, not to mention an increasingly educated population and an unprecedented birth rate. This re-examination is both necessary and desirable.

### Conclusion

A debate over the proper role of education has occupied man from Aristotle on. In history, and at present, a controversy exists as to whether education should be liberal or general, or specialized and vocational. John Duncan Spaeth has perhaps the best answer to this debate when he writes:

The conflict between so-called cultural and scientific types of higher education cuts to the very core of human nature, because man belongs to two worlds--the world of things and the world of experience, the world of fact and the world of faith, the world of matter and the world of mind, the world of sense and the world of spirit. The primary business of education is unification of the two worlds in each individual.<sup>1</sup>

There has also been a controversy as to whether education should be dedicated to knowledge alone, or if it should be primarily concerned with the development of character.

The President's commission on higher education in 1947 claimed that education should include programs not only for those who have the verbal and abstract reasoning abilities but also for those who have such

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<sup>1</sup> John Duncan Spaeth, "Science and Humanism in University Education," Critical Issues in Education, An Anthology, eds. Henry Ehlers and Gordon C. Lee (New York: Holt Rinehart and Winston, Inc., 1959), p. 260.

talents as artistic ability, mechanical aptitude, motor skills, social versatility and other special talents.<sup>1</sup>

Thus it can be seen that fundamental aims of education are still being discussed and re-examined at the present time.

The one thing that we can be certain of is that education does change, will change, and should change if it is to serve the individual and society. This chapter has attempted to point out that for every change, there was a reason, or as it is sometimes called, a force, which made education respond to a certain need. Education has a challenging task not only to respond to these forces, but to lead the way whenever possible.

### Summary

A review of the historical development of education was presented. In history, and at present, a controversy exists as to whether education should be liberal, general, or specialized and vocational.

Many forces have influenced the evolution of education in this country. The most pervasive have been industrialization, urbanization, immigration, and transportation. Each has had affect on the structure of American education. Today the demand is for more education in its widest meaning--from education for the intellectual to education for the practical man.

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<sup>1</sup>Ibid., p. 261.

While the changing structure of our society demands increasing emphasis on education for all, there are various groups that believe education should be for the select few. Other groups demand with equal vigor that the institution should serve all society. These groups could be classified into those with a traditional orientation, and those with a land grant orientation.

Other pressure groups attempt to mold the structure and function of the colleges and universities. In addition to these groups, the administrator must take into account the problems and conflicts facing our society. He must also have in mind the many goals of our society and our democracy. The college administrator must allocate the resources of the institution in line with its objectives. The institution must help social progress keep pace with technological progress.

## CHAPTER III

### BACKGROUND OF THEORY AND RESEARCH

The theoretical background for this study must start with the concept of society itself, for the university, the agency to be investigated in this study, is itself a part of society. While the major purpose of this study is to determine the acceptance or rejection of non-academic programs at the university, this does relate to the purpose of a university, and a university's relationship in turn to society. Conversely, society looks to the university to perform certain functions--such as bridging the gap between the level and nature of the culture of the individual and the approved culture of his society; to selecting and controlling the environment which in its best tradition mirrors the culture of greater society; and finally as an agency of social control, directing the assimilation of the individual into reasonable conformity with group standards.<sup>1</sup>

#### The Structure of a Social System

A university, then, is a social system that is part of a larger social system--society. There are several important features of a social system that make up its structure. These are:

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<sup>1</sup> Clyde B. Moore and William E. Cole, Sociology in Educational Practice (Boston: Houghton Mifflin Co., 1952), p. 51.

1. The way the work is divided among its members--the division of labor. The division of labor is of great functional significance to a social system. Without it, the aims of a system may fail because of a lack of order and the presence of friction.

2. The authority structure--the roles of a social system are differentiated in terms of power and authority assigned to them. The authority structure enforces the division of labor which helps to maintain order and to avoid friction within the system.

3. The prestige or status structure--which helps motivate individuals to play their roles well and consequently contribute to the stability of the system. The prestige structure reinforces the authority system by giving great amounts of prestige to the authority positions.

4. The distribution of rewards--financial or otherwise, is undertaken to enhance the aims of the organization by supplying rewards for satisfactory performance on the part of employees. A definite scheme is used to distribute the rewards.<sup>1</sup>

It can be deduced that a university is a social system, as it has within it all of these structural elements. One of the broad purposes of this study will be to examine the relationship of a university to its society. Already questions could be posed regarding the division of labor in a university in which both professional and non-professional

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<sup>1</sup> Eugene V. Schneider, Industrial Sociology (New York: McGraw-Hill Book Company, Inc., 1957), pp. 23-25.

programs are located. Will a proper division of labor be structured so that order may be maintained? Will the authority structure enforce a division of labor which will help maintain order? Will the prestige or status structure be maintained so as to help motivate individuals to play their roles well and thereby contribute to the stability of the system? And finally, will the distribution of rewards be such as to enhance the satisfactory performance of those at the university?

### Functional Prerequisites

A university is a social system within which the roles of its members are distributed in a systematic definite pattern. This social system in order to operate has several functional prerequisites:

1. The social system must accomplish its major purpose without conflict which may disable it. The system must maintain internal order as it does its business.
2. The system must also secure itself from threats or encroachments from outside arising from the actions of its members in their pursuit of roles.
3. The motivations of the persons comprising the organization or social system must be such that a large proportion of them will contribute to the system's undertaking.
4. There must be adequate communication between the members of the social system in both upward and downward directions.

5. Finally, members of the system must share common beliefs, definitions, values, and goals in order to unite the system and have it achieve its purpose.<sup>1</sup>

The introduction of the MDT programs will be viewed against these five points. If the introduction of MDT programs has caused a breakdown of one of these functional prerequisites, the value of these programs to the university and to society would have to be weighed against the harmful effects of such breakdowns.

### Stratification

Every society has some form of social stratification. This is true in a simple society based largely upon kinship relations, and it is also true in a sophisticated society, based upon highly complex social relationships. It appears that as societies become more complex the basis for stratification and class structuring also becomes more complex.<sup>2</sup> Social stratification, then, exists within every organized human society, due to the conditions inherent within that society. These conditions undoubtedly have many causes that are intimately connected with the phenomenon of "living together". However, there is no general agreement on the causes.<sup>3</sup>

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<sup>1</sup> Ibid., pp. 21-23.

<sup>2</sup> Peter Murdock, Social Structure (New York: MacMillan, 1949), p. 88.

<sup>3</sup> Pitirim A. Sorokin, Social and Cultural Mobility (Glencoe, Illinois: Free Press, 1957), p. 337; Kingsley Davis and Wilbert E. Moore, "Some Principles of Stratification: A Critical Analysis," American Sociological Review, (August, 1953), pp. 387-394.

While no clear-cut picture exists of the class structure of the United States as a whole, several attempts have been made through national samples to have people identify themselves with a social class to which they feel they belong. Based upon upper, middle, and lower class divisions, Gallup found in 1939 that eighty-eight per cent of a sample surveyed indicated they belong to the middle class.<sup>1</sup> Cantril also found a similar result through the use of income data correlated with social class identification. In his case over eighty-seven per cent of his sample indicated that they belonged to the middle class.<sup>2</sup> Cantril also found a tendency of people to identify themselves with social classes higher than their income levels. In 1945, Centers conducted a public attitude study of a sample of the adult male population in the United States to obtain a view of their class identification. He found that forty-three per cent considered themselves middle class while fifty-one per cent considered themselves working class. He indicated that "a class is no more nor less than what people collectively think it is. It is a psychological structuring and must be observed just as any other psychological datum before we can infer its basis and nature."<sup>3</sup>

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<sup>1</sup>George Gallup and S. F. Rae, The Pulse of Democracy (New York: Simon and Shuster, 1940), p. 309.

<sup>2</sup>Hadley Cantril, "Identification with Social and Economic Class," Journal of Abnormal and Social Psychology, XXXVII (1943), 74-78.

<sup>3</sup>Richard Centers, The Psychology of Social Classes (Princeton, N. J.: Princeton University Press, 1949), p. 75.



Ogburn and Nimkoff have stated:

Practically, the significance of class system lies partly in the fact that it determines the social rewards of the people. The members of a particular class have more or less the same "life-chances," that is, the same probability of securing the good things of life, such as freedom, a high standard of living, leisure, deference, or whatever things are highly valued in a given society.<sup>1</sup>

For the purpose of analysis, then, social classes have been roughly divided into upper, middle, and lower classes. The upper class in America has high status and many privileges. Its members belong to the "best clubs", are usually wealthy, with their wealth either inherited or derived from large financial holdings. Employment is more characteristic of the lower upper class. They are almost always in a professional and proprietary position. Not all upper classes are wealthy--some derive their place from aristocratic family backgrounds.

The values of the upper class, like any group, mold the attitude and behavior of its members. Generally, a member of this class will find that his marriage partner, and the church and the schools he attends are prescribed by his social class. He is more apt to attend a college of a name variety, usually of the ivy league type. He is certain of his status and keeps those below him at a proper social distance.<sup>2</sup>

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<sup>1</sup> William F. Ogburn and Meyer Nimkoff, "Social Class and Welfare Levels," Social Foundations of Education, eds. William O. Stanley et al. (New York: The Dryden Press, Inc., 1956), p. 189.

<sup>2</sup> Hubert Bonner, op. cit., p. 301.

The middle class in the United States is less well defined than the upper or lower class. This is because of the large body of persons who identify with it and their great variety of occupations. Most of this class are white-collar workers. Although heterogeneous, the pervasive attitude of these people is their close identification with upper class interests. This is because they aspire to social migration and because their occupations thrust them in contact with members of the upper class.<sup>1</sup>

The lower class is usually comprised of the so-called laboring group. These are wage earners in industry, low salaried workers, farmers and farm laborers, servants, and the unemployed. To this group belong most of the industrial workers of America. This is a fairly large segment of society. The lower class person is conscious of the fact that he is manual worker who receives a low income. This person is apt to resent his low status and underprivileged position. Since class status determines opportunities, the worker may feel that the upper class not only deprives him of an adequate income but also of the satisfactions that income could supply. Statistics bear him out as there is a wide difference in the United States in the health, comfort, intelligence, educational opportunities, and the like between those in the upper and lower class.<sup>2</sup>

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<sup>1</sup> Ibid.

<sup>2</sup> Ibid.

Centers found that Americans are aware of class differences and their position within these classes.<sup>1</sup> Yet while they recognize a class difference there appears to be very little desire on the part of many American working men to attempt to change the class or status system. The ambitions of most working men are modest--they usually desire only to better themselves within their own class--not to "rise to the top". It therefore appears that most working men have reconciled themselves to their present job and class position--recognizing that they do not have the special skills and education to attain a position much higher on the ladder.<sup>2</sup>

Bonner sums up the differences in social classes with the following statement:

Class alignments and occupational-centrism play a significant role in determining attitudes and influencing personality. His class membership and his occupation impose certain modes of thinking and behaving upon the individual from which he cannot easily free himself. They erect social and psychological barriers between him and the members of other groups, for they involve

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<sup>1</sup> Centers, op. cit., p. 77.

<sup>2</sup> Ibid., p. 78.

differences in life organization, outlook, interest, and conduct . . . Occupational distance, however, cannot be sharply distinguished from class distance, the social separation arising from the differences in class membership. Knowledge of either the occupation or the class identification of an individual is generally sufficient for an accurate prediction concerning his attitudes and beliefs, particularly conservatism and radicalism. The degree of conservatism and radicalism is in turn a fairly reliable index of class alignment and occupation.<sup>1</sup>

Despite the lack of consensus on the use of the term "class" in sociological theory and research, and on how it is measured, it is recognized that it is a powerful variable and one that could explain some of the variation in human behavior.

When this social class variable does not take the analysis in the expected direction there are two professionally endorsed explanations:

(1) reference groups; and (2) anticipatory socialization.<sup>2</sup> Gottlieb explains these concepts as follows:

If the lower class respondent deviates significantly from the modal pattern of his own class group and behaves like members of the middle or upper class, we introduce the reference group concept; that is, he has taken on the values of the group to which he aspires. If, on the other hand, our lower class respondent does not differ significantly from his own class but does show a tendency to be like those above him on the status ladder, we introduce the notion of anticipatory socialization. In this case we propose that this individual is in training for membership in a group to which he aspires, that is, he is in the process of taking on the values of a reference group.<sup>3</sup>

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<sup>1</sup> Bonner, op. cit., p. 311.

<sup>2</sup> David Gottlieb, "Social Class, College Students and the Ideal College Professor," Paper read at the annual meeting of the Ohio Valley Sociological Society, April 21, 1961.

<sup>3</sup> Ibid.

It is of interest to note that Herbert Hyman introduced the reference group concept and that Merton and Rossi further developed reference group and anticipatory socialization concepts in their work.<sup>1</sup>

How does the theory of social stratification and class consciousness affect the attitude of the groups to be examined in this study? Will those who have arrived in positions of social superiority, the administrators, professors, instructors, and regular University students, view themselves as of a higher social order and greater social importance than those in the MDT programs?

In discussing prejudice in the dynamics of class and status, Greenbaum and Pearlin indicate:

1. Vertical mobile groups, those markedly changing their position or status in the stratification hierarchy, tend more frequently than stationary groups to be prejudiced.
2. Higher classes, insecure about their prestige, tend to be more prejudiced than prestige-insecure lower classes.
3. In general, groups attempting to secure an unstable status or prestige tend more frequently to have prejudiced attitudes than those relatively more secure in status and prestige.<sup>2</sup>

Will these attitudes be reflected on a university campus? Will

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<sup>1</sup>Robert K. Merton and Alice S. Rossi, "Contributions to the Theory of Reference Group Behavior," Contributions in Social Research: Studies in Scopes and Methods of the American Soldier, eds. Robert K. Merton and Paul F. Lazerfeld (Glencoe: The Free Press, 1955).

<sup>2</sup>Joseph Greenbaum and Leonard L. Pearlin, "Vertical Mobility and Prejudice: A Socio-Psychological Analysis," eds. Reinhard Bendix and Seymour M. Lipset, Class Status and Power (Glencoe: The Free Press, 1951), p. 481.

there be close articulation between the groups or will they be unable to bridge the social distance?

It can be surmised that the attitude of the instructor toward the re-training student will, in no small extent, govern the success of the re-training programs on the University campus. Thus, the degree of egalitarianism of the regular faculty will be of interest in this study.

It is believed, then, that social class background is likely to play an important role in determining the attitudes and perceptions of the regular university administrator, faculty, and student toward the non-professional programs--insofar as those involved in the programs are generally recognized as belonging to a lower social and economic class.

Another dimension of this study is social mobility. The aspirations for upward social mobility on the part of administrators, faculty, and students will influence their reaction to the non-professional programs. Also those in the programs, the MDT students and faculty are, or could be, anticipating that social mobility will result from the training. A brief examination of social mobility may be, therefore, appropriate at this time.

### Social Mobility

First, one should examine whether or not social mobility exists in this country--and, if so, what factors facilitate mobility. It has been claimed with pride that the United States is the land of opportunity in

which an individual is allowed to grow to his full innate capability. However, it has been suggested by some that there are fewer opportunities for upward mobility today than when the land was being developed. It was felt in the early days that any man who arrived in this country could, with endeavor, make himself economically independent by opening a small shop or farm. During the industrial development of our country many men of humble origin worked their way up to become corporate presidents in the industrial structure.

Students of the class system of the United States during the '30's and '40's, however, asserted that social mobility was declining. This assertion was made for the following reasons: (1) the frontier had disappeared, (2) the upper classes were beginning to reproduce themselves to a greater extent than formerly, (3) great corporations were falling into the hands of relatively few families or other closed groups, and (4) the new psychology of security was hardly capable of producing the spirit of competition which encourages upward social striving.<sup>1</sup>

Recently, however, these assertions have been disputed. It has been pointed out that a number of studies present evidence to show that the extent of social mobility in early American history was overestimated or that mobility at present probably is equal to that of

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<sup>1</sup> Joyce O. Hertzler, Society in Action (New York: Dryden Press, Inc., 1954), p. 34.

earlier decades.<sup>1</sup>

Havighurst and Neugarten have found that the upper socio-economic classes have not reproduced themselves in the United States--in spite of the previous assertion that the upper classes are tending to reproduce themselves faster.

Havighurst and Neugarten also state that, to maintain the necessary numbers in the upper class, one out of eight persons during his lifetime must move up at least one step in the social scale. This ratio will undoubtedly change as the nature of work being accomplished becomes more sophisticated.<sup>2</sup>

The literature on working class mobility leads to the following conclusions: (1) The proportional size of the working class is not changing significantly. Its total number is, of course, increasing, but no more rapidly than the population as a whole. (2) The internal structure of the working class has changed significantly. More workers are now in semi-skilled jobs than before; fewer are in unskilled jobs. The proportion of skilled workers has remained about the same. (3) A considerable proportion of the working class is not mobile; it tends to remain and work within the class of its origin. However, a sizeable proportion does move out of the working class, particularly into the white-collar

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<sup>1</sup>Natalie Rogoff, Recent Trends in Occupational Mobility (Glencoe: Free Press, 1953), pp. 44-45.

<sup>2</sup>Robert J. Havighurst and Bernice L. Neugarten, Society and Education (Boston: Allyn and Bacon, 1957), pp. 291-293.



and the small proprietary class. (4) There is considerable intraclass mobility--on both the local and national levels.

It may be concluded that the American working class is stable in its structural relations to the class system as a whole, but that internally its structure is changing. Individuals move fully out of and into this class or between the various levels within the class.<sup>1</sup> Ogburn and Nimkoff summarized the results of recent studies of occupational mobility in the United States and concluded also that while there is still considerable mobility, most persons remain within the economic class in which they were born. Since World War II it appears that there has been less upward mobility than in the past, and that business leadership is increasingly being recruited from the ranks of junior executives hired from graduating classes of colleges rather than from those of men who started at the bottom of the economic scale.<sup>2</sup>

Education is an important means to class mobility through job oriented success. It also serves to prepare the worker for his new station in life by making him socially acceptable because of his general education attainment and his ability to adopt the social habits of a higher social class.<sup>3</sup> Lipset and Bendix state education "has become the

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<sup>1</sup>Schneider, op. cit., p. 393.

<sup>2</sup>William F. Ogburn and Meyer Nimkoff, Sociology (2d ed.; Boston: Houghton-Mifflin Company, 1950), pp. 147-148.

<sup>3</sup>Ibid., pp. 156-157.

principal means for upward mobility in most industrialized societies."<sup>1</sup> Education could be considered the primary determinate of occupational and, therefore, social status. Havighurst has stated, "Higher education has become the major source of upward social mobility, and upward social mobility is a major social value in the United States. Anything which would reduce the proportion of working-class and lower-middle-class youth going to college would reduce the amount of this mobility."<sup>2</sup>

In society, social status is either directly or indirectly determined by occupation. Brookover and Nosow have said, "The individual has few other statuses which are capable of offering him a respected position within the community."<sup>3</sup>

Ely Chinoy also has a similar view:

The mass of available evidence demonstrates clearly the high correlation between occupation and various criteria of class: prestige, income, wealth, style of life, and power. Although there is some disagreement in the relative importance of each of these variables within the total system, there seems ample warrant for concluding that in American society, at least, occupation is probably the most significant, that is, it is more likely to influence other

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<sup>1</sup> Seymour Lipset and Rinehart Bendix, Social Mobility in Industrial Society (Los Angeles: University of California Press, 1959), p. 91.

<sup>2</sup> Robert J. Havighurst, American Higher Education in the 1960's (Columbus: Ohio State University Press, 1960), p. 49.

<sup>3</sup> Wilbur B. Brookover and Sigmund Nosow, "A Sociological Analysis of Vocational Education in the United States," Education for a Changing World of Work: Consultants on Vocational Education, Appendix III (Washington: Government Printing Office, 1963), p. 26.

variables than to be influenced by them.<sup>1</sup>

Schneider has this to say:

Perhaps the most important influence of industry on the status system arises from the fact that occupational role is one of the major bases of status in this nation; thus the occupations which individuals hold in industry tend to confer certain amounts of status in the community . . . . In a rough way a role acquires prestige according to the income it brings and the amount of specialized training it requires.<sup>2</sup>

As the occupational role is one of the major bases of status in this nation, any education or training that will increase the income of the individual, and consequently his status, is desirable from a societal as well as from a personal point of view.

It has been found on both the national and community levels that the ranking of jobs in industrial occupations and the status system are interrelated. Industry, the prime source of occupations, is the prime source of status in many communities. Of course, other factors may enter into status--for example ethnic origin, racial background, and religion.

This correlation between status and occupation raises some important questions: (1) The university is recognized as an agency of social mobility by providing an avenue through education for vertical migration.

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<sup>1</sup>Ely Chinoy, Man, Work and Society, a Reader in the Sociology of Occupations, eds. Sigmund Nosow and William B. Form (New York: Basic Books, Inc., 1962), p. 354.

<sup>2</sup>Schneider, op. cit., p. 379.

To what degree is the regular faculty aware of this? (2) Would the MDT programs provide an opportunity for improvement of occupational, and, hence, social status? Would those in the retraining programs be working at higher level jobs after the training than before? (3) In every society there is some resistance, as stated by Sorokin<sup>1</sup>, to vertical mobility. Would there be any feeling on the part of regular faculty that the MDT instructors and students should not be given this opportunity to improve their occupational status? (4) Would regular faculty feel any loss of status for being involved in the instructional aspects of MDT programs? (5) Would members of the regular faculty be likely to feel BS instructors teaching in the MDT programs are less professional for doing so?

### Manifest and Latent Roles

Sociologists have long used the concept of role theory to explain human actions. Gouldner<sup>2</sup> has made an interesting attempt to develop certain distinctions between what he terms "manifest" and "latent" identities and roles. He states that a social role is a set of expectations oriented toward certain people who occupy a particular position in a social system. He felt, however, that what was meant by "position" is a social identity which has been assigned to a person by his group.

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<sup>1</sup> Sorokin, op. cit., p. 41.

<sup>2</sup> Alvin W. Gouldner, "Cosmopolitans and Locals," Administrative Science Quarterly, II(1957-58), 281-306.

The group imputes certain characteristics to a person and these are related to and interpreted in terms of a set of culturally prescribed categories which have been learned during the course of socialization. On the other hand, the culturally learned categories focus attention on certain aspects of the individual. The individual is then categorized or typed from this process. The process by which an individual is assigned or classified can be called the assignment of a social identity.

Gouldner further stated that after the individual has been assigned a social identity he is accorded a set of expectations, a series of rights and obligations. A social role, then, is a shared set of expectations directed toward persons who are assigned a certain social identity.

Persons may have more than one social identity, but one and only one is paramount--though other identities do "intrude" and offset the group's behavior. It is, then, necessary to distinguish between those social identities which the group members feel are relevant to them in a given setting, and those they feel are irrelevant or inappropriate to consider. The former are called manifest social identities, and the latter latent social identities.

Gouldner points out that "social identities", manifest or latent, are not synonymous with the concept of social status. Social identities have to do with the way in which the individual is perceived and classified in terms of culturally standardized categories. Social statuses,

on the other hand, refer to a complex of culturally standardized categories to which individuals in a group are assigned. They are defined as the position of one individual in relation to another or a series of others--as well as the culturally prescribed expectations associated with the position. Expectations associated with the manifest social identities are termed manifest social roles, and expectations oriented toward latent identities are called latent social roles.

It can be surmised that latent social identities or roles do affect group behavior, and that the individuals in a group do have a variety of social identities rather than one or a few. However, Gouldner stated that conceptual tools are needed to distinguish between different types of social identities so as to facilitate the analysis of ways in which they influence group behavior. The concept of latent identities and roles directs attention to the need to regard only those identities and roles which are felt to be relevant or legitimately activated in that group.

According to Gouldner, when members of a group orient themselves to latent identities of others they are involved in a relationship with them that is not culturally prescribed by the norms of the group governing their manifest role. He further states that the concepts of latent identities and roles directs attention to patterns of social interactions and lines of interaction which are not prescribed by the group studied. Latent identities and roles are important because they exert

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influence upon the manifest roles, after upsetting their conformity with their requirements and threatening the equilibrium of the manifest role system. By way of contrast, the concept of manifest roles directs attention to the manner in which the group norms yield prescribed similarities in the beliefs and actions of those performing the same role. This difference between manifest and latent roles makes it necessary to seek out and specify the latent identities and expectations corresponding to them which underlie those which are culturally prescribed. The concept of latent roles states that persons playing different manifest roles may be performing similar latent roles, or that those performing the same manifest roles may be playing different latent roles. This concept of latent roles may account for some of the differences found among those in the same manifest role, or for some of the similarities found among those having different manifest roles.

#### Cosmopolitan and Local Latent Identities

Gouldner states that in addition to their manifest identities members of formal organizations may have two latent social identities called "cosmopolitan" and "local."<sup>1</sup> These concepts may help

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<sup>1</sup> These terms Gouldner credits to Robert K. Merton, "Patterns of Inference, Local and Cosmopolitan Influentials" in Social Theories and Social Structure. However, Merton credits Carle C. Zimmerman, who used them as translations of Toennies' distinction between Gemeinschaft (localistic) and Gesellschaft (cosmopolitan) found in Fundamental Concepts of Sociology. The same concepts, but with different terminology, are found in the writings of Durkheim, Weber, and Cooley.



organizational analysis without relying solely on overt, culturally differentiated manifest organizational identities and roles. A number of studies have dealt with this concept of latent identities--such as those of Reissman<sup>1</sup> and Pelz<sup>2</sup>.

Gouldner undertook a systematic study of the conflict between professional and organizational commitment in a small liberal arts college. He constructed Guttman-type scales to measure loyalty to the organization, commitment to specialized skills, and reference group orientation. He found the following: (1) Cosmopolitans were more likely than locals to believe that their teaching load should be lightened to allow them time for research, writing, and other professional work. (2) Cosmopolitans were more likely to state that if they see no opportunity to do research at their college they would find their job less satisfying. (3) Cosmopolitans were more likely to feel that there were few people at the college with whom they could share professional interest. (4) Cosmopolitans were more likely to be Ph. D. 's or Ph. D. candidates while locals were likely to be M. A. 's or working on the M. A. (5) Cosmopolitans had published more than locals. (6) Cosmopolitans had less organizational loyalty and would more readily leave

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<sup>1</sup> Leonard Reissman, "A Study of Role Conceptions in Bureaucracy," Social Forces, XXVII (March, 1949), 305-310.

<sup>2</sup> Donald C. Pelz, "Some Social Factors Relating to Performance in a Research Organization," Administrative Science Quarterly, I (December, 1956), 310-336.

the college for another job. (7) Cosmopolitans knew "fewer" fellow faculty members than the locals. (8) Cosmopolitans did not consider the local AAUP chapter an "outside organization. (9) Cosmopolitans were more likely to get most of their intellectual stimulation from sources outside the college than locals.<sup>1</sup>

Regarding the need for "experts" with their cosmopolitan leanings, Gouldner states: "There seems to be some tension between an organization's bureaucratic need for expertise and its social system need for loyalty."<sup>2</sup>

In the work cited previously, Merton found that the chief difference between the cosmopolitan and local was their orientation toward the local community.<sup>3</sup> The cosmopolitan formed no great attachment to the community and considered himself mobile, while the local was firmly committed to living in the local area and wished to remain there.

The difference in the cosmopolitan and local orientation was apparent in their interest in national affairs, their desire to form acquaintances in the community, the composition of these acquaintances, and their participation in local organizations. The local tendency to belong to organizations for "making contacts" and establishing personal ties,

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<sup>1</sup> Gouldner, op. cit., pp. 295-296.

<sup>2</sup> Ibid., p. 466.

<sup>3</sup> Robert K. Merton, Social Theory and Social Structure (Glencoe: The Free Press, 1957), pp. 368-370.

while cosmopolitans tended to belong to organizations in which they exercised their skills and knowledge.

It was found that the locals' influence rests on an elaborate network of personal relations, and not so much on what they know but who they know. On the contrary, the cosmopolitan does not utilize personal ties as his means to influence. He usually is equipped with prestige and skills upon his arrival in the community and starts his climb of the prestige-structure at a high level. His prestige rests on his previous achievements and previously acquired skills. Personal relations are usually the product rather than the instrument of his influence. Because the local has a slower route to influence he is usually older than the cosmopolitan.

These concepts of "local" and "cosmopolitan" orientations will be examined in this study to see if differences in responses can be attributed to these orientations. It is expected that at Michigan Tech there will be those who can be assigned to each category. It is also expected that in certain academic areas these orientations will be more pronounced. This is why for purposes of analysis the faculty and student groups are broken into the three categories: engineering, science, and Business Administration-Liberal Arts.

Now that manifest and latent roles have been examined, it is appropriate to determine why individuals assume these roles.

## Goals

Rewards are built into every role for those who play the role properly. Rewards satisfy a wide variety of human motives. These rewards influence individuals and groups to prize certain goals. Schneider recognizes four types of generalized goals:

1. The instrumental goal. One of the generalized goals provided by roles is to attain other ends . . . . The real wants of the individual are not being met within the role but outside it. In one sense the instrumental goal acts as a form of coercion; the actor must play a certain role if other wants are to be achieved.
2. Recognition. A second major generalized goal, provided by some roles, is the opportunity for recognition. By recognition is meant a feeling of being respected, "looked up to," valued by other significant human beings . . . . The desire for recognition not only may motivate the individual to play a role, but may motivate him to attempt to acquire status of a higher order, that is, one having more prestige, honor, or privilege. Such action is usually designated status striving. It should be noted that such striving is an important motive in our type of society . . . . Even within our own society . . . status striving is limited to certain sections of the population.
3. Security. Another generalized goal which may be attained through role playing is security. Roles may offer economic, social, or psychological security . . . . There is another way in which security may operate as a general inducement to role playing. Here the goal is essentially a negative one. The individual may be constrained to play a role through fear, timidity, anxiety, or the desire to avoid the strange and unexpected. This negative goal will motivate individuals who are cautious, conservative, concerned above all with the making secure or guaranteeing a stake in the role.
4. Response. A fourth type of generalized goal is the opportunity which certain roles afford to form satisfying social relationships in which the individual feels reasonably certain of the continuing favorable response of the people important to him.<sup>1</sup>

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<sup>1</sup> Schneider, op. cit., pp. 17-18.

Other goals could be listed, but these are some of the important ones that motivate role performance. Roles differ in the extent to which various goals may be made available. Some roles provide many goals while others do not. The more goals a role can fulfill the more attractive it is and the more it will be sought after. When a role can provide these generalized goals and at the same time become a part of the personality there is ample motivation for the role playing.

This concept of role playing forms an important part of this study. The role of the university instructor carries with it certain connotations in our society. How will the present academic faculty view a group whose members are assuming the role of university instructors, but who have not had the degree of professional preparation that society usually associates with this role? Will conflict exist between the regular faculty and the MDT faculty? Will the regular university instructor accept the MDT instructor?

### CHANGE AND ITS IMPLICATION

Perhaps one of the most fundamental variables involved in this study is how people react to change. The introduction of the non-academic programs may be the specific change in this case, but how various persons react to change in general is also an aspect of this study.

The theoretical background for this part of the study will be developed by answering the following questions:

1. How do people react to change? How does one plan to change?

How can changes be made and accepted?

2. Can attitudes be changed? When they are in conflict, will actual change occur without an attitude change?

In order for a university, or any social agency, to attain its goals, it must have all its members working together toward their accomplishment. To the extent that certain individuals work toward a substitute set, or to the extent that they are uninformed or indifferent to the institution's goals, real progress is curtailed or halted.

#### Institutional Goals vs. Individual Goals

It has been found that where an institution clearly states its mission as being of service to all people in whatever way, there are groups who readily accept this goal, and conversely, there are also those who reject it. Thus, even with a clearly stated position in regard to service one can find that faculty tend to superimpose their own goals on those of the institution. Montgomery found this to be true in his studies of the Florida Community Junior College. Here a younger more democratic faculty accepted the community junior college's goals and strived to attain them. On the other hand, an older, less flexible group tended to superimpose their own goals on those of the institution.<sup>1</sup> It would

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<sup>1</sup> Douglas M. Montgomery, "An Analysis of Faculty Acceptance of and Commitment to the Stated Mission of the Florida Community Junior College" (unpublished Doctoral Dissertation, Florida State University, 1963), p. 181.

be appropriate to determine if a similar pattern exists at the Michigan Technological University.

How people react to change, then, is a vital part of this study--as the introduction of non-academic programs and their integration within the framework of the University is a significant and impelling change.

### Attitude Toward Change

Change represents something to anticipate and accept, or something to resist, depending upon how an individual perceives the desirability of change. Some persons look forward to change to offer variety while others find the thought of change threatening. How new programs, especially those that are non-academic, are likely to be viewed by a complex group of faculty can best be anticipated by reviewing some of the literature on change.

External changes that are imposed upon an individual by others, often cause him to reject or resist the change. This is particularly true when this change is directed as part of a supervisory function and those directed to change have not had the opportunity to learn why the change is needed. This resistance to externally imposed change can be found in all types of human activity--including business, industry, and education. An example of this is found in a study by Coch and French of changes introduced in a clothing factory. In this study three groups were allowed to participate in planning the change in varying

degrees from a very passive to a very active role. The results indicated that the first group actually decreased production; lost their cohesiveness, which is shown by the fact that 17 per cent quit; had more hostility toward supervision; and in general displayed a lack of cooperation. The second group remained about neutral, while the total participation group, after an initial drop, increased their production over the previous rate. There were no signs of hostility and no one quit.<sup>1</sup>

It therefore appeared that resistance to change can be overcome by involving the persons affected by the change and showing them the need for it.

Other studies have indicated that there is more to overcoming resistance to change than merely having those involved in the change participate in planning for it. They point out that resistance to change is not so much a resistance to technical progress as to the change in the social aspect of employment. The social aspect of employment refers to how the individual views his relationship with the organization. Anything that appears to threaten the usual relationship of the individual toward his supervisors or the organization will cause him to reject or resist the change, while those changes that are introduced in the normal non-threatening way, especially if the operator is allowed

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<sup>1</sup> Lester Coch and John R. P. French, Jr., "Overcoming Resistance to Change," Human Relations, I (April, 1949), 532.



to participate, are usually accepted without resistance.<sup>1</sup>

In education, the resistance to change is pointed out by Fullager who found that teachers tended to resist change that is directed by an administrative edict. They were suspicious of the motives of the administrative staff who they felt had not defined the framework in which the teacher could work.<sup>2</sup>

Eicholz developed a theory of rejection that was composed of five states--awareness, disinterest, denial, trial, and rejection. In testing his theory on teachers he arrived at five different forms of rejection--ignorance, suspended judgment, situational, personal, and experimental. The first form, ignorance, was simply being uninformed of the change; suspended judgment meant that the teacher was doubtful and felt that the traditional methods were safer. Situational rejection occurred when the teacher, while assured that the change was good, found reasons equally compelling for not changing. In personal rejection the teacher rejected the change because he was anxious about his own ability to carry out the change--or because of other personal reasons. In the last form of rejection the teacher actually tried the change and rejected it.

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<sup>1</sup> Paul R. Lawrence, "How to Deal with Resistance to Change," Harvard Business Review, XXXII (May-June 1954), 49-57.

<sup>2</sup> William A. Fullager, "Some Teacher-Sensed Problems in Curriculum Improvement" (unpublished Doctoral Dissertation, Columbia University, 1951), p. 137.

In this study Eicholz states that the progression through the five stages of rejection was actually a continuum through which an individual may progress--though not necessarily in order.<sup>1</sup>

Willower also found that changes that threaten status, and changes that benefit one part of the organization at the expense of another part, are resisted.<sup>2</sup> And as previous studies have shown, change ordered by someone higher in the hierarchy is likely to meet with resistance, particularly if the subordinate has not had a chance to participate in developing the change.

Willower also found, as did Eicholz, that change may be resisted because of a lack of information or skill. When a teacher resists teaching "modern mathematics" it may be because of a feeling of inadequacy caused by a lack of information on the new method.

Finally, it was found that where change is being implemented, resistance will develop if the initial stages of the change are exhausting to the persons involved.

The actual resistance may take any form from verbal hostility to organizational sabotage. Often sloppy work results in a kind of apathetic indifference. Even slavish, rigid conformity can be hostility if

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<sup>1</sup>G. C. Eicholz, "Why Do Teachers Reject Change?" Theory into Practice, II (December, 1963), 264-268.

<sup>2</sup>Donald J. Willower, "Barriers to Change in Educational Organizations," Theory into Practice, II (December, 1963), 257-263.

it creates purposely contrived emergencies.

Willower concludes that resistance to change can be rational and based on honest disagreement. He also states that resistance sometimes serves to clarify motives, points of view, and loyalties.<sup>1</sup>

Lippitt states that change forces and resistance forces may be "rational or irrational, recognized or unrecognized, general or specific."<sup>2</sup> He further identifies four types of motivation toward change:

1. The client system may feel dissatisfaction or pain associated with the present situation. Then the change force is a desire for relief.

2. The dissatisfaction may arise from a perceived discrepancy between what is and what might be.

3. Sometimes external pressures will be brought to bear upon the client system to make it change its behavior.

4. Finally, there is the possibility that some internal requiredness will set up pressures toward change.<sup>3</sup>

Once the sequence of change has been started, there is a shift in the change forces as first one then another become primary. Often new change forces emerge to carry the change forward to completion. For example, there is the need to complete a task which has been begun. Often those who resisted a change, after a certain critical point

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<sup>1</sup> Ibid.

<sup>2</sup> Ronald Lippitt, Jeanne Watson and Bruce Westley, The Dynamics of Planned Change (New York: Harcourt, Brace and Company, 1958), p. 72.

<sup>3</sup> Loc. Cit.

has been reached, become supporters of the change and direct their energies toward its final completion. It has been found, however, that in order for changes of this type to occur, two requirements must be met. First, those involved must feel that they, rather than those who demand the change, have taken the first steps. The second requirement is that the planned changes should not be made too rapidly for fear of half way measures or partial solutions. If this happens then those who are demanding the change may have to step in and take over, thus, in effect doing away with the self-directed change.

Another kind of change force may emerge as those who want the change and those affected work together. Those who are expected to change will begin to know what is required of them and will change in accordance with the esteem and respect they have for those who demand the change.

A third emergent force may be the effect change in one part of a system has on the other parts. Thus, one part of an organization may have to make an adaptive change because of a change introduced in another department.<sup>1</sup>

This interdependence may have just the opposite effect on change if one part of a system refuses to change and causes a breakdown in the operation of the system.

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<sup>1</sup> Ibid., p. 75.

Resistance forces can occur at almost any time during the period of change. Often there is a group who resist change of any kind at the very beginning and who are satisfied with the status quo. This kind of resistance usually grows out of ignorance and fear of the unknown. Any change appears as a threat to this group. The teachers may resist change because they may feel that they are incapable of teaching what is expected of them.

Resistance that occurs after the process of change has been in force for some time (1) may reflect genuine disappointment with the new method, or (2) may be an unconscious attempt to avoid the responsibilities for making the change. If the first form of resistance occurs, the method should be examined to see if it should be continued; if the second, the real reasons behind this attitude should be made clear to those expected to change.

Resistance to change may occur during the change period if certain factors that were minor in nature, or unnoticed at the beginning, suddenly become major obstacles. This often occurs where changes are predicated upon a fixed sum of money and an unplanned obstacle drains off needed funds.

Resistance may occur late in the period of change if those who are expected to change suddenly realize that those upon whom they are dependent for advice and assistance will suddenly not be available. Of course, this could also be a spur to change if the group decides to

hurry the change through to completion while those who offer advice and assistance are still available.

While resistance to change may be looked upon as detrimental to progress, the fact that it can be recognized allows the opportunity to gain information on the objectives of those affected and difficulties to be expected.

Interference with change is different than resistance to change although they may both produce the same result. Interference is found when competing forces are present in a situation. Often this may be competition between two groups for a limited source of funds when both groups feel that change is desirable and necessary. A distinction should be made between resistance forces and interference forces. The resistance forces are found within the group expected to change and are directed either at the group expecting the change, or the change itself. They are likely to continue for a long period of time to affect the nature of the change and may generate new change forces. Interference is, however, not directly aimed at the proposed change but is part of a total situation. Interference can be overcome, but will not generate new change forces as there is no chance for interaction to take place as in the case of resistance.<sup>1</sup>

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<sup>1</sup>Ibid., p. 86.

### Overcoming Resistance

Resistance to change may be overcome only when it is realized that an individual's behavior is tempered by his past experiences, beliefs, perceptions, attitudes, all conditioned by fixed habit patterns. These causal factors must be taken into account so that change can be individualized and tailored to fit the circumstances.<sup>1</sup>

Dempsey feels that the person in the leadership role can cope with the problems of change and resistance to change if he has the following understandings:

1. People Change When They See A Need To Change.

This happens when a person believes the change will benefit him, will alleviate discontent, or if he perceives himself in a different image.

2. People Change When They Know How To Change.

In order to change one must modify his beliefs, attitudes, and values. This requires that the individual must adjust to a new role. This will happen with little resistance if the individual has some degree of certainty about the outcome, when he knows how to accomplish the change and how this change will alter the opinion others have of him.

3. People Change When They Are Actively Involved in the Change Process.

People who participate in planning the change are more likely to have their attitudes, beliefs, and behavior changed than those who remain passive. In planning for the change

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<sup>1</sup>Richard Allen Dempsey, "An Analysis of Teachers' Expressed Judgments of Barriers to Curriculum Change in Relation to the Factor of Individual Readiness to Change" (unpublished Doctoral Dissertation, Michigan State University, 1963), p. 38.

an individual is able to identify compelling reasons for change, and if he contributes to the planning, is emotionally involved.

4. People Change When They Are Secure in Changing.

If change is introduced in a non-threatening way, the opposition to change can be greatly reduced. This means that the individual must be reassured of his security and his ability to adjust to the new situation.

5. People Do Not Necessarily Change on the Basis of New Knowledge Alone.

Even though an individual may receive new knowledge, it does not mean that he knows how to apply it, or that he even wants to apply it. Actually, new knowledge may appear to represent a threat to his long standing habits and beliefs.

6. People Change When They Are Encouraged and Supported in Changing.

Persons are more likely to change when they feel that those whom they respect are supporting them. It also lends encouragement to change when others are engaged in the same endeavor.

7. People Change Some Attitudes Slowly.

People must change perceptions and habits before attitude changes can occur. This often causes discomfort and difficulty because attitudes are often the result of earlier experiences, dubious assumptions, and unquestioned beliefs.<sup>1</sup>

In concluding, Dempsey states:

When people sincerely work toward these understandings, real and lasting change in behaviors can be accomplished, for people often fear, reject, or resist the unknown or untried.

They tend to reject the new and hold to the status quo that served them so well. But once their fears are alleviated,

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<sup>1</sup> Ibid., p. 43.



regardless of whether or not they are real or imagined, and once they see that they will not lose, they usually accept change as a challenge and cooperate with it.<sup>1</sup>

As the non-academic MDT programs were introduced by an administrative decision without any attempt to prepare the regular line administrators, faculty, or students for these programs, virtually none of the basic understandings developed by Fisher were considered. It will be a dimension of this study to determine if these programs are less accepted because of this method of introduction. This could be a vital lesson for future program introductions of the non-academic variety.

Evidently, problems associated with the establishment of federal retraining programs on a university campus are so new that literature in this subject is yet to come. It was necessary to turn to the literature in the establishment of technical-terminal programs on a university campus to see if problems could be helpful.

### PREVIOUS RESEARCH

A search of previous dissertations has revealed only one that has touched in part on the topic considered in this study. This dissertation, "Status of and Need for Terminal Vocational-Technical Curricula in

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<sup>1</sup>Ibid.

Senior Colleges and Universities," by Richard Earl Fisher<sup>1</sup> is mainly concerned with the need for these programs and how they relate to university organization. The students in this study were quite homogeneous and did not receive allowances from the government for their expenses. Fisher indicated that the vocational-terminal programs received a mixed reaction from the faculty but were readily accepted by all students. The emphasis by Fisher was upon an overview of programs in this country, and he did not attempt to find in depth the attitudes of administrators, faculty, and students toward non-academic programs on a regular university campus. He also did not show how those in the non-academic programs were viewed by the regular administrators, faculty, and students.

### Summary

In this chapter a university's relationship to society is examined. The university itself is a social system that responds to greater society needs. In order for the university to function it must operate in an orderly fashion in which its members perform the roles expected of them.

There are certain characteristics of individuals that may influence their attitudes toward non-academic programs. The perceived social

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<sup>1</sup>Richard Earl Fisher, "Status of and Need for Terminal Vocational-Technical Curricula in Senior Colleges and Universities"(unpublished Doctoral Dissertation, University of Missouri, 1956).

status of the individual, and whether he has experienced social mobility may be of importance. Status and role are also of concern and are examined in detail to show how they affect behavior.

Manifest and latent social identities were introduced and two latent identities, labeled "cosmopolitan" and "local" may have implications for this study. It was established that in all probability, "locals" would be more likely to support the non-academic programs than would "cosmopolitans".

Goals which motivate individuals and groups were presented as a dimension of the study. Finally, how individuals react to change and its implications was included as the non-academic MDT programs represented a substantial change from the University's traditional programs.

No body of literature could be found concerning the acceptance of non-academic retraining programs on a university campus.

## CHAPTER IV

### DESIGN OF THE STUDY

This chapter shall be concerned with the source of the data, procedures used in collecting the data, the specification of the sample, the description of the instrument used, the statement of hypotheses and their sub-hypotheses, and the procedures used for the analysis of the data.

#### Source of the Data

The data for this study were obtained from the administrators, faculty, and students of the Michigan Technological University at Houghton, Michigan. The sample consisted of 114 administrators and faculty, and 414 students.

#### Collection of the Data

The support of the president and chief administrators of the University was secured before this study was attempted. With their permission, the various department heads were contacted and the purpose of this study explained to them. Meetings with the faculty were arranged so that they could be briefed on the purpose of the study and allowed to participate in it if they so desired.

At the prearranged date the questionnaire was distributed to the

entire faculty. It was emphasized that they were to answer the questionnaire as they actually felt, rather than to give answers they thought others might expect of them. The fact that their answers would be treated confidentially was stressed, and that anyone was free not to participate in the study was also emphasized.

The student sample was selected so that each class level, as well as each of the three academic areas of Engineering, Science, and Business Administration-Liberal Arts was proportionately represented. After determining the number of students in each category, they were selected on a random basis to participate in the study. As with the administrator-faculty group, the purpose and need of the study was explained. The students were given the opportunity to ask questions and were assured that their answers on the questionnaire would be treated confidentially. It was explained to them that they did not have to cooperate in the study if they did not desire to do so.

A total of 102 administrators and faculty, and 308 students responded to the original questionnaire. A mail follow-up was made to the original non-respondents and an additional 12 administrator-faculty and 109 student questionnaires were returned.

An analysis was made of the returns from the mailed response against the original returns to check for bias. In none of the areas checked did any discernible difference appear so that the mailed response was then included in the total response for analysis.

### Sample

The sample is composed of two groups: (1) administrators and faculty, and (2) graduate and baccalaureate students. The entire faculty and administrators were all asked to participate in the study. For the purpose of this study they were classified into three major academic areas: Engineering, Science, and Business Administration-Liberal Arts. The administrator-faculty group was divided into those with more than ten years of work experience at Michigan Technological University, and those with less than ten. In addition, the group was further divided into those with the doctorate and those without. These data are presented in Table 4.1. Table 4.2 presents data on the respondent's sex, age, and rank. The respondent's political orientation, father's occupation, and tenure are presented in Table 4.3. Data on length of service in years and teaching level are presented in Table 4.4.

A total of 37.7 per cent of the administrative-faculty group were from Engineering, 31.6 per cent from Science, 25.4 per cent from Business Administration-Liberal Arts, and 5.3 per cent from administration. In actual numbers, forty-three were in Engineering, thirty-six in science, twenty-nine in Business Administration-Liberal Arts, and six did not teach.

As stated previously, the student group was also divided into the same three academic areas as the administrator-faculty group with proportionate representation for each class level. Table 4.5 presents

TABLE 4.1

NUMBERS AND PERCENTAGES IN THE ADMINISTRATOR-FACULTY  
SAMPLE IN TERMS OF ACADEMIC SPECIALIZATION, LENGTH  
OF SERVICE, AND DEGREE OF ACADEMIC PREPARATION

Academic Area	Degree	Less than Ten Years Service		More than Ten Years Service		Totals	
		Number	Percentage	Number	Percentage	Number	Percentage
Engineering	Ph. D.	24	21.1	9	7.9	33	29.0
	Non Ph. D.	19	16.7	25	21.9	44	38.6
Science	Ph. D.	7	6.1	3	16.7	10	8.7
	Non Ph. D.	3	2.6	5	4.4	8	7.0
Business Adminis- tration - Liberal Arts	Ph. D.	8	7.0	6	5.3	14	12.3
	Non Ph. D.	2	1.8	3	2.6	5	4.4
Totals	Ph. D.	39	34.2	18	15.8	57	50.0
	Non Ph. D.	24	21.1	33	28.9	57	50.0

TABLE 4.2

**CHARACTERISTICS OF THE ADMINISTRATOR-FACULTY  
SAMPLE: SEX, AGE, AND RANK**

Characteristic	Frequency	Percentage
<b>Sex</b>		
Male	113	99.2
Female	<u>1</u>	<u>0.8</u>
Total	114	100.0
<b>Age</b>		
21-25	2	1.8
26-30	10	8.9
31-35	13	11.6
36-40	17	15.3
41-45	21	18.7
46-50	19	17.0
51-55	12	10.7
56-60	13	11.6
61 and over	<u>5</u>	<u>4.4</u>
Total	112	100.0
<b>Rank</b>		
Instructor	11	10.3
Assistant Professor	26	25.3
Associate Professor	36	33.6
Professor	<u>34</u>	<u>31.8</u>
Total	107	100.0



TABLE 4. 3

**CHARACTERISTICS OF THE ADMINISTRATOR-FACULTY  
SAMPLE: POLITICAL ORIENTATION, FATHER'S  
OCCUPATION, AND TENURE**

Characteristic	Frequency	Percentage
<b>Political Orientation</b>		
Liberal	33	30.5
Conservative	27	25.0
Independent	42	38.9
Not Ascertainable	<u>9</u>	<u>5.6</u>
Total	111	100.0
<b>Father's Occupation</b>		
White Collar	49	44.2
Blue Collar	29	26.1
Farmer	21	18.9
Other	<u>12</u>	<u>10.8</u>
Total	111	100.0
<b>Tenure</b>		
With Tenure	77	69.7
Without Tenure	<u>34</u>	<u>30.3</u>
Total	111	100.0

TABLE 4. 4

**CHARACTERISTICS OF THE ADMINISTRATOR-FACULTY  
SAMPLE: LENGTH OF SERVICE,  
AND TEACHING LEVEL**

Characteristic	Frequency	Percentage
<b>Length of Service in Years</b>		
1-4	31	28.4
5-9	30	27.5
10-14	20	18.4
15-19	14	12.9
20-24	6	5.5
25-29	7	6.4
30 and over	<u>1</u>	<u>0.9</u>
Total	109	100.0
<b>Teaching Level</b>		
Freshman-Sophomore	43	38.4
Junior-Senior	34	30.4
Graduate	29	25.9
Do not teach	<u>6</u>	<u>5.6</u>
Total	112	100.0

data on the academic specialization and class standing of the student sample. Table 4.6 shows the composition of the student sample in terms of sex, age, father's occupation, and political orientation.

The percentage of students in Engineering was 65.9, in Science 19.8, in Business Administration-Liberal Arts 10.6, and 3.7 in other categories. In terms of numbers, 266 were in Engineering, eighty were in Science, forty-three were in Business Administration-Liberal Arts, and fifteen were in other categories.

#### Description of the Instrument

The questionnaire developed for this study had two functions: (1) it had to indicate whether the respondent accepted or rejected the non-academic MDT programs at the University, and (2) if he accepted or rejected each hypothesis or sub-hypothesis.

In order to accomplish the two functions, and to assure validity, a series of statements were prepared and submitted to five judges selected for their knowledge of the factors involved. These judges were asked to determine if the statements would, in fact, disclose whether the respondents actually accepted or rejected the non-academic MDT programs and each hypothesis and sub-hypothesis.

The judges indicated that several statements were ambiguous and should be revised or discarded. In order to increase internal consistency of the items used, and to assure greater reliability, the questionnaire items were then subjected to the "t" test as used in the

TABLE 4. 5  
NUMBERS AND PERCENTAGES OF STUDENTS BY  
ACADEMIC MAJOR AND CLASS STANDING

Class Standing	Engineering		Science		Business Adminis- tration-Liberal Arts		Totals	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Freshman	50	12.1	14	3.4	13	3.1	77	18.6
Sophomore	59	14.2	14	3.4	11	2.9	84	20.3
Junior	55	13.3	9	2.2	9	2.2	73	17.6
Senior	63	15.2	19	4.6	12	2.9	94	22.7
Graduate	56	13.5	29	7.0	1	.2	86	20.8
Totals	283	68.3	85	20.6	46	11.1	414	100.0

TABLE 4. 6

**CHARACTERISTICS OF THE STUDENT SAMPLE:  
SEX, AGE, FATHER'S OCCUPATION,  
AND POLITICAL ORIENTATION**

Characteristic	Frequency	Percentage
<b>Sex</b>		
Male	383	95.1
Female	<u>20</u>	<u>4.9</u>
Total	403	100.0
<b>Age</b>		
18-19	74	18.4
20-21	117	29.0
22-23	116	28.7
24-25	54	13.4
26-27	18	4.5
28 and over	<u>24</u>	<u>6.0</u>
Total	403	100.0
<b>Father's Occupation</b>		
White Collar	228	57.0
Blue Collar	146	36.5
Farmer	23	5.8
Other	<u>3</u>	<u>0.7</u>
Total	400	100.0
<b>Political Orientation</b>		
Liberal	129	33.3
Conservative	135	34.8
Independent	118	30.4
Not Ascertainable	<u>6</u>	<u>1.5</u>
Total	388	100.0

Likert Method of Summated Ratings. This analysis yielded the ultimate questionnaire items for the determination of respondent attitudes. The final format of the items was changed from that found in the "t" test in order to include certain demographic responses that were pertinent for this study. Finally, adequate correlation was assured by checking the consistency of the responses with related or similar items.

The final items selected were then used to construct two forms of the questionnaire--one for the administrators and faculty, and another for the students. These two forms of the questionnaire were then submitted to a group of eighteen judges who were not part of this study to see if they agreed that the remainder of the statements would disclose the respondent's attitude toward the non-academic MDT programs and each hypothesis and sub-hypothesis. As a result of this last evaluation a few statements were reworded. The final forms of the questionnaire were established.

A listing of the various statements concerning each hypothesis and sub-hypothesis follows in this chapter after the restatement of the hypotheses. These are presented as a group and not in the order in which they appear on the questionnaire. In some cases items which do not pertain to the student version of the questionnaire are listed but were not considered when the student responses were analyzed. For the differences in the two versions of the questionnaire see Appendix A.

Following is a restatement of the major hypotheses together with the various operational null and alternative sub-hypotheses.

## Statement of Hypotheses

I. There is no consensus on the purpose and function of the University as it relates to the non-academic MDT programs; hence, these programs will be differentially accepted according to the respondent's reference group orientation; his commitment to professional skills; and his loyalty to the University.

## Sub-Hypothesis I-1

H<sub>1</sub> Administrators, faculty, and students interested in the community service function of the University will be more likely to accept the non-academic MDT programs than those who are not.

H<sub>0</sub> There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students interested in the community service function of the University and those not interested in this function.<sup>1</sup>

The rationale for this sub-hypothesis was that administrators, faculty, and students who perceive the University to be an agency of society, created to be of service to all segments of society would accept any program if it were of service to the community. Conversely, administrators, faculty, and students who perceive the University in a more restricted role, where only the intellectually able attend, would not accept the non-academic MDT programs. Stated another way, those

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<sup>1</sup> H<sub>0</sub> = Statement of null hypothesis

who have a land grant orientation regarding the purpose of the University would accept the non-academic MDT programs while those who hold to a more restrictive orientation would reject the non-academic programs:

Sub-Hypothesis I-2

- $H_1$  Administrators, faculty, and students who aspire for the University to provide a liberal education will be more likely to reject the non-academic MDT programs than those who do not.
- $H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who aspire for the University to provide a liberal education and those who do not.

The rationale behind this sub-hypothesis was that those who perceive the University in a traditional role would not accept programs that are not a part of the usual structure of higher education, and that do not contribute to a broad liberal education. It is anticipated, therefore, that administrators, faculty, and students most removed from the technical areas, i. e., liberal arts, humanities, etc., would be less likely to accept the non-academic MDT programs than those in technical or engineering areas who would have a closer identification with the non-academic programs that are largely technical in nature.



II. Acceptance of such programs as MDT is directly related to the economic and social background of the respondent, his pattern of social mobility, and his aspirations for social and professional status.

Sub-Hypothesis II-1

H<sub>1</sub> Administrators, faculty, and students who have experienced social mobility will be more likely to reject the non-academic MDT programs than those who have not.

H<sub>0</sub> There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who have experienced social mobility and those who have not.

The rationale for this sub-hypothesis was that persons who themselves have experienced several different "social atmospheres" would acquire different "mental vistas" than persons locked in one occupational career.<sup>1</sup> Thus, the person who has experienced rapid vertical mobility would fear competition of those aspiring to his social status.<sup>2</sup>

Sub-Hypothesis II-2

H<sub>1</sub> Administrators, faculty, and students who perceive the University as a source of prestige will be more likely to reject the non-academic

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<sup>1</sup>Pitirim A. Sorokin, Social and Cultural Mobility (Glencoe, Illinois, The Free Press, 1959), p. 509.

<sup>2</sup>Greenbaum and Pearlin, op. cit., p. 481.

MDT programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who perceive the University as a source of prestige and those who do not.

The rationale for this sub-hypothesis was that those who are conscious of status would reject the non-academic MDT programs because they would detract from the prestige of the institution and, ultimately, the persons associated with it. It is anticipated that this group will feel that persons involved in the non-academic MDT programs are less professional than those who are not involved.

III. Acceptance of such programs as MDT is directly related to the respondent's knowledge of and involvement in the non-academic programs.

Sub-Hypothesis III-1

$H_1$  Administrators and faculty who make decisions concerning the non-academic MDT programs will be more likely to accept the programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators and faculty who make decisions concerning the programs and those who do not.

The rationale for this sub-hypothesis was that in order for persons to make decisions concerning the non-academic MDT programs they

would become familiar with them and emotionally involved to the extent that they would be interested in their success.

Sub-Hypothesis III-2.

$H_1$  Administrators, faculty, and students who have established interpersonal relations with individuals in the non-academic MDT programs will be more likely to accept the programs than those who have not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who have established interpersonal relations with individuals in the programs and those who have not.

The rationale for this sub-hypothesis was that it is more difficult to hold negative attitudes toward programs that are assisting persons with whom one is familiar. Those who are not familiar with persons in the MDT programs would be more likely to reject them at the University. This sub-hypothesis may suggest to administrators that they should not consult the faculty before introducing the non-academic MDT programs as once the persons in the programs are on campus they will establish relations with the regular students, faculty, and administrators and will become accepted.

## Sub-Hypothesis III-3

$H_1$  Administrators, faculty, and students who feel that the non-academic MDT programs interfere with the regular programs will be more likely to reject them than those who feel they do not interfere.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who feel that the programs interfere with the baccalaureate and graduate programs and those who feel that they do not.

The rationale for this sub-hypothesis was that the University is operating under an austere budget with great demands for baccalaureate and graduate education. It was felt that students, faculty, and administrators would reject any program that would weaken the regular degree programs by drawing off University resources.

IV. The non-academic MDT programs will be rejected at the University on the basis of stereotypes held by administrators, faculty, and students.

## Sub-Hypothesis IV-1

$H_1$  Administrators, faculty, and students who believe that government subsidy is necessary will be more likely to accept the non-academic MDT programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who believe that government subsidy to education is necessary and those who do not.

The rationale for this sub-hypothesis was that administrators, faculty, and students who have a conservative philosophy regarding the function of the federal government in education would reject the non-academic MDT programs.

Sub-Hypothesis IV-2

$H_1$  Administrators, faculty, and students who believe that MDT students have less than average ability will be more likely to reject the programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who believe that students in the programs have less than average ability and those who do not.

The rationale advanced was that those who feel that everyone unemployed, or in the retraining programs, is naturally low in ability would see no reason for having the non-academic MDT programs at the University where traditionally only intellectually demanding programs are offered.

Sub-Hypothesis IV-3.

$H_1$  Administrators, faculty, and students who believe that MDT students lack ambition will be more likely to reject the programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and

students who believe that persons in the programs lack ambition and those who do not.

The rationale for this sub-hypothesis was that those who have a stereotype concerning unemployment and laziness would feel that the non-academic MDT programs are not solving the basic problem.

### Analysis

To determine if the various major and sub-hypotheses should be accepted or rejected an analysis was made of the responses to various items on the questionnaire. By grouping all the items together that relate to a given hypothesis or sub-hypothesis it was felt that a "profile" of the respondent's attitude would emerge.

Perhaps the fundamental profile which relates to the major variable of this study is whether the respondent accepts, rejects, or is indifferent to MDT programs at the University. The following items relate to the respondent's position on these programs.

Questions relating to acceptance or rejection of MDT programs at Michigan Technological University.<sup>1</sup>

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<sup>1</sup> While the numbers of the administrator-faculty questionnaire items and the student questionnaire items are not the same, the actual questions are identical except that items not appropriate for the student questionnaire have been deleted. Only the faculty item numbers are listed. The questionnaires may be found in Appendix A.

- 4.5 The respondent's position on the University's commitment to Manpower Development and Training Programs.
- 5.5 The respondent's rating of the growth potential for MDT programs at the University.
- 8.2 Respondent's attitude toward administration's decision to undertake MDT programs.
- 9.3 Whether respondent would teach MDT students (faculty only).
- 14. Whether MDT programs should be offered at the University.
- 14.1. Additional information on answer given in Question 14.
- 22.4 Respondent's estimate of the amount of resources that should be expended for graduate, undergraduate, associate degree, continuing education, and MDT programs.

If Question 4.5 was answered "very much" or "moderately" it was taken that he accepted this item. If he rated the growth potential the same in Question 5.5 it appeared to indicate that he was favorably disposed to these programs. In Question 8.2 if he indicated that the administration's decision to undertake MDT programs was a proper one he was marked as favoring them. If he indicated that he would teach both baccalaureate and MDT, or MDT students only, in Question 9.3 he was placed in the acceptance group. Question 14 is the most fundamental indication of acceptance as it asks for a frank "yes" or "no" answer to whether MDT programs should be at the University. Question 14.1 was open ended and added greater detail to the response given in Question 14. Question 22.4 gave some indication of the degree of commitment to MDT programs by asking the respondent to give a quantitative amount of support to these programs as well as to the other academic programs of the University.

Support in any amount was taken as an indication of acceptance of MDT programs.

If the respondent checked the above items in the manner stated it was felt that this clearly indicated a strong commitment to the non-academic MDT programs at Michigan Technological University. If he indicated a positive answer to most of the items it was still a strong commitment if he answered affirmative to Question 14, which is the key question to this profile. If the respondent answered about the same number of items negatively as positively, it was felt that this indicated no definite commitment for or against the MDT programs, while a majority of negative responses indicated a lack of acceptance.

After determining the respondent's position regarding acceptance or rejection of the non-academic MDT programs at Michigan Technological University, it was necessary to draw a profile from his responses to various items bearing on each hypothesis or sub-hypothesis. Each sub-hypothesis had one or more questions that were related to it. The respondent's answers to these questions were used to classify him into one of two categories used for each sub-hypothesis. The category he was placed into was determined by the majority of his responses to the questions.

As each sub-hypothesis concerned an attitudinal or demographic variable, a comparison of this variable with the accept-reject variable was used. Thus, the entire population of this study was classified first as to



acceptance or rejection of the MDT programs, then according to their responses to the attitudinal or demographic variables. The chi square statistic was used to determine if a significant relationship existed between the variables.

A list of questions that seem to relate to each hypothesis and sub-hypothesis is presented in order.<sup>1</sup>

Hypothesis I. -- There is no consensus on the purpose and function of the University as it related to non-academic MDT programs; hence, these programs will be differentially accepted according to the respondent's reference group orientation, his commitment to professional skills, and his loyalty to the University.

Sub-Hypothesis I-1. -- Administrators, faculty, and students interested in the community service function of the University will be more likely to accept the non-academic MDT programs than those who are not.

This sub-hypothesis had three facets: (1) it was believed that those who held a land grant attitude regarding the function of the University would accept the MDT programs as "Service to the public", (2) those who held a traditional view of the University would not accept the MDT programs and would be more interested in "Liberal education", and (3) those who could be considered cosmopolitan would reject the MDT programs while those who could be considered local would accept them.

The meaning attached to a cosmopolitan or local orientation follows:

Cosmopolitan-- Those low on loyalty to the employing organization, high on commitment to specialized skill roles, and likely to use an

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<sup>1</sup> Only the alternative sub-hypothesis ( $H_1$ ) is restated in this section.

outer reference group orientation.

Local--Those high on loyalty to the employing organization, low on commitment to specialized skill roles, and likely to use an inner reference group orientation.<sup>1</sup>

It was anticipated that the cosmopolitan would rate "Liberal education" and "Research" high, while the local would rate "Service to the public" and "Preparation for a vocation" high.

In order to determine who was to be considered as having a land grant or traditional, and cosmopolitan or local orientation, a series of profiles were drawn from the questionnaire items.

To identify those with a land grant orientation answers to the following items appear to relate:

- 1.2 The University's commitment to public service.
- 1.3 The University's commitment to vocational preparation.
- 2.1 Whether all universities should provide these functions.
- 3.1 What proportion of the population should be allowed some form of higher education.
- 15.1 Whether regular instructors should be expected to teach in MDT programs.
- 17.11 If MDT students should be in separate housing and classes.
- 17.12 If MDT students should be in separate classes.
- 20. If the University has changed as a result of having MDT students on campus.

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<sup>1</sup> Gouldner, op. cit., pp. 281-306.

21. Attitude toward associate degree and MDT programs at Michigan Technological University.
- 22.3 Amount of resources that should be expended for graduate, undergraduate, associate degree, continuing education, and MDT programs.

It was believed that those who see Michigan Technological University from a land grant point of view would list public service and preparation for a vocation of importance. They would believe that all universities should also stress these two aspects of education, and that a large proportion of the public should be helped by some form of higher education. They would also be willing to teach in these programs and would not wish for MDT students to be separated in housing but could see the necessity of separate classes.

Further, they would perceive no change in the University as a result of these programs and would remain even if these programs were expanded. They would agree that both associate degree and MDT programs should be offered, and that University resources should be expended on graduate, undergraduate, associate degree, continuing education, and MDT programs.

To categorize those who view the University in a traditional role answers to the following questions comprise a profile:

- 3.4 The amount of resources to be devoted to higher education.
- 4.1 The University's commitment to graduate, undergraduate, associate degree, continuing education, and MDT programs.
- 8.1 Attitude toward administration's decision to undertake MDT programs.
- 9.1 Whether respondent would teach MDT students (faculty only).

- 13.1 Where MDT programs should be offered--at high schools, community colleges, colleges, or most convenient site.
- 15.2 Whether regular instructors should be expected to teach in MDT programs as part of their regular load.
- 21.4 Attitude toward associate degree and MDT programs at Michigan Technological University.
- 22. Amount of resources that should be expended for graduate, undergraduate, associate degree, continuing education, and MDT programs.

It was believed that those who view Michigan Technological University in a traditional role would believe that only a small number of high school graduates should attend college. They would believe that the University's commitment should be to graduate and undergraduate education, and that these two areas represent growth potential.

It was also believed that they would not want to teach MDT students, and would not want MDT programs offered at colleges. They would not expect regular instructors to teach in MDT programs. They would treat both associate degree and MDT programs alike and not view them with sympathy. Finally, they would place all or most of the University's resources in graduate or undergraduate programs.

Answers to the following questions appear to identify respondents with a cosmopolitan leaning:

- 5.1 The rating of growth potential for graduate programs.
- 5.2 The rating of growth potential for baccalaureate programs.

- 28. Number of "outer" organizations in which respondent has membership.
- 29. Number of "inner" organizations in which respondent has membership.
- 40. What degrees are held by the respondent.
- 41. Type of institution from which respondent was graduated.
- 42. Type of college or university for which respondent prefers to work. (Code 3 or 6)
- 43.1 Reasons why respondent wants to work for above college or university.

It was expected that the respondent with cosmopolitan leanings would want Michigan Technological University to be involved in graduate and undergraduate programs exclusively or in major part. Also that he would rate the growth potential of these programs high or moderate. He would likely reject associate degree and MDT programs and would tolerate continuing education. He would belong to more "outer" organizations than "inner" ones and would prefer to work for more "prestigious" schools.

It was also expected that persons with advanced degrees would be more cosmopolitan in their leanings than those who have the masters degree or lower. Finally, that those who have worked for a short period of time at the University, and are without tenure, would be more cosmopolitan in their leanings.

To determine whether the respondent had a local orientation the

following questions were expected to differentiate:

3. Whether higher education should be available to a large proportion of the high school population. (Code 1 or 2)
- 4.3 Extent that the University should be involved in associate degree programs.
- 4.4 Extent that the University should be involved in continuing education programs.
- 4.5 Extent that the University should be involved in MDT programs.
- 5.1 The respondent's rating of the growth potential of the above programs.
- 13.3 Whether MDT programs should be offered at colleges.
- 13.4 Whether MDT programs should be offered at most convenient site.
- 20.2 Whether respondents will remain at Michigan Technological University if MDT programs are expanded.
28. Number of "outer" organizations in which respondent has membership. (Code 3, 4, 5)
29. Number of "inner" organizations in which respondent has membership. (Code 3, 4, 5)
40. What degrees are held by the respondent. (Code 1, 2)
41. Institution from which respondent received his degree. (Code 1, 2)
42. Type of college or university for which respondent prefers to work. (Code 4 or 5)

It was felt that a respondent with a local orientation would feel that some form of education should be available to a large proportion of high school graduate, that Michigan Technological University should be involved in graduate, undergraduate, associate degree, continuing

education, and MDT programs--though perhaps still with major emphasis on undergraduate education. He would rate the growth potential of all programs fairly high, and would accept MDT programs at colleges.

It would not affect the respondent with a local orientation if the MDT programs were expanded as he would be firmly committed to working for Michigan Technological University. It is expected that while the local belongs to some "outer" organizations, he is much more involved in "inner" organizations and local activities.

The local is expected to hold a Master's degree and prefer to work for a school like Michigan Technological University.

This summarized the various facets of Sub-Hypothesis I-1.

Sub-Hypothesis I-2--Administrators, faculty, and students who aspire for the University to provide a liberal education will be more likely to reject the non-academic MDT programs than those who do not.

To find those who aspire for the University to provide a liberal education, the following questions seemed pertinent:

- 1.1 The respondent's estimate of the University's commitment to liberal education.
2. Whether just Michigan Technological University, or all Universities, should provide liberal education.
3. Amount of high school graduates that should be provided higher education. (Code 4)

- 4.1 The respondent's position on the University's commitment to graduate programs.
- 4.2 The respondent's position on the University's commitment to baccalaureate programs.
- 37. Whether respondent is in Engineering, Science, or Business Administration-Liberal Arts.
- 42. Type of college or university for which respondent prefers to work. (Code 1 or 2)
- 43. Reasons why respondent wants to work for above college or university.

It was believed that the respondent who aspires for Michigan Technological University to provide a broad liberal education would rate the University's commitment to liberal education high and that he would believe all universities should provide a liberal education before other commitments. He would restrict the number of high school graduates attending institutions of higher education and would want Michigan Technological University to use all resources for graduate and baccalaureate programs.

It was also believed that the respondent who aspires for the University to provide a broad liberal education would be in the non-science and engineering faculty, and would prefer to be identified with a ~~school~~ school that has a strong liberal arts connotation.

This summarizes Hypothesis I and its several sub-hypotheses.



Hypothesis II--Acceptance of such programs as MDT is directly related to the economic and social background of the respondent; his patterns of social mobility, and his aspirations for social and professional status.

Sub-Hypothesis II-1. --Administrators, faculty, and students who have experienced social mobility will be more likely to reject the non-academic MDT programs than those who have not.

To determine if the respondent had experienced social mobility the following questions were included in the questionnaire:

30. Main occupation of the respondent's fathers.
31. Educational attainment of the respondents' fathers.
32. Educational attainment of the respondent's mothers.
33. Educational attainment of the respondent.
40. Degrees held by the respondent.
41. Types of colleges or universities respondent attended.

In assigning the respondent to the group who had experienced social mobility the following considerations were used: If the respondent's father had an occupation that was classified as manual worker, service worker, or farm worker it signified that the respondent had experienced upward social mobility. Also, if the father's occupation required less formal education than that of the respondent and if the respondent has more formal education than the father or mother it was felt that this also was indicative of upward social mobility. If the respondent attended a

college or university for his advanced degrees that were of the more "prestigious" variety compared to his undergraduate degree this also was an indication of social mobility. Finally, those who held degrees higher than their professional parent were held to have experienced upper social mobility.

Sub-Hypothesis II-2. -- Administrators, faculty, and students who perceive the University as a source of prestige will be more likely to reject the non-academic MDT programs.

The questions concerned with this sub-hypothesis were:

- 6.2 The respondent's attitude toward those teaching in the MDT programs.
- 6.3 How the respondent feels the MDT instructors are, or would be accepted by the regular faculty.
- 9.3 If the respondent would teach MDT students.
- 18.3 If the respondent believes the MDT programs adversely affect the University.
- 19.3 If the respondent believes those concerned with status would resist MDT programs.
- 20.1 Whether respondent believes the University has changed because of the MDT programs.

Respondents assigned to the group who perceive the University as a source of prestige would feel that those teaching in the MDT programs are less professional and would not be accepted by the regular faculty.

They would not want to teach MDT students. They would believe that MDT programs adversely affect the University and would believe that persons concerned with status should reject the programs. They would also believe that the University has changed because of the MDT programs.

This completes the summary of Hypothesis II and its several sub-hypotheses.

Hypothesis III. -- Acceptance of such programs as MDT is directly related to the respondent's knowledge of and involvement in the non-academic programs.

Sub-Hypothesis III-1-- Administrators and faculty who make decisions concerning the non-academic MDT programs will be more likely to accept the programs than those who do not.

The following questions established who was involved in the non-academic MDT programs:

7. If the respondent has been involved in any way in the non-academic MDT programs.
  - 7.1 When respondent was involved.
  - 7.2 What way respondent was involved.

The analysis of these questions is obvious and no explanation is necessary.

Sub-Hypothesis III-2. -- Administrators, faculty, and students who

have established interpersonal relations with individuals in the non-academic MDT programs will be more likely to accept the programs than those who have not.

The following questions determined who had established interpersonal relations with those in the non-academic programs.

- 6. If the respondent knows anyone teaching in the MDT programs.
- 6.3 If the respondent feels they would or do "fit in" with the regular faculty.
- 16.1 If the respondent has had direct experience with MDT students.

The answer to these questions are "yes" or "no" and do not require a detailed analysis to determine who has established interpersonal relations with those in the MDT programs.

Sub-Hypothesis III-3. -- Administrators, faculty, and students who feel that the non-academic MDT programs interfere with the regular programs will be more likely to reject them than those who feel that they do not interfere.

The questions concerned with this sub-hypothesis were:

- 14.2 Whether the respondent feels that a separate faculty should teach in the MDT programs.
- 15. Whether the respondent feels that the regular faculty should be expected to teach in the MDT programs as part of their regular teaching load.

- 17.1 Whether the MDT students should be in separate housing and classes.
18. Whether the respondent sees any obstacles in the way if the University decides to go into MDT type programs permanently.
19. What type of individual is most likely to show resistance to MDT programs.

Respondents assigned to this category were expected to indicate that a separate faculty should be used for the MDT programs, and that regular faculty should not be expected to teach in them. Also, that MDT students should be in separate housing and classes. They would also state that the individual most likely to show resistance to MDT programs would be those who feel that these programs compete for University resources.

This summarizes Hypothesis III and its sub-hypotheses. Hypothesis IV and its sub-hypotheses will now be examined.

Hypothesis IV.-- The non-academic MDT programs will be rejected at the University on the basis of stereotypes held by the administrators, faculty, and students.

Sub-Hypothesis IV-1. -- Administrators, faculty, and students who believe that governmental subsidy to education is necessary will be more likely to accept the non-academic MDT programs than those who do not.

Answers to the following questions were used to categorize

respondents into this group:

10. Respondent's belief regarding federal subsidy to agriculture, hospital care for the aged, education, retraining of workers, and recreation facilities.
11. Whether respondent believed federal support should increase, decrease, remain the same, or terminate.
34. Whether the respondent's parents had or have a conservative political outlook.
35. Whether the respondent's political outlook is conservative.

It was believed that those assigned to this classification would not agree with government support to education, would feel that government support should decrease or terminate, and would have parents who were conservative as they themselves are.

Sub-Hypothesis IV-2. -- Administrators, faculty, and students who believe that students in the MDT programs have less than average ability will be more likely to reject the programs than those who do not.

Respondents were classified into this group by their response to the following:

- 16.02 Respondent's assessment of the non-academic student in terms of ability as compared to the regular student.

Sub-Hypothesis IV-3. -- Administrators, faculty, and students who believe that MDT students lack ambition will be more likely to reject the programs than those who do not.

The respondents assigned to this group were classified by their response to the following:

16.01 Respondent's assessment of the degree of ambition of those in the non-academic programs.

This completes the summary of Hypothesis IV and its sub-hypotheses. The next section will be devoted to an explanation of the procedures used for data analysis.

Procedure for Data Analysis

The data were transferred from the questionnaire to the mechanically sorted punched cards. A program was then written to evaluate the responses of each respondent in order to sort for acceptance or rejection of the non-academic MDT programs, and to assign respondents into attitudinal or demographic categories used for each hypothesis and sub-hypothesis. These data were then fed through the Chi Square Program used on Michigan State University's CD 3600 computer. The program produced frequencies, means, standard deviations, product moment correlations, and chi square statistics. The chi square test was used for this study, with the .05 per cent level of probability as the cutting point for the acceptance or rejection of the specific hypothesis being tested.

Summary

This chapter contains a description of the population used in this

study. All of the administrators and faculty of Michigan Technological University were asked to participate, but a random stratified sample of the student population was used. An explanation was made of the procedures used in the development of the questionnaire. Also, the hypotheses were restated in a more testable form. A detailed analysis of the various profiles concerning the acceptance or rejection of the MDT programs and with the attitudinal or demographic variables used in the hypotheses and sub-hypotheses was included. Finally, the procedures used for the data analysis were explained.



## CHAPTER V

### PRESENTATION AND ANALYSIS OF DATA

This chapter includes a restatement of the major and sub-hypothesis together with the data collected to show if each has been accepted or rejected.

Additional information of interest but not germane to this part of the study has been included in Appendices B and C. The material in these Appendices was used together with other data obtained from the questionnaire to form the profiles used in this study.

#### The Accept - Reject Variable

The accept-reject variable relating to non-academic programs at the University was the major dependent variable of this study. Each hypothesis and sub-hypothesis was stated so that this variable was matched against an attitudinal or demographic variable.

This study was concerned only with the acceptance or rejection of non-academic programs at the University at the time of the initial survey and did not attempt to introduce material that would alter or change in any way the attitudes of the respondents.

### The Demographic Variables

Various demographic variables may have significance for this study. They were included in order to specify the samples and to assist in classifying the respondents into various socio-economic groups. In many instances the demographic variables have been regrouped into fewer, larger groupings than appeared on the questionnaire. This was done to facilitate analysis and to make the data more meaningful. The following demographic data were collected: sex, age, type of community lived in, father's occupation, father's and mother's education, political orientation, teaching level (or in the case of the student - class standing), major academic area, length of employment (faculty only), tenure status (faculty only), degrees, types of schools attended, rank (faculty only), and whether the respondent (faculty only) had an administrative assignment.

In order to determine if each major research hypothesis should be accepted or rejected it was necessary to determine first if the various sub-hypotheses (operationally testable) were themselves accepted or rejected. If the majority of the alternative sub-hypotheses were accepted the major hypothesis was itself accepted.

### Hypothesis I

There is no consensus on the purpose and function of the University as it relates to non-academic programs; hence, these pro-

grams will be differentially accepted according to the respondent's reference group orientation, his commitment to professional skills, and his loyalty to the University.

This major hypothesis is accepted. The following analysis provides the basis for acceptance:

#### Sub-Hypothesis I-1

H<sub>1</sub> Administrators, faculty, and students interested in the community service function of the University will be more likely to accept the non-academic MDT programs than those who are not.

H<sub>0</sub> There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students interested in the community service function of the University and those not interested in this function.

It was hypothesized that administrators, faculty, and students who perceive the University to be an agency of society, created essentially as a service agency to society, would accept the non-academic programs at the University. It was further hypothesized that this sub-hypothesis had three facets: (1) those who held a traditional orientation regarding the purpose of a university would not accept the non-academic programs, (2) that those who held a "land grant" orientation would accept the programs, and (3) that those who could be considered as having a "cosmopolitan" latent identity would reject the non-academic programs

while those who could be considered as having a "local" latent identity would accept them.

The statistics in Table 5.1 indicate that these assumptions were correct for those with a traditional or land grant orientation regarding the purpose of the University. ( $X^2 = 17.81$ , d.f. = 1,  $p < .05$  for the administrators and faculty, and  $X^2 = 28.67$ , d.f. = 1,  $p < .05$  for the students). Since the  $X^2$  values indicate a significant relationship exists between orientation and acceptance of the MDT programs  $H_0$  is rejected at the .05 per cent level of significance. It is deduced, therefore, that those with a land grant orientation are more likely to accept the MDT programs than those with a traditional orientation.

TABLE 5.1

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
TRADITIONAL OR LAND GRANT  
ORIENTATION

Attitude toward MDT Programs at University	Orientation Regarding Function of University				Statistic
	Traditional		Land Grant		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	19	57.6	74	91.4	$X^2 = 17.81$ d.f. = 1 $p < .05$
Reject	14	42.4	7	8.6	
Total	33	100.0	81	100.0	
Student					
Accept	92	70.2	257	90.8	$X^2 = 28.67$ d.f. = 1 $p < .05$
Reject	39	29.8	26	9.2	
Total	131	100.0	283	100.0	

It will be found that the statistics in Table 5.2 indicate that those with a "cosmopolitan" latent social identity are more likely to reject the non-academic MDT programs than those with a "local" latent social identity ( $X^2 = 23.82$ , d.f. = 1,  $p < .05$  for the administrators and faculty, and  $X^2 = 21.85$ , d.f. = 1,  $p < .05$  for the students).

The statistics in Table 5.1 and 5.2 indicate that in both cases  $H_0$  should be rejected at the .05 per cent level of significance and that the alternative sub-hypothesis  $H_1$  should be accepted. Therefore, it is concluded that those interested in the community service function of the University will be more likely to accept the non-academic MDT programs than those who are not.

TABLE 5.2

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
COSMOPOLITAN OR LOCAL LATENT  
SOCIAL IDENTITY

Attitude toward MDT Programs at University	Latent Social Identity				Statistic
	Cosmopolitan		Local		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	27	55.1	61	93.9	$X^2 = 23.82$ d.f. = 1 $p < .05$
Reject	22	44.9	4	6.1	
Total	49	100.0	65	100.0	
Student					
Accept	212	78.2	137	95.8	$X^2 = 21.85$ d.f. = 1 $p < .05$
Reject	59	21.8	6	4.2	
Total	271	100.0	143	100.0	

## Sub- Hypothesis I-2

- $H_1$  Administrators, faculty, and students who aspire for the University to provide a liberal education will be more likely to reject the non-academic MDT programs than those who do not.
- $H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who aspire for the University to provide a liberal education and those who do not.

It was hypothesized that administrators, faculty, and students who perceive the University in a traditional role would be less likely to accept the non-academic MDT programs that are not contributing to a broad liberal education. Table 5.3 summarized the data obtained.

TABLE 5.3

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
ASPIRATION FOR LIBERAL EDUCATION

Attitude toward MDT Programs at University	Aspiration for Liberal Education				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	26	56.5	62	91.2	$X^2 = 18.71$ d.f. = 1 $p < .05$
Reject	20	43.5	6	8.8	
Total	46	100.0	68	100.0	
Student					
Accept	78	59.1	271	96.1	$X^2 = 93.04$ d.f. = 1 $p < .05$
Reject	54	40.9	11	3.9	
Total	132	100.0	282	100.0	

The statistics indicate that there is a relationship between aspirations for a liberal education and acceptance or rejection of non-academic MDT programs ( $X^2 = 18.71$ , d.f. = 1,  $p < .05$  for administrators and faculty, and  $X^2 = 93.04$ , d.f. = 1,  $p < .05$  for the students). Therefore,  $H_0$  is rejected at the .05 per cent level of significance and  $H_1$  is accepted. It appears that those who have aspirations for the University to provide a

broad liberal education will be more likely to reject the non-academic MDT programs at the University than those who do not have such aspirations.

This completes the analysis of the sub-hypotheses relating to Hypothesis I. To summarize, the various alternative sub-hypotheses ( $H_1$ ) were all accepted; therefore, Hypothesis I is accepted. It is assumed that there is no consensus on the purpose and function of the University as it relates to non-academic MDT programs; hence, these programs are differentially accepted according to the respondent's reference group orientation, his commitment to professional skills, and his loyalty to the University.

## Hypothesis II

Acceptance of such programs as MDT is directly related to the economic and social background of the respondent, his patterns of social mobility, and his aspirations for social and professional status.

This major hypothesis is only partially accepted. The subsequent data will reveal that the social and economic background of the respondent and his pattern of social mobility have no relationship to his acceptance or rejection of the non-professional MDT programs at the University. However, the part of the hypothesis that is concerned with his aspirations for social and professional status is accepted as a definite relationship appears to be present.



## Sub-Hypothesis II-1

$H_1$  Administrators, faculty, and students who have experienced social mobility will be more likely to reject the non-academic MDT programs than those who have not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who have experienced social mobility and those who have not.

It was hypothesized that those persons who have experienced social and economic gains would be more reluctant to see the benefits of mobility acquired by those in the non-academic MDT programs.

TABLE 5.4

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
PATTERN OF SOCIAL MOBILITY

Attitude toward MDT Programs at University	Social Mobility				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	59	80.8	29	70.7	$X^2 = 1.52$ d. f. = 1 $P > .05$
Reject	14	19.2	12	29.3	
Total	73	100.0	41	100.0	
Student					
Accept	226	84.3	123	84.3	$X^2 = 0.0$ d. f. = 1 $P > .05$
Reject	42	15.7	23	15.7	
Total	268	100.0	146	100.0	

The data in Table 5.4 indicates no apparent relationship between acceptance or rejection of non-academic MDT programs and patterns of social mobility ( $X^2 = 1.52$ , d.f. = 1,  $p > .05$  for the administrators and faculty, and  $X^2 = 0.0$ , d.f. = 1,  $p > .05$  for the students). Therefore,  $H_0$  is accepted at the .05 per cent level of significance. There appears to be no difference in the degree of acceptance of the non-academic MDT programs between those who have experienced social mobility and those who have not.

#### Sub - Hypothesis II - 2

$H_1$  Administrators, faculty, and students who perceive the University as a source of prestige are more likely to reject the non-academic MDT programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who perceive the University as a source of prestige and those who do not.

It was the purpose of this sub-hypothesis to suggest that those who are conscious of status would reject the non-academic MDT programs because they would detract from the prestige of the institution and, ultimately, the persons associated with it.

TABLE 5.5

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
THE UNIVERSITY AS A PERCEIVED  
SOURCE OF PRESTIGE

Attitude toward MDT Programs at University	University as a Perceived Source of Prestige				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	8	30.8	80	90.9	$X^2 = 41.23$ d.f. = 1 $p < .05$
Reject	18	69.2	8	9.1	
Total	26	100.0	88	100.0	
Student					
Accept	16	26.7	333	94.1	$X^2 = 176.10$ d.f. = 1 $p < .05$
Reject	44	73.7	21	5.9	
Total	60	100.0	354	100.0	

The data presented in Table 5.5 reveal a correlation between the University as a source of prestige and acceptance or rejection of the non-academic MDT programs ( $X^2 = 41.23$ , d.f. = 1,  $p < .05$  for the administrators and faculty, and  $X^2 = 176.10$ , d.f. = 1,  $p < .05$  for the students). Thus,  $H_0$  is rejected and  $H_1$  accepted at the .05 per cent level of significance. It is assumed that there is a relationship between perception of the University as a source of prestige and rejection of the

non-professional MDT programs.

This completes the analysis of the sub-hypotheses relating to Hypothesis II. As  $H_0$  is accepted in Sub-Hypothesis II-1 and is rejected in Sub-Hypothesis II-2 there can be no complete acceptance of Hypothesis II. Therefore, only that part of the hypothesis relating to social and professional status is accepted.

### Hypothesis III

Acceptance of such programs as MDT is directly related to the respondent's knowledge of and involvement in the non-academic programs.

This major hypothesis is only partially accepted. It will be found in examining the following data that involvement in the programs and interpersonal relations with those in the programs have no relationship with acceptance or rejection of the non-academic MDT programs at the University. On the other hand, acceptance or rejection of the programs based upon their possible interference with the regular baccalaureate or graduate programs is indicated. Those who believe that the non-academic MDT programs will interfere with the regular programs reject them at the University.

### Sub-Hypothesis III -1

$H_1$  Administrators and faculty who make decisions concerning the non-academic MDT programs will be more likely to accept the programs

than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators and faculty who make decisions concerning the programs and those who do not.

It was hypothesized that persons involved in the non-academic MDT programs, either directly or indirectly, would be emotionally involved to the extent that they would want the programs to succeed. As only the administrators and faculty were involved in the programs, the following data are restricted to their response.

TABLE 5.6

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY BASED  
UPON INVOLVEMENT IN THE PROGRAMS

Attitude toward MDT Programs at University	Involvement in the Programs				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	32	84.2	56	73.7	$\chi^2 = 1.59$ d.f. = 1 $p > .05$
Reject	6	15.8	20	26.3	
Total	38	100.0	76	100.0	

It is apparent that no relationship appears to be present regarding the acceptance or rejection of the non-academic MDT programs at the University and involvement in the programs ( $X^2 = 1.59$ , d.f. = 1,  $p > .05$  for the administrators and faculty.) Therefore  $H_0$  is accepted at the .05 per cent level of significance. It appears that there is no difference in the degree of acceptance of the non-academic MDT programs between those who make decisions concerning the programs and those who do not.

#### Sub-Hypothesis III-2

$H_1$  Administrators, faculty, and students who have established interpersonal relations with individuals in the MDT programs are more likely to accept the programs than those who have not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who have established interpersonal relations with individuals in the programs and those who have not.

It was expected that those who have formed an acquaintanceship with either the students or instructors involved in the non-academic MDT programs would accept these programs at the University. This was based upon the belief that it is more difficult to reject a program in which the beneficiary is known.

TABLE 5.7.

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
INTERPERSONAL RELATIONS WITH  
THOSE IN THE PROGRAMS

Attitude toward MDT Programs at University	Interpersonal Relations with MDT Personnel				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	24	88.9	64	73.6	$\chi^2 = 2.75$ d. f. = 1 p > .05
Reject	3	11.1	23	26.4	
Total	27	100.0	87	100.0	
Student					
Accept	87	90.6	262	82.4	$\chi^2 = 3.78$ d. f. = 1 p = .05
Reject	9	9.4	56	17.6	
Total	96	100.0	318	100.0	

The data presented in Table 5.7 indicate that there is no relationship between acceptance or rejection of the non-academic MDT programs and interpersonal relations with students or instructors in the programs for the administrators and faculty. However, there appears to be a relationship between acceptance or rejection of the non-academic MDT programs and interpersonal relations with students or instructors in the programs for the students ( $X^2 = 3.78$ , d. f. = 1, p = .05). The  $X^2$  value of 3.78 is just slightly lower than the 3.84 needed to indicate a significant relationship.

There appears to be no difference in the degree of acceptance of the non-academic MDT programs between those who have established interpersonal relations with individuals in the program and those who have not.

### Sub-Hypothesis III-3

- $H_1$  Administrators, faculty, and students who feel that the non-academic MDT programs interfere with the regular programs will be more likely to reject them than those who feel that they do not interfere.
- $H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who feel that the programs interfere with the baccalaureate and graduate programs and those who feel that they do not.

It was hypothesized that the non-academic MDT programs would be rejected if it was thought that they would interfere or weaken the regular baccalaureate or graduate programs by competing for University resources.



TABLE 5.8

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY BASED  
UPON THEIR POSSIBLE INTERFERENCE  
WITH REGULAR PROGRAMS

Attitude toward MDT Programs at University	Interference with Regular Programs				Statistic
	With		Without		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	25	53.2	63	94.0	$X^2 = 26.17$ d.f. = 1 p < .05
Reject	22	46.8	4	6.0	
Total	47	100.0	67	100.0	
Student					
Accept	64	56.1	285	95.0	$X^2 = 94.17$ d.f. = 1 p < .05
Reject	50	43.9	15	5.0	
Total	114	100.0	300	100.0	

From the data presented in Table 5.8 it can be assumed that a relationship exists between acceptance or rejection of non-academic MDT programs at the University and whether or not these programs are perceived to interfere with the regular baccalaureate and graduate programs ( $\chi^2 = 26.17$ , d.f. = 1,  $p < .05$  for the administrator, and  $\chi^2 = 94.25$ , d.f. = 1,  $p < .05$  for the students). Therefore,  $H_0$  is rejected and  $H_1$  accepted at the .05 per cent level of significance.

It is assumed that those who perceive the non-academic MDT programs as competing for University resources will reject them at the University.

This completes the analysis of data relating to Hypothesis III.  $H_0$  is accepted and  $H_1$  rejected in Sub-Hypothesis III-1 and Sub-Hypothesis III-2, but  $H_0$  is rejected and  $H_1$  accepted in Sub-Hypothesis III-3. Therefore, involvement in the non-academic MDT programs and interpersonal relations with those in the programs have no influence on the acceptance or rejection of these programs at the University. However, if the non-academic MDT programs are perceived to interfere with the regular baccalaureate or graduate programs they are rejected at the University by the administrators, faculty, and students.

#### Hypothesis IV

The non-academic MDT programs will be rejected at the University on the basis of stereotypes held by administrators, faculty, and students.

The major hypothesis is only partially accepted. The subsequent data will reveal that there is no correlation between acceptance or rejection of the non-academic MDT programs and federal subsidy to education as it relates to the administrators and faculty. However, there does appear to be a correlation between these variables as it relates to the student response.

There appears to be no correlation between acceptance or rejection of the non-academic MDT programs and appraisal of MDT student ability. However, there does appear to be a correlation between acceptance and rejection of the non-academic MDT programs and appraisal of MDT student ambition.

Sub-Hypothesis IV -1

- H<sub>1</sub> Administrators, faculty, and students who believe that government subsidy is necessary are more likely to accept the non-academic MDT programs than those who do not.
- H<sub>0</sub> There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and students who believe that government subsidy to education is necessary and those who do not.

It was expected that there would be a correlation between the respondent's attitude toward federal subsidy to education and his support of the non-academic MDT programs at the University.

TABLE 5.9

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
ATTITUDE TOWARD FEDERAL SUBSIDY  
TOWARD EDUCATION

Attitude toward MDT Programs at University	Attitude Toward Federal Subsidy to Education				Statistic
	Agree with Subsidy		Disagree with Subsidy		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	74	79.6	14	66.7	$X^2 = 1.62$ d. f. = 1 $p > .05$
Reject	19	20.4	7	33.3	
Total	93	100.0	21	100.0	
Student					
Accept	323	86.1	26	66.7	$X^2 = 10.11$ d. f. = 1 $p < .05$
Reject	52	13.9	13	33.3	
Total	375	100.0	39	100.0	

The data in Table 5.9 indicate little relationship between acceptance or rejection of non-academic MDT programs at the University and the administrator-faculty response regarding federal subsidy to education ( $X^2 = 1.62$ , d. f. = 1,  $p > .05$ ).

However, the relationship between the student acceptance or rejection of the non-academic MDT programs and federal subsidy to education does not appear to be a chance one ( $X^2 = 10.11$ , d. f. = 1,  $p < .05$ ).

Thus,  $H_0$  is accepted at the .05 per cent level of significance for the administrators and faculty, and  $H_0$  is rejected for the student response. Students who agree with federal subsidy to education are more likely to accept the non-academic MDT programs at the University.

#### Sub - Hypothesis IV-2

- $H_1$  Administrators, faculty, and students who believe that MDT students have less than average ability will be more likely to reject programs than those who do not.
- $H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators; faculty, and students who believe that students in the programs have less than average ability and those who do not.

It was hypothesized that the administrators, faculty, and students who believe the MDT student to be lower in ability than the regular student would reject the non-academic MDT programs at the University.

TABLE 5.10

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
APPRAISEMENT OF MDT STUDENT  
ABILITY

Attitude toward MDT Programs at University	Appraisement of MDT Student Ability				Statistic
	Average or Above		Below Average		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	51	78.5	37	75.5	$X^2 = 0.14$ d. f. = 1 p > .05
Reject	14	21.5	12	24.5	
Total	65	100.0	49	100.0	
Student					
Accept	252	85.4	97	81.5	$X^2 = 0.98$ d. f. = 1 p > .05
Reject	43	14.6	22	18.5	
Total	295	100.0	119	100.0	

There is no apparent relationship between acceptance or rejection of the non-academic MDT programs and appraisement of MDT student ability ( $X^2 = .14$ , d. f. = 1,  $p > .05$  for the administrators and faculty, and  $X^2 = .98$ , d. f. = 1,  $p > .05$  for the students). Therefore,  $H_0$  is accepted and  $H_1$  rejected at the .05 per cent level of significance. There appears to be no difference in the degree of acceptance of the non-academic MDT programs between administrators, faculty, and

students who believe that students in the MDT programs have less than average ability and those who do not.

Sub-Hypothesis IV-3

$H_1$  Administrators, faculty, and students who believe that MDT students lack ambition are more likely to reject the programs than those who do not.

$H_0$  There will be no difference in the degree of acceptance of the non-academic MDT programs between administrators; faculty, and students who believe that persons in the programs lack ambition and those who do not.

It was hypothesized that those who have a stereotype concerning unemployment and laziness would believe the non-academic MDT programs are not solving the basic problem.

TABLE 5.11

AN ANALYSIS OF ACCEPTANCE OR REJECTION OF  
MDT PROGRAMS AT THE UNIVERSITY AND  
APPRAISEMENT OF MDT STUDENT  
AMBITION

Attitude toward MDT Programs at University	Appraisement of MDT Student Ambition				Statistic
	Average or Above		Below Average		
	Number	Percentage	Number	Percentage	
Administrator-Faculty					
Accept	75	82.4	13	56.5	$X^2 = 6.99$ d.f.= 1 $p < .05$
Reject	16	17.6	10	43.5	
Total	91	100.0	23	100.0	
Student					
Accept	278	90.6	71	66.4	$X^2 = 35.11$ d.f. = 1 $p < .05$
Reject	29	9.4	36	33.6	
Total	307	100.0	107	100.0	

The data in Table 5.11 suggests that there is a correlation between acceptance or rejection of the non-academic MDT programs at the University and appraisement of MDT student ambition ( $X^2 = 6.99$ , d.f. = 1,  $p < .05$  for the administrators and faculty, and  $X^2 = 35.11$ , d.f. = 1,  $p < .05$  for the students). Therefore,  $H_0$  is rejected and  $H_1$  accepted at the .05 per cent level of significance. Administrators, faculty, and students who believe that MDT students lack ambition are



more likely to reject the programs than those who do not.

This completes the analysis of the sub-hypotheses relating to Hypothesis IV. To summarize,  $H_0$  is accepted and  $H_1$  rejected for the administrators and faculty, but  $H_0$  is rejected and  $H_1$  accepted for the students in Sub-Hypothesis IV-1. There appears to be a definite correlation between a favorable student attitude toward federal subsidy to education and acceptance of the non-academic MDT programs at the University.  $H_0$  is accepted and  $H_1$  rejected in Sub-Hypothesis IV-2 and there appears to be no correlation between acceptance or rejection of the non-academic MDT programs at the University and appraisal of MDT student ability. However,  $H_0$  is rejected and  $H_1$  accepted in Sub-Hypothesis IV-3 and there apparently is a correlation between acceptance of the non-academic MDT programs and a favorable appraisal of MDT student ambition. Hypothesis IV is, therefore, accepted only to the extent that the various alternative Sub-Hypotheses are accepted.

TABLE 5.12

SUMMARY OF ACCEPTANCE OR REJECTION OF  
HYPOTHESES AND SUB-HYPOTHESES WITH  
RELATED STATISTICS\*

Hypothesis or Sub-Hypothesis	Accept or Reject		Chi Square Statistic	
	H <sub>0</sub>	H <sub>1</sub>	Administrator- Faculty	Student
Hypothesis I				
Sub-Hypothesis I-1	Reject	Accept	46.06	80.55
Traditional or Land Grant Orientation	Reject	Accept		
Cosmopolitan or Local Latent Identity	Reject	Accept	23.82 18.71	21.85 93.04
Sub-Hypothesis I-2	Accept	Reject	1.52	0.0
Hypothesis II	Reject	Accept	41.23	176.10
Sub-Hypothesis II-1	Accept	Reject		
Sub-Hypothesis II-2	Accept	Reject	1.59	---
Hypothesis III	(Faculty)	(Faculty)	2.75	3.78
Sub-Hypothesis III-1	Reject	Accept		
Sub-Hypothesis III-2	(Students)	(Students)		
Sub-Hypothesis III-3	Reject	Accept	26.17	94.25
Hypothesis IV				
Sub-Hypothesis IV-1	Reject	Accept	1.62	10.11

Chapter V contains an analysis of the data collected for this study. A brief description of the variables and their relationship was included. Through the presentation of the data in the form of tables the hypotheses and various null or alternative forms of the sub-hypotheses were either accepted or rejected according to the chi square analysis used. Table 5.12 presents a summary of each sub-hypothesis and its related statistics.

Chapter VI will be concerned with the final summary and the conclusions derived from this study. It will also be concerned with future implications for further research.

## CHAPTER VI

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS OF THE STUDY

In Chapter VI will be found a restatement of the problem investigated, a summary of the study, and the conclusions drawn from the data obtained. Finally, implications for further research are listed.

#### Statement of the Problem

This study was concerned with the acceptance of non-academic curricula of study on a traditional college campus. It examined some anticipated problems confronting administrators in higher education in facing the demands for curricular offerings for diverse programs. Specifically, the non-academic curricula studied were the Manpower Development and Training Act programs being conducted at Michigan Technological University at Houghton, Michigan.

It was the purpose of this investigation to (1) determine if non-academic programs are accepted at the University, (2) to determine if certain groups differ in their degree of acceptance, and (3) to find if there are certain characteristics that can be identified which relate to the degree of acceptance of these non-academic programs.

### Summary

In order to provide a perspective for the problem investigated a review of the historical development of education in this country was presented. The cultural heritage of our European forebearers shaped the structure of the Colonial educational system. A debate over the proper role of education has occupied man since the time of Aristotle. Historically, a controversy existed, as it does at present, as to whether education should be liberal, general, or specialized and vocational.

Many forces have influenced the evolution of education in this country. The most pervasive have been industrialization, urbanization, immigration, and transportation. Industrialization completely changed the employment structure of this country by eliminating individual artisanship and home industry. New skills replaced the old, and machinery replaced man's effort. Jobs became routinized and demanded less training. However, during the present century, as labor costs have sharply increased, industries have turned to automation to cut production costs. This has resulted in greater job sophistication and a surplus of manpower in the unskilled, semi-skilled, and even some skilled worker classifications. Today the demand is for more education in its widest meaning--from education for the intellectual to education for the practical man. The Manpower Development and

Training Act is but one of the latest pieces of legislation to help the practical wage-earner remain economically sufficient in a changing economy.

While the changing structure of our society demands increasing emphasis on education for all, there are various groups that believe education should be for the select few. Some of these groups bring pressure to bear on the colleges and universities to restrict the role these institutions assume in society. Other groups demand, with equal vigor, that the institution serve all society--not just the few. These groups could be classified into those with a traditional orientation, and those with a land grant orientation. It may be natural to assume that those two groups will differ in their perceptions of the role of the University in MDT training.

Various other groups have influence on the colleges and universities of this country. These are national or regional accrediting agencies, employers, unions, faculty associations, chapters of national associations dealing with specific causes, professional associations such as the AAUP, legislators, and others.

While the college administrator must contend with the various pressure groups, and at the same time give direction to the institution in educational matters, he is also confronted with a variety of societal problems and conflicts that demand attention. Among these are equality of educational opportunity, equality of

civil rights for our minorities, assimilation of the scientific revolution, adequate use of leisure time, urban blight with its social degradation, unemployment, the changing character of employment, the lack of occupational education, growth in population, interdependence, and national survival.

The college administrator must constantly have in mind the many goals of our society which have implications for education. The first goal could be the realization of a more perfect democracy; the second is to see that all peoples and nations have security and equality; the third is to provide for higher ethical and aesthetic standards; and fourth, to have a carefully considered plan for the future. Society must anticipate problems and design social institutions to handle these problems rather than use stop-gap, short term solutions. Social progress must keep pace with technological progress.

The college administrator must be aware of the dynamics of society--for the university itself is a part of society. Society looks to the University to perform certain tasks--such as bridging the gap between the level and nature of the culture of the individual and the approved culture of his society; to selecting and controlling the environment which in its best tradition mirrors the culture of the greater society; and finally as an agency of social control, directing the assimilation of the individual into reasonable conformity with group standards.

The university, then is a social system that responds to greater society needs. In order for the university to function it must operate in an orderly fashion in which its members perform the roles expected of them.

There are certain characteristics of individuals that may influence their attitudes toward non-academic programs. The perceived social status of the individual, and whether he has experienced social mobility may be of importance. Status and role are also of concern and are important as they affect behavior.

Sociologists have long used the concept of role theory to explain human actions. Gouldner<sup>1</sup> has made an attempt to develop distinctions between what he terms "manifest" and "latent" identities and roles. It is necessary to distinguish between those identities which are perceived as relevant to a particular setting, and those which do not obviously intrude. The relevant identities are labeled "manifest" and the latter "latent" social identities. Two latent social identities, namely, "cosmopolitan " and "local" may have implications for this study. It was hypothesized that the "local" would be more likely to support the non -academic MDT programs at the University. This was surmised from their greater identification with the local community, their commitment to service, their loyalty to the University, their lack of advanced degrees and lack of interest in professional associations.

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<sup>1</sup> Gouldner, op. cit., pp. 281-306.



It is necessary to examine how individuals react to change as the non-academic MDT programs represent a definite change and possibly one not completely desired by individuals or groups on campus. Change is usually accepted if the individual knows of the need for change and has a chance to participate in planning for the change. As the MDT programs were introduced by an administrative decision, without faculty planning, this could have an effect on the acceptance of the program.

A search of previous dissertations revealed only one that has touched in part on the topic considered in this study. This dissertation, Status of and Need for Terminal Vocational-Technical Curricula in Senior Colleges and Universities, by Richard Earl Fisher<sup>1</sup> is mainly concerned with the need for these programs and how they relate to university organization. The emphasis by Fisher was upon an overview of programs in this country, and he did not attempt to find in depth the attitudes of administrators, faculty, and students toward non-academic programs on a regular university campus.

The data for this study were obtained from the administrators, faculty, and students of the Michigan Technological University at Houghton, Michigan. The sample consisted of 114 administrators and

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<sup>1</sup>Fisher, op. cit.

faculty, and 414 students in the regular baccalaureate and graduate degree programs. A complete administrator--faculty survey was made while a stratified random sample was selected from the student body. Both the administrator--faculty and student sample was proportionally selected from the three major areas of engineering, science, and business administration--liberal arts.

A total of 102 administrators and faculty, and 308 students responded to the original questionnaire. A mail follow-up was made to the original non-respondents and an additional 12 administrator--faculty and 106 student questionnaires were returned.

An analysis was made of the returns from the mailed response against the original returns to check for bias. In none of the areas checked did any discernable difference appear so that the mailed response was then included in the total response for analysis.

The following demographic data were obtained from the samples selected: sex, age, rank (or class standing), political orientation, father's occupation, length of service (faculty), teaching level (faculty), tenure (faculty), degrees, education of father and mother, membership in organizations, and area of specialization.

The questionnaire developed for this study had two functions: (1), it had to indicate whether the respondent accepted or rejected the non-academic MDT programs at the University, and (2) to procure those attitudes and information needed to test the various hypotheses.

The questionnaire was validated by a panel of judges who requested that the original document be modified. After final acceptance by the judges the questionnaire was given a trial to check for ambiguities and reliability. After careful analysis the final questionnaire was prepared. (See Appendix A).

The following major hypotheses or sub-hypotheses were accepted or rejected. Only the alternative form ( $H_1$ ) of the sub-hypotheses is restated.

I. There is no consensus on the purpose and function of the University as it relates to the non-academic MDT programs; hence, these programs will be differentially accepted according to the respondent's reference group orientation, his commitment to professional skills, and his loyalty to the University.

Sub-Hypothesis I-1

Administrators, faculty, and students interested in the community service function of the University will be more likely to accept the non-academic MDT programs than those who are not.

This sub-hypothesis is accepted.

Sub-Hypothesis I-2

Administrators, faculty, and students who aspire for the University to provide a liberal education will be more likely to reject the non-academic MDT programs than those who do not.

This sub-hypothesis is accepted.

II. Acceptance of such programs as MDT is directly related to the economic and social background of the respondent, his patterns of social mobility, and his aspirations for social and professional status.

Sub-Hypothesis II-1

Administrators, faculty, and students who have experienced social mobility will be more likely to reject the non-academic MDT programs than those who have not.

This sub-hypothesis is not accepted.

Sub-Hypothesis II-2

Administrators, faculty, and students who perceive the University as a source of prestige will be more likely to reject the non-academic MDT programs than those who do not.

This sub-hypothesis is accepted.

III. Acceptance of such programs as MDT is directly related to the respondent's knowledge of and involvement in the non-academic MDT programs.

Sub-Hypothesis III-1

Administrators and faculty who make decisions concerning the non-academic MDT programs will be more likely to accept the programs than those who do not.

This sub-hypothesis is not accepted.

#### Sub-Hypothesis III-2

Administrators, faculty, and students who have established interpersonal relations with individuals in the non-academic MDT programs will be more likely to accept the programs than those who have not.

This sub-hypothesis is not accepted.

#### Sub-Hypothesis III-3

Administrators, faculty, and students who feel that the non-academic MDT programs interfere with the regular programs will be more likely to reject them than those who feel that they do not interfere.

This sub-hypothesis is accepted.

IV. The non-academic MDT programs will be rejected at the University on the basis of stereotypes held by administrators, faculty, and students.

#### Sub-Hypothesis IV-1

Administrators, faculty, and students who believe that government subsidy to education is necessary will be more likely to accept the non-academic MDT programs than those who do not.

This sub-hypothesis is rejected for the administrator--faculty response and is accepted for the student response.

## Sub-Hypothesis IV-2

Administrators, faculty, and students who believe that MDT students have less than average ability will be more likely to reject the programs than those who do not.

This sub-hypothesis is rejected.

## Sub-Hypothesis IV-3

Administrators, faculty, and students who believe that MDT students lack ambition will be more likely to reject the programs than those who do not.

This sub-hypothesis is accepted.

Of the major hypotheses only the first is completely accepted. The remaining major hypotheses are accepted only to the extent that their sub-hypotheses are accepted.

## Conclusions

It would appear that the following conclusions are warranted to the extent that the data obtained from this study are valid and reliable. After a statement of the conclusion a discussion follows.

1. The non-academic MDT programs are accepted by the majority of the administrators, faculty, and students of Michigan

Technological University.

It was found that 77.2 per cent of the administrators and faculty, and 84.3 per cent of the students accepted the programs. Perhaps, then, the single most revealing fact associated with this study is that the administrators, faculty, and students appear to have an egalitarian orientation. It is perhaps more likely that in a University designed largely to produce scientists, engineers, and business administrators concerned with material progress in a utilitarian sense that one would find less commitment to the elitest orientation regarding the purpose of higher education. Michigan Technological University, perhaps better than many colleges or universities in Michigan, offers an ideal climate for experimentation in programs of a practical nature.

2. Those who hold a traditional orientation regarding the purpose of the University are more likely to reject the non-academic MDT programs than those with a land grant orientation.

There appears to be a very strong correlation between the perceived purpose of the University and acceptance or rejection of the non-academic MDT programs. Actually, more than twice as many administrators, faculty, and students have a land grant orientation than did not. This may be a characteristic of state supported institutions such as Michigan Technological University. Again, this commitment to a land grant orientation could be the result of the primary mission of the institution.

3. Those with a cosmopolitan latent identity are more likely to reject the non-academic MDT programs than those with a local latent identity.

This conclusion agrees with the profile of the cosmopolitan presented in Chapter III. He is less likely to accept programs based upon service to the local area, is more concerned with his professional commitment, and is more independent regarding his relationship to the University. Those with a local latent identity were expected to, and did, accept the non-academic MDT programs. Therefore, the results of this study tend to reinforce the concepts of cosmopolitan and local latent identities developed by Gouldner and others.

4. Those who have aspirations for the University to provide a liberal education are more likely to reject the non-academic MDT programs than those who do not.

Despite the University's strong orientation to specialized education there are a large number of administrators, faculty, and students who desire that the University offer a liberal education. However, most of the administrators, faculty, and students do not aspire for a liberal education and are more concerned with their specialized education.



5. Social mobility of the respondent has no effect on the acceptance or rejection of the non-academic MDT programs.

Despite literature to the contrary, those who have experienced social and economic gains were not reluctant to see the benefits of mobility possibly acquired by those in the non-academic MDT programs.

It is evident from the demographic data obtained that most of the administrators, faculty, and students at Michigan Technological University came from modest socio-economic backgrounds. By their very presence at the University they have attained higher social status than their parents.

It would appear that the administrators, faculty, and students of Michigan Technological University generally have an equalitarian orientation. While the reason for this orientation has not been brought out in this study, it could be a reflection of the strong commitment to service and the large number of persons with a local latent identity. Perhaps further research could tie these together.

6. Those who perceive the University as a source of prestige are more likely to reject the non-academic MDT programs.

Only a small number of administrators, faculty, and students perceive the University as a source of prestige; however, for those who do a definite correlation exists between rejection of the MDT programs and the feeling that the University is a source of prestige.

Chapter III analyzed the meaning of status in society, and indicated how closely social status is related to occupational status. It is a wonder, therefore, that not more of the administrators, faculty, and students perceive the University as a source of prestige. This finding, however, is consistent with the results found in Conclusion 6, in which a definite egalitarian orientation is evident in all groups studied.

7. The degree of involvement of the respondent in the non-academic MDT programs is not likely to affect his acceptance or rejection of these programs.

Despite the fact that a large number of administrators and faculty were involved in the non-academic MDT programs, no firm commitment to the programs seems to exist. It would appear that, in principle, those not involved in the non-academic programs are just as likely to accept them as are those who are involved. Actually, this is in agreement with data presented earlier in which the total number of respondents who accept the programs is far larger than the total number involved in the programs. It would seem to indicate that the administrators, faculty, and students agree that the non-academic programs are necessary, should be done, but that they have little or no identity with the programs.

8. It appears to make no difference in the acceptance or rejection of the non-academic MDT programs whether or not the respondent has

established interpersonal relations with those in the programs.

This conclusion is but a facet of the previous conclusion. Those involved in the study evidently did not accept or reject the non-academic MDT programs because of the persons in the programs. To the administrator faced with the introduction of these programs, there would be no logic in assuming that once they are on campus the programs would be accepted because of the relationship built up between non-academic MDT students and faculty and the regular students and faculty. It is evident that the programs were accepted for reasons other than involvement in them or having established interpersonal relations with those in the programs.

9, Those who feel that the non-academic programs interfere with the regular programs are more likely than others to reject the programs.

There is a firm commitment to the present programs of the University and those who perceive the non-academic MDT programs as interfering with the regular programs are more likely to reject them at the University. By far the majority of respondents felt, however, that the MDT programs did not interfere with the regular programs.

10. Attitude toward federal subsidy to education does not affect the acceptance or rejection of the non-academic MDT programs by the

administrators and faculty, but does affect the response of the student toward these programs.

It was found for the administrators and faculty that 81.6 per cent accepted federal subsidy in spite of the fact that this did not correlate with the acceptance or rejection of the federally subsidized MDT programs. It could be that those who did not agree with federal subsidy to education nevertheless felt that such a subsidy is necessary for the MDT programs to exist.

There was a definite correlation between acceptance of federal subsidy to education and acceptance of the non-academic MDT programs for the students in this study. Also, in terms of numbers, more of those who disagree with federal subsidy accepted the MDT programs than rejected them.

It might be surmised that federal subsidies are accepted as a routine order of business today from the response received from this study.

11. How the respondent views the ability of the MDT student appears to have no bearing on his acceptance or rejection of the non-academic MDT programs.

Regardless of how the respondent perceived the ability of the MDT student he nevertheless was likely to accept the non-academic MDT programs at the University. Again, perhaps there is a lack of identity

with these programs. It could be assumed that possibly these non-academic programs and those associated with them are considered temporary and of no long-range concern for the University.

Over fifty-seven per cent of the administrators and faculty felt that the MDT student was average or above average in ability while over seventy-one per cent of the students did.

12. How the respondent views the ambition of the MDT student appears to have an effect on acceptance or rejection of the non-academic MDT programs.

Those who believe the MDT student has average or above average ambition are more likely to accept the programs. It was found that the majority of those who responded to this study felt that the MDT student has average or above average ambition. This would seem to indicate that the respondents might feel that the MDT student is a victim of economic circumstances over which he has no control, and that his lack of employment is not because of laziness. One could state that there is no evidence of a stereotype on the part of the respondents of this study toward the MDT student concerning unemployment and laziness.

#### Implications for Further Research

It is obvious that this study has dealt with a problem that could be

found on other campuses other than at Michigan Technological University. It would be of value to compare the findings related to the present situation to studies at other types of institutions in other parts of the country. The apparent acceptance of the non-academic MDT programs could be unique to Michigan Technological University and institutions of a similar type. Would similar findings result in a campus where the primary mission is liberal arts education?

The very setting of the Michigan Technological University could have significance in determining the results of this study. It is situated in an area of chronic unemployment and an out-migration of the employable population. There can be no doubt that the groups participating in this study were aware of the economic plight of those in the MDT programs. Would similar results be found in a more prosperous setting?

It seems quite apparent that the faculty at Michigan Technological University accepts with little opposition the changes in University objectives as indicated by the MDT programs. Indeed, having the chief administrators decide unilaterally to introduce these programs appears to be the most expeditious way. Would a different method of introduction of these programs have resulted in the same degree of success?

From material presented in Chapter II it is obvious that the unemployment problem in this country is vast and challenging, and that

education plays the vital role of providing the training necessary for successful job placement. The vast number of job seekers are presently beyond reach of secondary institutions, and are considered members of the adult segment of our society. It would, therefore, seem appropriate for post-high school institutions to answer the need for additional vocational and technical education for this age group.

Venn expresses a similar view:

Technological change, has rather suddenly, thrown up a dramatic challenge to this nation's . . . educational institutions. Though the full scope of this challenge may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of all American Education. All levels of education, and particularly post-secondary education, must quickly move to assume greater responsibility for preparing men and women for entry into the changed and changing world of technological work. Unless far more and far better education on a semi-professional, technical, and skilled level is soon made available to greater numbers of citizens, the national economy and national structure will suffer irreparable damage.<sup>1</sup>

These sentiments have implications for further study. To what extent are the colleges and universities of America aware of their responsibilities regarding vocational and technical education? To what extent are the administrators and faculty aware of the changing

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<sup>1</sup>Venn, op. cit., p. 22.

world of work? To what extent do they feel that the colleges and universities have a legitimate role to play in adult retraining? Do the administrators, faculty, and students know of the characteristics of those who need retraining, or do they feel that they are unemployed because of some fault of their own? These questions, applied on a large scale would give some answers of value if this country is to meet its needs for an expanded program of vocational-technical education.

It can be surmised that the role Michigan Technological University has assumed in undertaking MDT programs is different from that usually associated with a traditional college or university. In this respect it is assuming some of the functions usually identified as being within the purview of the community college.

Perhaps a study should be made to determine the need for community college services in the local service area of Michigan Technological University. Such a study could address itself to the needs of the youth in the area as well as to the opportunities for post-high school education. It may be that because of its high admissions requirements and general lack of less-than baccalaureate degree occupational education Michigan Technological University may actually be of disservice to those students unable to gain admittance but who desire additional education.

However, within the same community a private junior college offers an additional spectrum of educational programs that compliment the services of Michigan Technological University. Between these two in-



stitutions perhaps the needs of the area for degree programs, transfer programs, and occupational programs of vocational and technical level are being met.

In the long run, however, Michigan Technological University may have to reassess its role in higher education to determine its future course of action not only in its local service area, but in the state and nation as well. Whether Michigan Technological University should continue to expand its less-than degree programs, or whether it should assist in the development of an institution to answer these needs is a vital question to be answered.

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## APPENDIX A

## FACULTY QUESTIONNAIRE

CONFIDENTIAL

## MICHIGAN STATE UNIVERSITY

A STUDY OF MANPOWER  
DEVELOPMENT PROGRAMS

Dear Respondent:

Michigan Tech is one of the few colleges or universities that have extensive Manpower Retraining programs on campus. We are interested in the reaction of persons to these programs and request your cooperation in our study.

This questionnaire gives you an opportunity to state your position on many topics. Please feel free to frankly state your position: Your answers will be completely confidential. No one but the researcher will have access to the completed document and no individual's answers will be identified.

The success of this study depends upon your cooperation. Please answer the questions as carefully and completely as possible.

Thank you very much for your help.

## INSTRUCTIONS

Many questions will require a brief statement, others may be answered by checking (✓) the proper box. If you do not find an answer that completely satisfies you, mark the one that is closest to your position.

Since following the sequence of questions is very important, please do not skip items or read ahead - follow the page sequence carefully!

After completing the questionnaire, place it in the enclosed envelope and place it in the campus mail.

Could you please answer this questionnaire promptly? It is important to this study that this information be gained as soon as possible.

Again, our sincere thanks for your efforts!

**CONFIDENTIAL**

Information given will be used for statistical purposes only. The confidence of the informant will be respected.

1. The following are functions performed by a state university. Please rate these in order of importance.
  - 1.1 ( ) Liberal education
  - 1.2 ( ) Service to the public
  - 1.3 ( ) Preparation for a vocation
  - 1.4 ( ) Research
  
2. Do you believe all universities should provide these functions in the same order?
  - 2.1 ( ) All universities
  - 2.2 ( ) Most universities
  - 2.3 ( ) Some universities
  - 2.4 ( ) Just Michigan Tech
  
3. In view of the fact that there are still limited resources for higher education in the state, do you believe that some type of higher education should be available for all high school graduates, the top 75%, 50%, or 25%?
  - 3.1 ( ) All
  - 3.2 ( ) Top 75%
  - 3.3 ( ) Top 50%
  - 3.4 ( ) Top 25%
  
4. To what extent should Michigan Tech be involved in the following programs?

	Very Much	Moderately	Not at all
Graduate			
Baccalaureate			
Associate Degree			
Continuing Education			
Manpower Development and Training			

5. How would you rate the growth potential of these programs at Michigan Tech?

	Very Much	Moderately	Not at All
Graduate			
Baccalaureate			
Associate Degree			
Continuing Education			
Manpower Development and Training			

6. Do you know of anyone teaching in the Manpower Development Training Programs (worker retraining programs)?

- ( ) Yes (Go to question 6.1)  
 ( ) No (Go to question 7 )

- 6.1 Would you say that they have high technical competence?

- ( ) Yes  
 ( ) No  
 ( ) Don't know

- 6.2 Do you feel that they are competent enough to teach in baccalaureate programs?

- ( ) Yes  
 ( ) No  
 ( ) Don't know

- 6.3 Do you think they (<sup>do</sup>would) "fit in" well with the baccalaureate faculty?

- ( ) Yes  
 ( ) No  
 ( ) Don't know

Please go on to next page

7. Have you been involved in MDT programs in any way?
- ( ) Yes  
( ) No
- 7.1 If so, when?
- 7.2 If so, in what way?
8. How do you feel about the administration's decision to undertake Manpower Development Training programs?
- ( ) I think it is a mistake  
( ) I believe the decision a proper one for them to make  
( ) I have no opinion
9. What would you do if asked to teach in the Manpower Development Training (MDT) programs?
- ( ) Ask to teach only regular baccalaureate students  
( ) Ask to teach both regular baccalaureate students and MDT students  
( ) Ask to teach only MDT students
10. Do you believe in Federal Government subsidy of -
- | Yes | No  |                            |
|-----|-----|----------------------------|
| ( ) | ( ) | Agriculture                |
| ( ) | ( ) | Hospital care for the aged |
| ( ) | ( ) | Education                  |
| ( ) | ( ) | Retraining of workers      |
| ( ) | ( ) | Recreation facilities      |
11. The Federal Government support to education should:
- ( ) Increase  
( ) Decrease  
( ) Remain same  
( ) Terminate

Please go on to next page

Manpower Development Training Programs Defined

At this point some additional information on MDT programs is in order - these programs are to train unemployed and underemployed heads of households and youths for semi-skilled and skilled employment in industrial, business, and service positions. The training programs vary in length from 10 to 48 weeks at Michigan Tech.

The government pays the cost of these programs, which includes the facility costs, faculty salaries, and the purchase of equipment and supplies. In addition, the unemployed head of household receives a training allowance if he must reside on campus, his unemployment benefits for his family in his home community, and one round trip to and from the university. If he is within commuting distance of the university he receives his unemployment benefits only.

12. If you were an unemployed worker, would you try to enter one of the Manpower Development Training programs?

( ) Yes  
( ) No  
( ) Undecided

12.1 If not, why not?

13. Where do you think the MDT programs should be offered?

( ) Local high schools  
( ) Community colleges  
( ) College campuses  
( ) Most convenient site

14. Should MDT programs be taught at Michigan Tech?

( ) Yes  
( ) No  
( ) Don't know

Please go on to next page



14.1 Why do you say this?

14.2 Should MDT programs have a separate faculty?

- ( ) Yes  
 ( ) No  
 ( ) Undecided

15. If MDT programs are offered on campus, should the regular instructors be expected to teach in them as part of their regular load?

- ( ) Yes  
 ( ) No  
 ( ) Undecided

16. On the basis of direct experience, or what you have heard, how would you compare the following characteristics of the MDT student with the regular university student?

	Higher	About Same	Lower	Don't Know
Ambition				
Native ability				
Educational attainment				
Socio-economic status				

- 16.1 ( ) I have had direct experience with MDT students.  
 ( ) I have not had direct experience with MDT students.

17. Many MDT students are not high school graduates. How do you think they will get along with the regular baccalaureate students?

- ( ) Will be accepted  
 ( ) Will cause minor friction  
 ( ) Will be source of major problems

Please go on to next page

- 17.1 Do you think MDT students should be separated from the regular students in housing and classes?

	Housing	Classes
Yes		
No		
Undecided		

18. If Michigan Tech decides to go into MDT programs permanently, what, if any, obstacles do you see in the way? Please indicate!

19. What type of individuals or groups are most likely to show resistance to these programs on a permanent basis?

20. Do you think that Michigan Tech has changed significantly as a result of having MDT programs on campus?

( ) Yes  
 ( ) No  
 ( ) Undecided

- 20.1 Are you interested in knowing about the introduction of new programs even though they are not in your department?

( ) Yes  
 ( ) No  
 ( ) Undecided

Please go on to next page

20.2 If MDT programs are expanded will this affect your decision to remain at Michigan Tech?

- ( ) Yes  
 ( ) No  
 ( ) Undecided

21. How do you feel about the 2 year associate degree programs as compared to the MDT programs?

- ( ) They are both logical programs for Tech to offer  
 ( ) The 2 year associate degree programs should be offered but not the MDT  
 ( ) The MDT programs should be offered but not the associate degree programs  
 ( ) Neither should be offered

22. If you had a chance to determine the emphasis that should be placed on the various programs, and the amount of resources that should be devoted to them, what percent would you assign to each area? (Must add up to 100%)

(     %) Graduate  
 (     %) Baccalaureate  
 (     %) Associate degree  
 (     %) MDT and other  
100%

23. Do you know of any new programs that the University has developed in the last year in the following categories?

Yes	No	
( )	( )	Baccalaureate or graduate
( )	( )	Associate degree
( )	( )	MDT

\* \* \* \* \*

We need to know more about you as a person; therefore, will you please give us the following information? Remember, your confidence will be respected completely and the data obtained will be used for statistical purposes only!

24. Male ( ) Female ( )

Please go on to next page

25. In what year were you born? \_\_\_\_\_
26. Where did you grow up?
- ☐ On a farm
  - ☐ In a small town or city - 10,000 people or less
  - ☐ In a large town or city - 10,000 to 100,000 people
  - ☐ In a city over 100,000 people
  - ☐ In a suburb of a large metropolitan area
27. Please describe the community that you would prefer to live in
27. 1 Is this area (Houghton-Hancock) a close approximation of this?
28. Which professional associations do you now hold membership in?
- ☐ National association in field of specialization
  - ☐ Regional association in field of specialization
  - ☐ Michigan Academy of Arts, Sciences, and Letters
  - ☐ American Society for Engineering Education
  - ☐ American Association of University Professors
  - ☐ Others (please specify) \_\_\_\_\_
29. Do you belong to any of the following community associations?
- ☐ Service clubs (How many? \_\_\_\_\_)
  - ☐ Church
  - ☐ PTA
  - ☐ Fraternal clubs
  - ☐ Others (please specify) \_\_\_\_\_
30. Please describe the main occupation your father had during his lifetime.

Please go on to next page

31. How far did your father go in school? (circle highest grade completed)  
Below 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, over 18
32. How far did your mother go in school? (circle highest grade completed)  
Below 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, over 18
33. How many grades of school have you completed? (please circle)  
12, 13, 14, 15, 16, 17, 18, 19, over 19
34. If the following were running for President, how would your parents most likely rate them? (First choice 1; second 2; etc.)
- ( ) Nixon
  - ( ) Stevenson
  - ( ) Eisenhower
  - ( ) Robert Kennedy
  - ( ) Dirksen
35. How would you rate them?
- ( ) Nixon
  - ( ) Stevenson
  - ( ) Eisenhower
  - ( ) Robert Kennedy
  - ( ) Dirksen
36. What is your usual teaching level?
- ( ) Freshman
  - ( ) Sophomore
  - ( ) Junior
  - ( ) Senior
  - ( ) Graduate
37. In which of the four major areas have you specialized?
- ( ) Engineering
  - ( ) Science
  - ( ) Business Administration
  - ( ) Liberal Arts
  - ( ) Other ( please specify) \_\_\_\_\_

Please go on to next page

38. How long have you worked for Michigan Tech?

- |  |  |
|--|--|
| <input type="checkbox"/> Up to 4 years | <input type="checkbox"/> 20-24 years       |
| <input type="checkbox"/> 5-9 years     | <input type="checkbox"/> 25-30 years       |
| <input type="checkbox"/> 10-14 years   | <input type="checkbox"/> 30 years and over |
| <input type="checkbox"/> 15-19 years   |  |

39. Do you have tenure?

- ☐ With tenure  
☐ Without tenure

40. What degrees do you have?

- ☐ B. A. or B. S.  
☐ M. A. or M. S.  
☐ Working on Ph. D. or equivalent  
☐ Ph. D., Ed. D. or equivalent  
☐ Other (please specify) \_\_\_\_\_

41. What type of colleges or universities did you attend for your degree?

B. A.	B. S.	M. A.	M. S.	Ed. D.	Ph. D.	(or equivalent)
						Private-Church related
						Private-Non-Church related
						Ivy League
						Publicly supported Technical College
						Publicly supported Teacher's College
						Publicly supported University such as Michigan, Michigan State or Wayne State

Please go on to next page

42. What type of college or university would you prefer to work for?

- ☐ Private-Church related
- ☐ Private-Non-Church related
- ☐ Ivy League
- ☐ Publicly supported Technical College
- ☐ Publicly supported Teacher's College
- ☐ Publicly supported University, such as Michigan, Wayne State, or Michigan State
- ☐ Other (please specify) \_\_\_\_\_

43. Why do you prefer the one marked? Please rank reasons in order of importance (1 for most important; 2 for next; etc.)

- ☐ Greater intellectual stimulation
- ☐ Better research facilities
- ☐ Better income
- ☐ Cultural attractions
- ☐ More selective student body
- ☐ Other (please specify) \_\_\_\_\_

44. What is your present rank?

- ☐ Instructor
- ☐ Assistant Professor
- ☐ Associate Professor
- ☐ Professor

45. Do you have any administrative assignments?

- ☐ Yes
- ☐ No

## **STUDENT QUESTIONNAIRE**



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Since following the sequence of questions is very important, please do not skip items or read ahead - follow the page sequence carefully!

After completing the questionnaire, place it in the enclosed envelope and return it to the instructor from which it was received, or place it in the campus mail by dropping it off at any departmental office.

Could you please answer this questionnaire promptly? It is important to this study that the information be gained as soon as possible.

Again, our sincere thanks for your efforts.

**CONFIDENTIAL**

Information given will be used  
for statistical purposes only.  
The confidence of the informant  
will be respected.

1. The following are functions performed by a state university.  
Please rate these in order of importance.

- 1.1 ( ) Liberal education
- 1.2 ( ) Service to the public
- 1.3 ( ) Preparation for a vocation
- 1.4 ( ) Research

2. Do you believe all universities should provide these functions in  
the same order ?

- 2.1 ( ) All universities
- 2.2 ( ) Most universities
- 2.3 ( ) Some universities
- 2.4 ( ) Just Michigan Tech

3. In view of the fact that there are still limited resources for  
higher education in the state, do you believe that some type  
of higher education should be available for all high school  
graduates, the top 75%, 50%, or 25% ?

- 3.1 ( ) All
- 3.2 ( ) Top 75%
- 3.3 ( ) Top 50%
- 3.4 ( ) Top 25%

4. To what extent should Michigan Tech be involved in the  
following programs ?

	Very Much	Moderately	Not at all
Graduate			
Baccalaureate			
Associate Degree			
Continuing Education			
Manpower Development and Training			

Please go on to next page

5. How would you rate the growth potential of these programs at Michigan Tech?

	Very Much	Moderately	Not at all
Graduate			
Baccalaureate			
Associate Degree			
Continuing Education			
Manpower Development and Training			

6. Do you know of anyone teaching in the Manpower Development Training Programs (worker retraining programs)?

( ) Yes (Go to question 6.1)  
 ( ) No (Go to question 7 )

- 6.1 Would you say that they have high technical competence?

( ) Yes  
 ( ) No  
 ( ) Don't know

- 6.2 Do you feel that they are competent enough to teach in baccalaureate programs?

( ) Yes  
 ( ) No  
 ( ) Don't know

- 6.3 Do you think they ( <sup>do</sup> would ) "fit in" well with the baccalaureate faculty?

( ) Yes  
 ( ) No  
 ( ) Don't know

Please go on to next page

7. How do you feel about the administration's decision to undertake Manpower Development Training programs?

- ☐ I think it is a mistake
- ☐ I believe the decision a proper one for them to make
- ☐ I have no opinion

8. Do you believe in the Federal Government subsidy of:

- | Yes                      | No                       |                            |
|--------------------------|--------------------------|----------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Agriculture                |
| <input type="checkbox"/> | <input type="checkbox"/> | Hospital care for the aged |
| <input type="checkbox"/> | <input type="checkbox"/> | Education                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Retraining of workers      |
| <input type="checkbox"/> | <input type="checkbox"/> | Recreation facilities      |

9. The Federal Government support to education should:

- ☐ Increase
- ☐ Decrease
- ☐ Remain same
- ☐ Terminate

### Manpower Development Training Programs Defined

At this point some additional information on MDT programs is in order--these programs are to train unemployed and underemployed heads of households and youths for semi-skilled and skilled employment in industrial, business, and service positions. The training programs vary in length from 10 to 48 weeks at Michigan Tech.

The Government pays the cost of these programs, which includes the facility costs, faculty salaries, and the purchase of equipment and supplies. In addition, the unemployed head of household receives a training allowance if he must reside on campus, his unemployment benefits for his family in his home community, and one round trip to and from the university. If he is within commuting distance of the university he receives his unemployment benefits only.

\* \* \* \* \*

10. If you were an unemployed worker, would you try to enter one of the Manpower Development Training programs?

- ( ) Yes
- ( ) No
- ( ) Undecided

11. Where do you think the MDT programs should be offered?

- ( ) Local high schools
- ( ) Community colleges
- ( ) College campuses
- ( ) Most convenient site

12. Should MDT programs be taught at Michigan Tech?

- ( ) Yes
- ( ) No
- ( ) Don't know

12.1 Why do you say this?

Please go on to next page

13. If MDT programs are offered on campus, should the regular instructors be expected to teach in them as part of their regular load?

- ( ) Yes  
 ( ) No  
 ( ) Undecided

14. On the basis of direct experience, or what you have heard, how would you compare the following characteristics of the MDT student with the regular university student?

	Higher	About Same	Lower	Don't Know
Ambition				
Native ability				
Educational attainment				
Socio-economic status				

14.1 ( ) I have had direct experience with MDT students.

14.2 ( ) I have not had direct experience with MDT students.

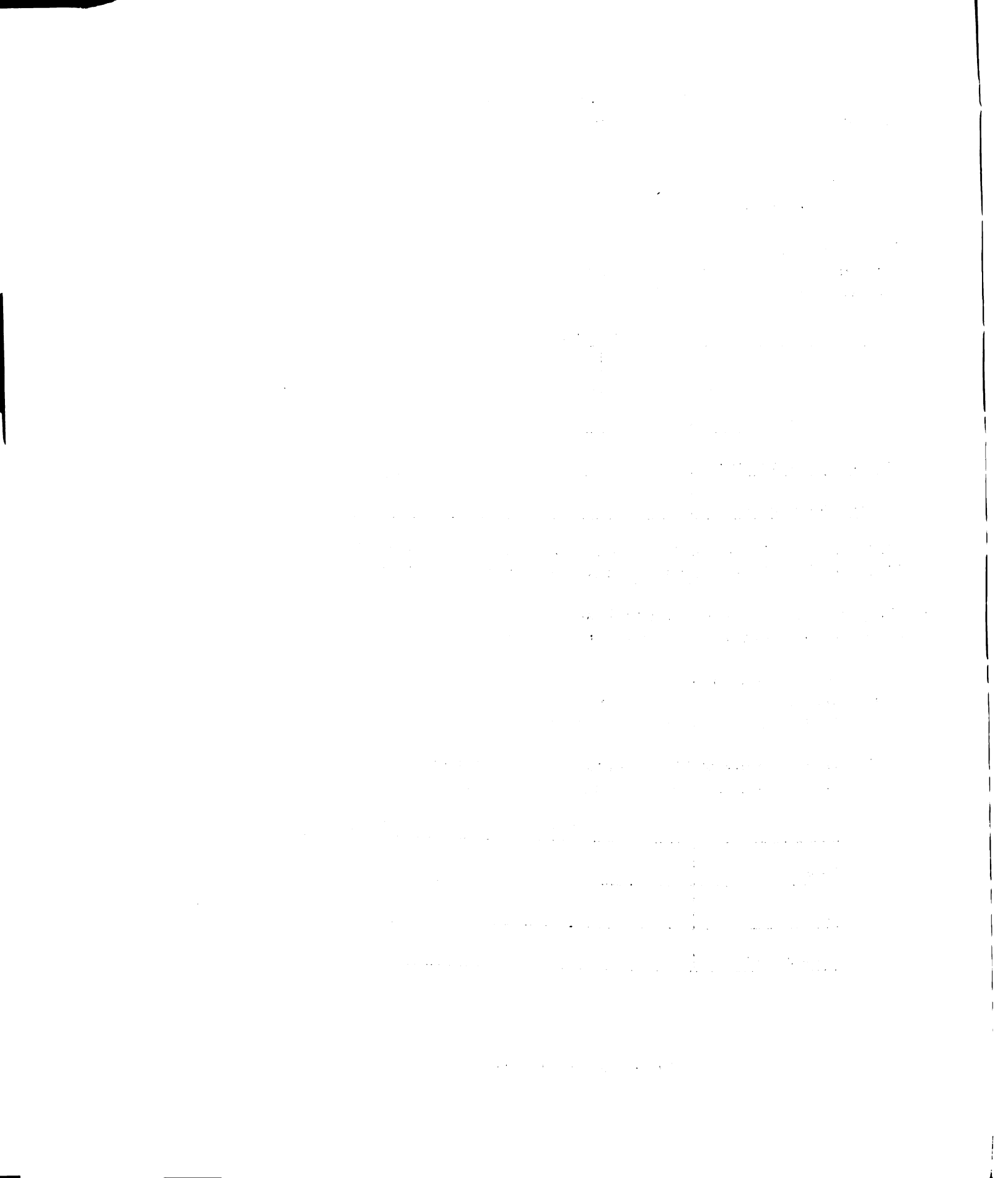
15. Many MDT students are not high school graduates. How do you think they will get along with the regular baccalaureate students?

- ( ) Will be accepted  
 ( ) Will cause minor friction  
 ( ) Will be source of major problems

15.1 Do you think MDT students should be separated from the regular students in housing and classes?

	Housing	Classes
Yes		
No		
Undecided		

Please go on to next page



16. If Michigan Tech decides to go into MDT programs permanently, what, if any, obstacles do you see in the way? Please indicate!
17. What type of individuals or groups are most likely to show resistance to these programs on a permanent basis?
18. Before Michigan Tech undertakes permanent participation in MDT programs, do you think the faculty should be consulted?
- ( ) Yes  
( ) No  
( ) Don't know
19. How do you feel about the 2 year associate degree programs as compared to the MDT programs?
- ( ) They are both logical programs for Tech to offer  
( ) The 2 year associate degree programs should be offered but not the MDT  
( ) The MDT programs should be offered but not the associate degree programs  
( ) Neither should be offered
20. If you had a chance to determine the emphasis that should be placed on the various programs, and the amount of resources that should be devoted to them, what percent would you assign to each area?  
(Must add up to 100%)
- |              |                  |
|--------------|------------------|
| (    %)      | Graduate         |
| (    %)      | Baccalaureate    |
| (    %)      | Associate degree |
| (    %)      | MDT and other    |
| <u>100 %</u> |                  |

Please go on to next page



21. Do you know of any new programs that the University has developed in the last year in the following categories?

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Baccalaureate or graduate
<input type="checkbox"/>	<input type="checkbox"/>	Associate degree
<input type="checkbox"/>	<input type="checkbox"/>	MDT

\* \* \* \* \*

We need to know more about you as a person; therefore, will you please give us the following information? Remember, your confidence will be respected completely and the data obtained will be used for statistical purposes only!

22. Male ☐ Female ☐

23. In what year were you born? \_\_\_\_\_

24. Where did you grow up?

☐ On a farm  
☐ In a small town or city - 10,000 people or less  
☐ In a large town or city - 10,000 to 100,000 people  
☐ In a city over 100,000 people  
☐ In a suburb of a large metropolitan area

25. Please describe the community that you would prefer to live in.

- 25.1 Is this area (Houghton-Hancock) a close approximation of this?

☐ Yes  
☐ No

Please go on to next page

26. Do you belong to any of the following community associations?

- ☐ Service clubs (How many? \_\_\_\_\_)
- ☐ Church
- ☐ PTA
- ☐ Fraternal Clubs
- ☐ Others (please specify) \_\_\_\_\_

27. Please describe the main occupation your father had during his lifetime.

28. How far did your father go in school? (circle highest grade completed)

Below 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, over 18

29. How far did your mother go in school? (circle highest grade completed)

Below 8, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, over 18

30. How many grades of school have you completed? (please circle)

12, 13, 14, 15, 16, 17, 18, 19, over 19

31. If the following were running for President, how would your parents most likely rate them? (First choice 1; second 2, etc.)

- ☐ Nixon
- ☐ Stevenson
- ☐ Eisenhower
- ☐ Robert Kennedy
- ☐ Dirksen

32. How would you rate them?

- ☐ Nixon
- ☐ Stevenson
- ☐ Eisenhower
- ☐ Robert Kennedy
- ☐ Dirksen

Please go on to next page

33. What is your present class standing?

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior
- ☐ Graduate

34. In which of the four major areas have you specialized?

- ☐ Engineering
- ☐ Science
- ☐ Business Administration
- ☐ Liberal Arts
- ☐ Other (please specify) \_\_\_\_\_

35. What type of college or university would you prefer to attend?

- ☐ Private-Church related
- ☐ Private Non-Church related
- ☐ Private Technical
- ☐ Ivy League
- ☐ Publicly supported Technical College
- ☐ Publicly supported Teacher's College
- ☐ Publicly supported University, such as Michigan, Wayne State, or Michigan State
- ☐ Other (please specify) \_\_\_\_\_

36. Why do you prefer the one marked? Please rank reasons in order of importance (1 for most important; 2 for next; etc.)

- ☐ Greater intellectual stimulation
- ☐ Better research facilities
- ☐ Better student aid programs
- ☐ Cultural attractions
- ☐ More selective student body
- ☐ Geographic Area
- ☐ Other (please specify) \_\_\_\_\_

## APPENDIX B

TABLE B-1

## ITEM 1

COMPARISON OF ACCEPT-REJECT VARIABLE  
AND ADMINISTRATOR-FACULTY RATING  
OF THE FUNCTIONS OF A STATE  
UNIVERSITY

Choice	1		2		3		4		Statistic
	N	%	N	%	N	%	N	%	
Liberal Education									
Accept	45	40.9	27	24.5	6	5.5	7	6.4	$X^2 = 0.15$ d.f. = 3 $p > .05$
Reject	14	12.7	7	6.4	2	1.8	2	1.8	
Total	59	53.6	34	30.9	8	7.3	9	8.2	
Service to the Public									
Accept	12	10.9	15	13.6	23	20.9	36	32.7	$X^2 = 5.38$ d.f. = 3 $p < .05$
Reject	0	0.0	3	2.7	6	5.5	15	13.7	
Total	12	10.9	18	16.3	29	26.4	51	46.4	
Preparation for a Vocation									
Accept	30	27.4	32	29.4	7	6.4	15	13.7	$X^2 = 6.02$ d.f. = 3 $p < .05$
Reject	12	11.1	4	3.7	5	4.6	4	3.7	
Total	42	38.5	36	33.1	12	11.0	19	17.4	
Research									
Accept	0	0.0	11	10.1	48	44.0	25	23.0	$X^2 = 12.10$ d.f. = 3 $p < .05$
Reject	0	0.0	11	10.1	11	10.1	3	2.7	
Total	0	0.0	22	20.2	59	54.1	28	25.7	

TABLE B-2

## ITEM 3

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RATING OF THE  
PERCENTAGE OF STUDENTS WHO SHOULD BE  
ALLOWED SOME FORM OF HIGHER EDUCATION

Choice	All		Top 75%		Top 50%		Top 25%		Statistic
	N	%	N	%	N	%	N	%	
Accept	42	37.4	19	17.0	22	19.6	5	4.5	$\chi^2 = 4.45$ d.f. = 3 $p < .05$
Reject	6	5.4	7	6.3	8	7.1	3	2.7	
Total	48	42.8	26	23.3	30	26.7	8	7.2	

ITEM 4

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RATING OF THE EXTENT  
OF UNIVERSITY INVOLVEMENT IN VARIOUS  
EDUCATIONAL PROGRAMS

Choice	Very much		Moderately		Not at all		Statistic
	N	%	N	%	N	%	

Graduate Education

Accept	37	32.5	51	44.7	0	0.0	$\chi^2 = 3.07$ d.f. = 1 $p > .05$
Reject	16	14.0	10	8.8	0	0.0	
Total	53	46.5	61	53.5	0	0.0	

Undergraduate Education

Accept	86	75.4	2	1.8	0	0.0	$\chi^2 = 0.60$ d.f. = 1 $p > .05$
Reject	26	22.8	0	0.0	0	0.0	
Total	112	98.2	2	1.8	0	0.0	

Associate Degree Education

Accept	21	18.8	57	50.9	9	8.0	$\chi^2 = 13.10$ d.f. = 2 $p < .05$
Reject	2	1.8	13	11.6	10	9.0	
Total	23	20.5	70	62.5	19	17.0	

Continuing Education

Accept	26	22.8	59	51.8	3	2.6	$\chi^2 = 15.30$ d.f. = 2 $p < .05$
Reject	3	2.6	16	14.0	7	6.2	
Total	29	25.4	75	65.8	10	8.8	

Manpower Development and Training

Accept	22	19.6	64	57.1	2	1.8	$\chi^2 = 68.08$ d.f. = 2 $p < .05$
Reject	1	0.9	5	4.5	18	16.1	
Total	23	20.5	69	61.6	20	17.9	

TABLE B-4

## ITEM 5

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RATING OF GROWTH  
POTENTIAL FOR VARIOUS PROGRAMS

Choice	Very much		Moderately		Not at all		Statistic
	N	%	N	%	N	%	
Graduate							
Accept	38	34.6	47	42.7	0	0.0	$X^2 = 0.09$ d.f. = 1 $p > .05$
Reject	12	10.9	13	11.8	0	0.0	
Total	50	45.5	60	54.5	0	0.0	
Undergraduate							
Accept	67	60.4	19	17.1	0	0.0	$X^2 = 4.71$ d.f. = 1 $p < .05$
Reject	14	12.6	11	9.9	0	0.0	
Total	81	73.0	30	27.0	0	0.0	
Associate Degree							
Accept	37	35.9	42	40.8	2	1.9	$X^2 = 11.37$ d.f. = 2 $p < .05$
Reject	7	6.8	10	9.7	5	4.9	
Total	44	42.7	52	50.5	7	6.8	
Continuing Education							
Accept	24	22.2	58	53.7	3	2.8	$X^2 = 7.94$ d.f. = 2 $p < .05$
Reject	1	0.9	19	17.6	3	2.8	
Total	25	23.1	77	71.3	6	5.6	
Manpower Development and Training							
Accept	25	23.6	58	54.7	1	0.9	$X^2 = 19.37$ d.f. = 2 $p < .05$
Reject	4	3.8	12	11.3	6	5.7	
Total	29	27.4	70	66.0	7	6.6	



TABLE B-5

## ITEM 6

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY KNOWLEDGE OF  
PERSONS TEACHING IN THE MDT PROGRAMS

Choice	With knowledge		Without knowledge		Statistic
	N	%	N	%	
Accept	62	55.4	24	21.4	$\chi^2 = 1.93$ d. f. = 1 p > .05
Reject	15	13.4	11	9.8	
Total	77	68.8	35	31.2	

TABLE B-6

## ITEM 6.1

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY APPRAISAL OF MDT  
INSTRUCTOR COMPETENCE

Choice	Competent		Not competent		Don't know		Statistic
	N	%	N	%	N	%	
Accept	48	60.8	2	2.5	13	16.5	$\chi^2 = 10.56$ d. f. = 2 p < .05
Reject	7	8.8	4	5.1	5	6.3	
Total	55	69.6	6	7.6	18	22.8	

TABLE B-7

## ITEM 6.3

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY ASSESSMENT OF THE  
COMPATIBILITY OF MDT FACULTY WITH  
REGULAR FACULTY

Choice	Compatible		Not compatible		Don't know		Statistic
	N	%	N	%	N	%	
Accept	43	56.6	4	5.3	14	18.5	$\chi^2 = 24.37$ d. f. = 2 p < .05
Reject	4	5.3	9	11.8	2	2.6	
Total	47	61.8	13	17.1	16	21.1	

TABLE B-8

## ITEM 7

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY INVOLVEMENT IN THE  
MDT PROGRAMS

Choice	Involved		Not involved		Statistic
	N	%	N	%	
Accept	22	20.4	62	57.4	$\chi^2 = 3.44$ d. f. = 1 p > .05
Reject	2	1.8	22	20.4	
Total	24	22.2	84	77.8	

TABLE B-9

## ITEM 8

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY REACTION TO THE  
DECISION TO INTRODUCE MDT PROGRAMS  
AT THE UNIVERSITY

Choice	A mistake		Good decision		No opinion		Statistic
	N	%	N	%	N	%	
Accept	1	0.9	77	70.0	9	8.2	$\chi^2 = 68.76$ d. f. = 2 $p < .05$
Reject	14	12.7	2	1.8	7	6.4	
Total	15	13.6	79	71.8	16	14.6	

TABLE B-10

## ITEM 9

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
TYPE OF STUDENT ADMINISTRATORS AND  
FACULTY WOULD TEACH

Choice	B. A. students		B. A. and MDT		MDT students		Statistics
	N	%	N	%	N	%	
Accept	26	25.5	52	51.0	4	3.9	$\chi^2 = 26.13$ d. f. = 2 $p < .05$
Reject	19	18.6	1	1.0	0	0.0	
Total	45	44.1	53	52.0	4	3.9	

TABLE B-11

## ITEM 10

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY ATTITUDE TOWARD  
GOVERNMENT SUBSIDY OF EDUCATION AND  
TRAINING

Choice	For subsidy		Against subsidy		Statistic
	N	%	N	%	
Education					
Accept	68	62.4	17	15.6	$X^2 = 3.16$ d. f. = 1 $P > .05$
Reject	15	13.8	9	8.2	
Total	83	76.2	26	23.8	
Retraining of Workers					
Accept	75	68.8	10	9.2	$X^2 = 4.31$ d. f. = 1 $P < .05$
Reject	17	15.6	7	6.4	
Total	82	84.4	17	15.6	

TABLE B-12

## ITEM 11

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY REACTION TO  
CONTINUED GOVERNMENT SUPPORT  
TO EDUCATION

Choice	Should increase		Should decrease		Should re-main same		Should terminate		Statistic
	N	%	N	%	N	%	N	%	
Accept	42	38.5	13	11.9	22	20.2	8	7.3	$X^2 = 4.29$ d. f. = 3 $P < .05$
Reject	7	6.4	3	2.8	10	9.2	4	3.7	
Total	49	44.9	16	14.7	32	29.4	12	11.0	

TABLE B-13

## ITEM 12

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
WHETHER ADMINISTRATORS AND FACULTY THINK  
THEY WOULD ENTER MDT TRAINING IF UNEMPLOYED

Choice	Yes		No		Undecided		Statistic
	N	%	N	%	N	%	
Accept	75	68.2	2	1.8	9	8.1	$\chi^2 = 0.99$ d.f. = 2 $p > .05$
Reject	19	17.3	1	0.9	4	3.7	
Total	94	85.5	3	2.7	13	11.8	

TABLE B-14

## ITEM 13

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
WHERE ADMINISTRATORS AND FACULTY BELIEVE  
MDT PROGRAMS SHOULD BE OFFERED

Choice	Local H. S.		Comm. Col.		Colleges		Most conv. Site		Statistic
	N	%	N	%	N	%	N	%	
Accept	3	2.7	4	3.6	11	9.8	70	62.5	$\chi^2 = 28.50$ d.f. = 3 $p < .05$
Reject	6	5.3	7	6.3	0	0.0	11	9.8	
Total	9	8.0	11	9.9	11	9.8	81	72.3	

TABLE B-15

## ITEM 14.2

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
MDT PROGRAMS SHOULD HAVE A SEPARATE FACULTY

Choice	Yes		No		Undecided		Statistic
	N	%	N	%	N	%	
Accept	30	27.1	20	18.0	35	31.5	$\chi^2 = 26.12$ d. f. = 2 $p < .05$
Reject	24	21.6	0	0.0	2	1.8	
Total	54	48.7	20	18.0	37	33.3	

TABLE B-16

## ITEM 15

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
THEY BELIEVE REGULAR INSTRUCTORS SHOULD BE  
EXPECTED TO TEACH IN THE MDT PROGRAMS

Choice	Yes		No		Undecided		Statistic
	N	%	N	%	N	%	
Accept	13	11.7	53	47.8	19	17.1	$\chi^2 = 7.13$ d. f. = 2 $p < .05$
Reject	0	0.0	23	20.7	3	2.7	
Total	13	11.7	76	68.5	22	19.8	

TABLE B-17

## ITEM 16

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY PERCEPTION OF MDT  
STUDENT AND REGULAR STUDENT

Choice	Higher		About same		Lower		Don't know		Statistic
	N	%	N	%	N	%	N	%	
Ambition									
Accept	7	6.4	29	26.6	13	11.9	35	32.1	$X^2 = 11.08$ d.f. = 3 p < .05
Reject	0	0.0	3	2.8	10	9.2	12	11.0	
Total	7	6.4	32	29.4	23	21.1	47	43.1	
Native Ability									
Accept	0	0.0	11	10.1	37	34.0	36	33.0	$X^2 = 1.63$ d.f. = 2 p > .05
Reject	0	0.0	1	0.9	12	11.0	12	11.0	
Total	0	0.0	12	11.0	49	45.0	48	44.0	
Educational Attainment									
Accept	1	0.9	3	2.8	55	50.5	25	22.9	$X^2 = 1.24$ d.f. = 3 p > .05
Reject	0	0.0	0	0.0	17	15.6	8	7.3	
Total	1	0.9	3	2.8	72	66.1	33	30.2	
Socio-economic Status									
Accept	0	0.0	7	6.4	50	45.9	27	24.8	$X^2 = 0.88$ d.f. = 2 p > .05
Reject	0	0.0	1	0.9	14	12.8	10	9.2	
Total	0	0.0	8	7.3	64	58.7	37	34.0	

TABLE B-18

## ITEM 17

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR- FACULTY CONTACT WITH MDT  
STUDENTS

Choice	With contact		Without contact		Statistic
	N	%	N	%	
Accept	24	21.8	60	54.5	$\chi^2 = 0.33$ d. f. = 1 $p > .05$
Reject	6	5.5	20	18.2	
Total	30	27.3	80	72.7	

TABLE B-19

## ITEM 17.1

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY ASSESSMENT OF THE  
RELATIONSHIP BETWEEN MDT STUDENTS AND  
REGULAR STUDENTS

Choice	Will be accepted		Will cause friction		Will cause major problems		Don't know		Statistic
	N	%	N	%	N	%	N	%	
Accept	44	42.8	30	29.1	4	3.9	1	0.9	$\chi^2 = 12.7$ d. f. = 3 $p < .05$
Reject	8	7.8	7	7.8	7	6.8	1	0.9	
Total	52	50.6	38	36.9	11	10.7	2	1.8	



TABLE B-20

## ITEM 17.1

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
MDT STUDENTS SHOULD BE SEPARATED IN HOUSING  
AND CLASSES

Choice	Housing						Classes						Statistic
	Yes		No		Don't know		Yes		No		Don't know		
	N	%	N	%	N	%	N	%	N	%	N	%	
Accept	31	28.7	35	32.4	17	15.7	65	59.1	12	10.9	8	7.3	(Housing) $\chi^2 = 5.55$
Reject	16	14.8	6	5.6	3	2.8	21	19.1	2	1.8	2	1.8	d. f. = 2 $p < .05$
Total	47	43.5	41	38.0	20	18.5	86	78.2	14	12.7	10	9.1	(Classes) $\chi^2 = 0.75$ d. f. = 2 $p > .05$

TABLE B-21

## ITEM 20

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
MICHIGAN TECH HAS CHANGED AS A RESULT OF THE  
MDT PROGRAMS

Choice	Changed		Not changed		Undecided		Statistic
	N	%	N	%	N	%	
Accept	1	0.9	71	65.2	14	12.8	$\chi^2 = 22.50$ d. f. = 2 $p < .05$
Reject	3	2.8	8	7.3	12	11.0	
Total	4	3.7	79	72.5	26	23.8	

TABLE B-22

## ITEM 20.2

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
THEY WOULD REMAIN IF THE MDT PROGRAMS  
ARE EXPANDED

Choice	Will move		Will stay		Undecided		Statistic
	N	%	N	%	N	%	
Accept	3	2.7	80	70.8	5	4.4	$\chi^2 = 23.83$ d.f. = 2 p < .05
Reject	4	3.5	12	10.6	9	8.0	
Total	7	6.2	92	81.4	14	12.4	

TABLE B-23

## ITEM 21

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
ADMINISTRATOR-FACULTY RESPONSE TO WHETHER  
2 YEAR ASSOCIATE DEGREE AND/OR MDT PROGRAMS  
SHOULD BE OFFERED AT MICHIGAN TECH

Choice	Offer both		2 Year only		MDT only		Neither		Statistic
	N	%	N	%	N	%	N	%	
Accept	74	67.3	1	0.9	10	9.1	1	0.9	$\chi^2 = 71.94$ d.f. = 3 p < .05
Reject	5	4.5	10	9.1	0	0.0	9	8.2	
Total	79	71.8	11	10.0	10	9.1	10	9.1	

## APPENDIX C

## APPENDIX C



TABLE C-1

## ITEM 1

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT RATING OF THE FUNCTIONS OF A  
STATE UNIVERSITY

Choice	1		2		3		4		Statistic
	N	%	N	%	N	%	N	%	
Liberal Education									
Accept	88	22.1	136	34.1	48	12.0	57	14.3	$\chi^2 = 7.62$ d.f. = 3 p < .05
Reject	24	6.0	21	5.3	17	4.2	8	2.0	
Total	112	28.1	157	39.4	65	16.2	65	16.3	
Service to the Public									
Accept	21	5.3	41	10.4	102	25.7	164	41.3	$\chi^2 = 2.33$ d.f. = 3 p > .05
Reject	2	0.5	10	2.5	18	4.5	39	9.8	
Total	23	5.8	51	12.9	120	30.2	203	51.1	
Preparation for a Vocation									
Accept	212	51.7	81	19.8	22	5.4	26	6.3	$\chi^2 = 0.69$ d.f. = 3 p > .05
Reject	43	10.5	16	3.9	6	1.4	4	1.0	
Total	255	62.2	97	23.7	28	6.8	30	7.3	
Research									
Accept	14	3.5	71	17.6	158	39.2	91	22.6	$\chi^2 = 3.86$ d.f. = 3 p < .05
Reject	2	0.5	22	5.5	28	6.9	17	4.2	
Total	16	4.0	93	23.1	186	46.1	108	26.8	

TABLE C-2

## ITEM 3

COMPARISON OF ACCEPT-REJECT VARIABLE  
AND STUDENT RATING OF THE PERCENTAGE  
OF STUDENTS WHO SHOULD BE ALLOWED  
SOME FORM OF HIGHER EDUCATION

Choice	All		Top 75%		Top 50%		Top 25%		Statistic
	N	%	N	%	N	%	N	%	
Accept	155	38.1	62	15.2	104	25.5	16	3.9	$\chi^2 = 7.95$ d. f. = 3 $p < .05$
Reject	23	5.7	17	4.2	22	5.4	8	2.0	
Total	178	43.8	79	19.4	126	30.9	24	5.9	

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TABLE C-3

ITEM 4

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
RATING OF THE EXTENT OF UNIVERSITY INVOLVEMENT  
IN VARIOUS EDUCATIONAL PROGRAMS

Choice	Very much		Moderately		Not at all		Statistic
	N	%	N	%	N	%	
Graduate Education							
Accept	238	57.9	103	25.1	1	0.2	$X^2 = 1.56$ d. f. = 2 $p > .05$
Reject	47	11.5	21	5.1	1	0.2	
Total	285	69.4	124	30.2	2	0.4	
Undergraduate Education							
Accept	298	73.2	38	9.3	2	0.5	$X^2 = 0.82$ d. f. = 2 $p > .05$
Reject	63	15.5	6	1.5	0	0.0	
Total	361	88.7	44	10.8	2	0.5	
Associate Degree Education							
Accept	105	26.0	187	46.4	42	10.5	$X^2 = 2.98$ d. f. = 2 $p > .05$
Reject	16	4.0	40	9.9	13	3.2	
Total	121	30.0	227	56.3	55	13.7	
Continuing Education							
Accept	143	35.1	189	46.5	6	1.5	$X^2 = 24.90$ d. f. = 2 $p < .05$
Reject	9	2.2	55	13.5	5	1.2	
Total	152	37.3	244	60.0	11	2.7	
Manpower Development and Training							
Accept	121	29.5	221	53.9	0	0.0	$X^2 = 255.53$ d. f. = 2 $p < .05$
Reject	4	1.0	24	5.8	40	9.8	
Total	125	30.5	245	59.7	40	9.8	



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TABLE C-4

ITEM 5

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
RATING OF GROWTH POTENTIAL FOR VARIOUS PROGRAMS  
AT MICHIGAN TECHNOLOGICAL UNIVERSITY

Choice	Very much		Moderately		Not at all		Statistic
	N	%	N	%	N	%	
Graduate							
Accept	235	57.5	104	25.4	2	0.5	$X^2 = 0.67$ d. f. = 3 $p > .05$
Reject	46	11.2	22	5.4	0	0.0	
Total	281	68.7	126	30.8	2	0.5	
Undergraduate							
Accept	241	59.2	96	23.6	1	0.2	$X^2 = 3.33$ d. f. = 3 $p > .05$
Reject	54	13.3	14	3.5	1	0.2	
Total	295	72.5	110	27.1	2	0.4	
Associate Degree							
Accept	111	27.7	177	44.2	45	11.2	$X^2 = 1.87$ d. f. = 3 $p > .05$
Reject	22	5.5	33	8.2	13	3.2	
Total	133	33.2	210	52.4	58	14.4	
Continuing Education							
Accept	124	30.8	198	49.1	14	3.5	$X^2 = 8.16$ d. f. = 3 $p < .05$
Reject	13	3.2	49	12.2	5	1.2	
Total	137	34.0	247	61.3	19	4.7	
Manpower Development and Training							
Accept	160	39.7	165	40.9	9	2.2	$X^2 = 70.64$ d. f. = 3 $p < .05$
Reject	10	2.5	39	9.7	20	5.0	
Total	170	42.2	204	50.6	29	7.2	



TABLE C-5

## ITEM 6

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT KNOWLEDGE OF PERSONS  
TEACHING IN MDT PROGRAMS

Choice	With knowledge		Without knowledge		Statistic
	N	%	N	%	
Accept	98	23.9	242	59.0	$\chi^2 = 3.09$ d.f. = 1 $p > .05$
Reject	13	3.2	57	13.9	
Total	111	27.1	299	72.9	

TABLE C-6

## ITEM 6.1

COMPARISON OF ACCEPT-REJECT VARIABLE  
AND STUDENT APPRAISAL OF MDT  
INSTRUCTOR COMPETENCE

Choice	Competent		Not competent		Don't know		Statistic
	N	%	N	%	N	%	
Accept	85	69.7	10	8.2	11	9.0	$\chi^2 = 5.33$ d.f. = 2 $p < .05$
Reject	10	8.2	1	0.8	5	4.1	
Total	95	77.9	11	9.0	16	13.1	

TABLE C-7

## ITEM 6-3

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT ASSESSMENT OF THE COMPATIBILITY  
OF MDT FACULTY WITH REGULAR FACULTY

Choice	Compatible		Not compatible		Don't know		Statistic
	N	%	N	%	N	%	
Accept	73	58.4	11	8.8	26	20.8	$X^2 = 6.73$ d.f. = 2 $P < .05$
Reject	5	4.0	2	1.6	8	6.4	
Total	78	62.4	13	10.4	34	27.2	

TABLE C-8

## ITEM 7

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT REACTION TO THE DECISION TO INTRODUCE  
MDT PROGRAMS AT THE UNIVERSITY

Choice	A mistake		Good decision		No opinion		Statistic
Accept	4	1.0	268	66.5	62	15.4	$X^2 = 171.31$ d.f. = 2 $P < .05$
Reject	25	6.2	6	1.5	38	9.4	
Total	29	7.2	274	68.0	100	24.8	

TABLE C-9

## ITEM 8

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
ATTITUDE TOWARD GOVERNMENT SUBSIDY OF  
EDUCATION AND RETRAINING

Choice	Agree with subsidy		Disagree with subsidy		Statistic
	N	%	N	%	
Education					
Accept	315	78.3	20	5.0	$X^2 = 6.48$ d.f. = 1 $p < .05$
Reject	57	14.2	10	2.5	
Total	372	92.5	30	7.5	
Retraining of Workers					
Accept	287	72.5	45	11.4	$X^2 = 42.10$ d.f. = 1 $p < .05$
Reject	33	8.3	31	7.8	
Total	320	80.8	76	19.2	

TABLE C-10

## ITEM 9

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
RATING CONCERNING CONTINUED GOVERNMENT  
SUPPORT TO EDUCATION

Choice	Increase		Decrease		Remain same		Terminate		Statistic
	N	%	N	%	N	%	N	%	
Accept	239	59.3	8	2.0	76	18.9	11	2.7	$X^2 = 11.61$ d.f. = 3 p < .05
Reject	46	11.4	5	1.2	11	2.7	7	1.8	
Total	285	70.7	13	3.2	87	21.6	18	4.5	

TABLE C-11

## ITEM 10

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
WHETHER STUDENTS WOULD ENTER MDT  
PROGRAMS IF UNEMPLOYED

Choice	Yes		No		Undecided		Statistic
	N	%	N	%	N	%	
Accept	283	70.1	9	2.2	43	10.7	$X^2 = 24.41$ d.f. = 2 $p < .05$
Reject	45	11.1	11	2.7	13	3.2	
Total	328	81.2	20	4.9	56	13.9	

TABLE C-12

## ITEM 13

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT RESPONSE TO WHETHER THEY  
BELIEVE REGULAR INSTRUCTORS SHOULD BE  
EXPECTED TO TEACH IN THE MDT PROGRAMS

Choice	Should teach MDT program		Should not teach MDT program		Don't know		Statistic
	N	%	N	%	N	%	
Accept	41	10.1	224	55.4	70	17.3	$X^2 = 7.07$ d.f. = 2 $p < .05$
Reject	5	1.2	58	14.3	7	1.7	
Total	46	11.3	282	69.7	77	19.0	

TABLE C-13

## ITEM 14

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT PERCEPTION OF MDT STUDENT  
AND REGULAR STUDENT

Choice	Higher		About same		Lower		Don't know		Statistic
	N	%	N	%	N	%	N	%	
Ambition									
Accept	47	11.9	120	30.3	67	17.0	92	23.3	$X^2 = 38.08$ d.f. = 3 p < .05
Reject	3	0.8	9	2.3	37	9.3	20	5.1	
Total	50	12.7	129	32.6	104	26.3	112	28.4	
Native Ability									
Accept	13	3.3	108	27.3	94	23.8	111	28.1	$X^2 = 3.18$ d.f. = 3 p > .05
Reject	0	0.0	22	5.6	23	5.8	24	6.1	
Total	13	3.3	130	32.9	117	29.6	135	34.2	
Educational Attainment									
Accept	6	1.5	21	5.3	219	55.5	80	20.2	$X^2 = 0.93$ d.f. = 3 p > .05
Reject	2	0.5	6	1.5	46	11.7	15	3.8	
Total	8	2.0	27	6.8	265	67.2	95	24.0	
Socio-Economic Status									
Accept	6	1.5	52	13.2	184	46.7	83	21.1	$X^2 = 2.24$ d.f. = 3 p > .05
Reject	2	0.5	7	1.8	44	11.2	16	4.0	
Total	8	2.0	59	15.0	228	57.9	99	25.1	

TABLE C-14

ITEM 14.1

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT CONTACT WITH MDT STUDENTS

Choice	With contact		Without contact		Statistic
	N	%	N	%	
Accept	124	30.6	211	52.1	$\chi^2 = 1.30$ d. f. = 1 p > .05
Reject	31	7.7	39	9.6	
Total	155	38.3	250	61.7	

TABLE C-15

ITEM 15

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
ASSESSMENT OF THE RELATIONSHIP BETWEEN MDT  
STUDENTS AND REGULAR STUDENTS

Choice	Will be accepted		Will cause friction		Will cause major problems		Don't know		Statistic
	N	%	N	%	N	%	N	%	
Accept	194	48.5	128	32.0	9	2.2	0	0.0	$\chi^2 = 27.31$ d. f. = 2 p < .05
Reject	22	5.5	37	9.3	10	2.5	0	0.0	
Total	216	54.0	165	41.3	19	4.7	0	0.0	



TABLE C-16

## ITEM 15.1

COMPARISON OF ACCEPT-REJECT VARIABLE AND STUDENT  
RESPONSE TO WHETHER MDT STUDENTS SHOULD BE  
SEPARATED IN HOUSING AND CLASSES

Choice	Separated in housing						Separated in classes						Statistic (Housing) $X^2 = 17.07$ d. f. = 2 $P < .05$ (Classes) $X^2 = 7.80$ d. f. = 2 $P < .05$
	Yes		No		Un-decided		Yes		No		Un-decided		
	N	%	N	%	N	%	N	%	N	%	N	%	
Accept	85	21.0	213	52.7	36	8.9	238	57.9	75	18.2	28	6.8	
Reject	30	7.4	26	6.5	14	3.5	60	14.6	6	1.5	4	1.0	
Total	115	28.4	239	52.9	50	12.4	298	72.5	81	19.7	32	7.8	

TABLE C-17

## ITEM 18

COMPARISON OF ACCEPT-REJECT VARIABLE AND  
STUDENT RESPONSE TO WHETHER FACULTY  
SHOULD BE CONSULTED PRIOR TO MDT  
PROGRAM COMMITMENT

Choice	Yes		No		Don't know		Statistic
	N	%	N	%	N	%	
Accept	321	77.9	10	2.5	11	2.7	$X^2 = 1.0$ d. f. = 2 $p > .05$
Reject	66	16.0	3	0.7	1	0.2	
Total	387	93.9	13	3.2	12	2.9	

## APPENDIX D

TABLE D - 1

TYPES OF MDT PROGRAMS AT MICHIGAN  
TECHNOLOGICAL UNIVERSITY

Name of program	Sections	Duration in Weeks
Civil Engineer Aide-Surveyor	4	48
Forester Aide	4	48
Industrial Electronics	3	48
Draftsman	3	48
Diesel Mechanics	3	48
Tax Assessor	2	32
Lumber Grader	4	12
Head Sawyer	4	36
Saw Filer	3	36

## APPENDIX E



TABLE E-1

MAP SHOWING LOCATION OF MICHIGAN  
TECHNOLOGICAL UNIVERSITY

