A STUDY OF THE REASONS OFFERED BY STUDENTS GRADUATING IN THE TOP QUARTILES OF MICHIGAN PUBLIC HIGH SCHOOLS FOR NOT CONTINUING IN FORMAL EDUCATION

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William L. Finni

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A STUDY OF THE REASONS OFFERED BY STUDENTS GRADUATING IN THE TOP QUARTILES OF MICHIGAN PUBLIC HIGH SCHOOLS FOR NOT CONTINUING IN FORMAL EDUCATION

By

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A THESIS

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ABSTRACT

The purpose of this study is to discover and evaluate the reasons given by students graduating in the top quartiles of Michigan public high schools for not continuing their formal education in a junior-community college, college or university.

The study presents data which support the following hypotheses:

1. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education are unable to do so for financial reasons.

2. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education have parents who do not have a history of collegiate training.

3. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education have parents with occupations for which collegiate training is not essential.

The writer was also interested in knowing whether the statistics reported nationally reflect an accurate picture of the loss of talent in Michigan, and if the students ranked in the top quartile on a grade point average truly represents the top quartile in academic ability as measured by intelligence tests. Hypotheses were not stated on the last two items as this information could be obtained by tabulating the

questionnaires and reporting the percentage of students not continuing in formal education, and tabulating the median and mean intelligence test scores expressed in percentiles.

Some of the findings were:

1. The financial problem is the most important single reason for not continuing in formal education for students who come from families with an approximate annual income of less than $4,999. Fifty-four per cent of the respondents came from this group. It is not a significant problem for students who come from families with an approximate annual income of more than $5,000.

2. The level of education attained by the father is another significant factor in predicting college attendance. Seventy-one per cent of the fathers of the respondents had completed their formal education with a high school, or less than a high school education. Twenty-one per cent had completed an apprenticeship, trade, or technical school course, and only eight per cent had completed a college or university course. The problem of finances entered the picture of the respondents who reported that their fathers had completed a college or university course, as thirty-eight per cent of this group also reported their fathers deceased.

3. The occupational level of the fathers was the third most significant factor in predicting college attendance. Eighty per cent of the respondents reported their fathers in the unskilled or skilled labor classification. The five per cent who reported their fathers in a professional classification were female, which would indicate a

greater emphasis upon the education of boys than the education of girls. The remaining fifteen per cent reported their fathers in a white collar or managerial occupation which did not have a college education as a prerequisite at the time they entered the occupation.

Questionnaires returned from thirty-seven schools representing a total graduating class of 4,451 students, 1,137 of whom were listed in the top quartiles of their graduating class, disclosed a total of one hundred fifty-three students, or thirteen and four-tenths per cent who did not plan to continue in formal education. This is in contrast to forty per cent who do not plan to continue as reported for the nation as a whole.

The intelligence or ability test scores of the respondents, as reported by the principals, were converted to percentiles according to national norms. The median percentile was 69.9 and the mean percentile was 70.1.

This information may be used by secondary school administrators and counselors as an aid in recognizing the negative influences which deter college attendance for our able youth. Thus, the administrators and counselors would be better able to plan school and community programs which would minimize the effect of these influences.

ACKNOWLEDGEMENTS

The writer wishes to acknowledge the interest and assistance of many persons without whose aid this study would not have been possible.

He is greatly indebted to Dr. Clyde M. Campbell, Chairman of the Guidance Committee, for his encouragement and counsel, and to the other members of his committee: Dr. Carl Gross, Dr. William Roe and Dr. J. Allan Beegle, for their help.

Sincere thanks to Dr. Fred Vescolani and to Dr. Harold Dahnke for their assistance and counsel, and to Vice President Gordon A. Sabine for making it possible to complete this study.

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CHAPTER I

INTRODUCTION

The purpose of this study is to discover and evaluate the reasons given by students graduating in the top quartiles of Michigan public high schools for not continuing their formal education in a junior-community college, college or university.

Because of his unique position as a member of an admissions office staff, the writer has had an opportunity to discuss the importance of higher education with many students and parents during the past three years. During these discussions, there were many instances where an able student was not at all certain that he wanted to continue formal education beyond the high school. However, at the urging of his parents, he had visited the Michigan State admissions office to explore the benefits which could accrue from a college education.

The writer became interested in obtaining additional information on why some students--who apparently have the ability to succeed on a college or university level program--elect to terminate their formal education with a high school diploma.

During their visit to the admissions office, these top-quartile students most often asked questions about:

A. The possibilities of obtaining scholarship help.

B. The possibilities of obtaining loans.

C. Opportunities for employment on the campus.

This would indicate that the problem of financing a college education is one of major importance and would bear investigation. The writer observed, however, that many of the students concerned with financing an education had value judgments which were more inclined toward "conspicuous consumption," as they drove to the campus in their own late model automobiles.

There are, however, some other important problems which merit consideration. The occupational level of the parents, occupational aspirations of the student, and the educational level attained by the parents play an important part in determining whether or not the student plans to continue formal education after graduating from high school.

During the past several years, numerous estimates have been made by educational writers, newspaper columnists, and critics of secondary education on the percentage of academically talented youth who do not continue formal education in an institution of higher learning after graduating from high school. The percentage has varied with the percentile figure of the class rank used by the writer.

There are differences of opinion concerning the percentage of the graduating class which should be considered as the academically talented group. Wright and Jung[1] considered the top ten per cent of the high school graduating class (ninetieth percentile and above) as the

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[1]W. W. Wright and W. J. Jung, "Why Capable High School Students Do Not Continue Their Schooling," Bulletin of the School of Education, Indiana University, 35:1 (January, 1959), p. 1.

academically talented group. Dr. James B. Conant,[2] in an article in the Carnegie Foundation Journal, states that the top twenty-five per cent or top quartile should be considered as the academically talented group. The National Defense Education Act[3] stipulated that eligibility for a student loan is restricted to those students who graduate in the top quartile of their respective graduating classes, or who have attained an over-all average of B on the total high school record in the event they do not fall in the top quartile. The writer was unable to find a statement limiting the loans to students who ranked in the top quartile in ability as measured by the several tests available for this purpose (i.e., National Merit Scholarship test, College Entrance Examination Board tests, etc.). Since a greater percentage of Michigan public high schools also divide their graduating classes into quartiles, the writer will consider the top quartiles of graduating classes as the academically talented group.

The most reliable national estimates indicate that of the 500,000 young people of eighteen years of age who are in the top quartile in ability, 100,000 never complete high school and 200,000 more complete high school but do not go to college.[4] In other words, forty per cent

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[2]James B. Conant, "Can Our High Schools Do The Job?" Carnegie Corporation of New York, VI:7 (April, 1958), p. 4.

[3]United States Congress, Public Act 85-846, National Defense Education Act.

[4]B. S. Hollinshead, Who Should Go To College (New York: Columbia University Press, 1952), p. 81.

of those with a high ability level do not attain the levels of training of which they are capable. Accompanying the estimates of the percentage of talented youth who do not continue their education beyond the high school are a multitude of reasons for not doing so, with the problems involved in financing a college education usually heading the list.

On the other hand, one has only to scan the current newspapers and magazines to find the continuing high demand for highly trained persons in almost every field of endeavor. Currently being brought to our attention is the fact that one of our competitive major powers is outdistancing us in the race for more doctors and engineers. While the training of doctors and engineers is important, the more thoughtful students of the situation are well aware of the increasing need for trained personnel in almost every field of human activity. If this demand for highly trained personnel is to be met on a local as well as a national level, it would seem reasonable to assume that careful consideration should be given to the problems involved in encouraging the academically talented students to continue their education.

As Wright and Jung so succinctly stated it:

> In today's world, with a highly accelerated demand for well trained manpower, this increasing interest in capable youths who do not continue their education beyond the high school is certainly justified. The loss of human resources as represented by those youths who have fine academic records in high school but do not continue their formal training presents a situation that is, in some respects, intolerable.[5]

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[5]Wright and Jung, loc. cit.

The Michigan Department of Public Instruction estimates we had approximately 67,400 students graduating from Michigan public high schools in June of 1959. Several studies agree[6] that approximately forty per cent of the top quartile of high school graduating classes, on a nation-wide basis, do not continue in formal education in an institution of higher learning. If these estimates reflect the situation in Michigan, it would mean that forty per cent of the 16,850 students in the top quartiles on a state-wide basis would not continue their formal education in an institution of higher learning after completing high school. This loss of 6,740 students who would normally qualify for admission to a college or university, with a good chance to complete the requirements for a degree, would be tremendous in terms of potential contributions to our society.

I. THE PROBLEM

Statement of the problem. The main purpose of this study, then, is to discover and evaluate the reasons offered by the students concerned for not continuing in formal education after graduating from high school.

The writer is also interested in knowing whether the statistics reported nationally reflect an accurate picture of the loss of talent

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[6]B. S. Hollinshead, Who Should Go To College (New York:Columbia University Press, 1952), p. 79; Dael Wolfle, "America's Intellectual Resources," Educating the Gifted, ed. Joseph French, (New York:Henry Holt and Company, 1959).

in Michigan, and, if the students ranked in the top quartile on a grade point average truly represent the top quartile in academic ability as measured by intelligence tests. Hypotheses will not be stated on the last two items as they will only require a counting of the questionnaires and reporting the median and the average intelligence quotients expressed in percentiles.

The writer is not certain that the statistics reported in the national studies reflect the current situation in Michigan. If this should be the case, corrective measures should be undertaken immediately.

There seemed to be general agreement among the principals cooperating with the study and two members of the professional staff of the College of Education that a questionnaire constructed in a manner which would elicit information in the following areas would be of some value in this study:

1. Student's rank in class and grade point average
2. Father's education and level of occupation
3. Mother's education and level of occupation (if any)
4. Community organizations to which parents belong
5. Approximate family income
6. Ordinal status in the family
7. Whether or not the student owns a late model automobile
8. The extra class activities in which the student participates
9. The occupational aspiration of the student

10. Reasons offered by the student for not continuing formal education after graduating from high school

11. Distance the students live from an institution of higher learning

12. Student contacts with the counselor

13. The results of intelligence test scores, or mental ability test scores of the student

It should be noted that several studies have been published on many of the above topics from a sociological point of view. Kanl's[7] study shows the effects of the socio-economic environmental factors on the decision concerning college attendance. He also shows the relationship of community organizations to which the parents belong and their effect on the direction which the student will take after graduating from high school.

Haller[8] and others have published studies on the relationship of the occupational aspirations and college attendance. The writer was unable, however, to find a study which combined the weight of the several factors influencing the decision on college attendance for students graduating from Michigan public high schools.

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[7]J. A. Kahl, American Class Structure (New York: Rinehart, 1957).

[8]A. O. Haller and W. H. Sewell, "Farm Residence and Levels of Educational and Occupational Aspiration," American Journal of Sociology, LXII:4 (January, 1957), pp. 407-11; A. O. Haller, W. H. Sewell, and M. A. Straus, "Social Status and Educational and Occupational Aspiration," American Sociological Review, XXII:1 (February, 1957), pp. 67-73.

In a later chapter, this study will present data which will support the following hypotheses:

Hypotheses.

1. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education are unable to do so for financial reasons.

2. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education have parents who do not have a history of collegiate training.

3. Students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education have parents with occupations for which collegiate training is not essential.

Importance of the study. As was mentioned previously, the shortage of highly trained personnel in almost all fields is now a problem of national concern. The rapid growth of automation in industry has resulted in a large number of technologically unemployed persons. As an illustration of the effect of automation, the writer is familiar with a sheet metal stamping plant which now utilizes a single man to operate a multiple stamping machine with an automatic feeding unit. This machine will do the work of eight semi-automatic stamping machines requiring an operator for each machine. Thus, one man can produce as many stamp castings, with less effort, than eight men were

able to produce prior to automation. The seven remaining men would become members of the technologically unemployed group which industry has not been able to employ because they lack the training for anything but the most menial tasks.

The Congress of the United States has recognized the severity of this problem and passed the National Defense Education Act[9] in the second session of the eighty-fifth Congress (1958). This Act, entitled Public Act 85-846, provides for the following aids to education to individual states as a means by which this loss of talented youth may be minimized. To take advantage of the National Defense Education Act, the state would be required to pass an enabling act which would provide state money to match the federal funds allocated to the state.

This Act provides for funds for:

> Student loans for educational expense if the student is ranked in the top quartile of his high school graduating class, or has an over-all academic average of B in the event the student does not fall into the top quartile.
>
> Strengthening of instruction in science, mathematics, and foreign language.
>
> Establishing or improving guidance and counseling programs and establishing local testing programs where funds for this purpose might not otherwise be available.

Other important sources of financial aid are our large industrial concerns. This aid has been in the form of scholarship grants to individual colleges and universities, and substantial grants to national scholarship programs similar to the National Merit

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[9]United States Congress, loc. cit.

Scholarship program.

Although the technological and industrial aspects of American life have undergone radical changes during the past quarter of a century, the concepts of secondary education have remained comparatively static until the early 1950's. This static condition has fostered a widespread concern about the manner in which public schools meet the needs of their students. The concern has resulted in a marked improvement in the holding power of the secondary schools. The statistics compiled by the Research Division of the Department of Public Instruction show that the dropout rate has been reduced by one-sixth from the group starting school in Michigan in 1938 and graduating in 1950 to the group starting in 1946 and graduating in 1958. The statistics show a decline from forty-three per cent to thirty-six per cent in the dropout rate during this period. This improvement in holding power is partially due to the establishment of guidance and counseling programs in the secondary schools and other improvements that are curricular in nature, and in the general trend in our society which now requires a high school diploma as qualification for all but the most menial tasks in the labor market. The value of formal academic training seems to have increased as our society becomes more complex.

Robin A. Williams describes the trend toward requiring additional formal training when he says:

> Universal public education has decreased the role of the family in training the child; changes in occupational and technological requirements have emphasized formal

> training; changes in the economic structure have increased the importance of education as a means of social mobility. Consequently, we find increased pressure to graduate all students from high school, to admit all high school graduates into college, and to permit college students to continue in colleges as long as they wish.[10]

In keeping with the increased value of formal academic training, higher education is no longer considered a luxury item which we could well do without. It is now considered an essential prerequisite to success on an individual as well as a national scale.

Industry now employs specialists for the purpose of visiting colleges in a constant search for talent. The competition for outstanding prospective employees is every bit as rigorous as it is for athletic talent on a professional basis. An examination of placement bureau brochures reveals that the industrial recruiters are equally interested in future college graduates with a liberal arts background as they are in the graduates with a technical background. This would indicate the general values of a college education in addition to the obvious value of increased competency in a technical program.

James B. Conant emphasizes the growing need for additional formal academic training.

> As public secondary education expanded in the last decades of the nineteenth century and in the first half of the twentieth, the colleges and universities likewise expanded. Not only were the applicants more numerous, they were much more heterogeneous as to backgrounds and ambitions. Furthermore, the political, social, and economic development of the United States vastly altered the way in which the

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[10] R. A. Williams, Jr., American Society. A Sociological Interpretation (New York: Alfred A. Knopf, 1952), p. 282.

> public regarded education. As the years went by, it became more and more evident that in our complex industrialized society, mere ability to read and write, added to native wit, was not enough. With the passing of the frontier, the pioneer spirit was turned away from new lands toward new industries. And to manage modern industry requires more than a high school education--at least for all but the very exceptional man.
>
> With the increasing industrialization went increasing urbanization, a higher standard of living, and a vast number of services available for city and town dwellers, more and more new mechanical and electrical devices distributed widely among the population--automobiles, electric refrigerators and radios, to mention the most obvious examples. All this industrial expansion required more and more men and women with a larger and different educational experience than would have been necessary fifty years earlier to run a farm, a store, or even a bank.[11]

II. DEFINITION OF TERMS

Aspiration Level. The plateau of future achievement, either vocational or educational, which the individual may set as a desired goal.

Educational Aspiration. The level of attainment to be arrived at through the media of attending an institution of higher learning or through a self-directed program of study.

Occupational Aspiration. The manner of earning a living which the individual concerned has set as a goal.

Vocational Preference. The occupation or profession held by the individual concerned as the most desirable means of earning a living.

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[11] J. B. Conant, Education In A Divided World (Cambridge: Harvard University Press, 1948), pp. 60-61.

Educational Attainment. The level or degree of accomplishment acquired through mental processes at a recognized institution of higher learning, either public or private, college or university.

Higher Education. The acquiring of knowledge, skill, or information through the media of instruction or study at an institution of higher learning.

Institution of Higher Learning. An organization or institution providing a course of study beyond that of a high school, a public or private, college or university.

Top Quartile. The top twenty-five per cent of a graduating class according to the grade point average earned for all courses taken up to the time of ranking.

Academically Talented Group. Used synonymously with the top quartile.

Talented Youth. Used synonymously with academically talented group and the top quartile.

III. LIMITATIONS OF THE STUDY

Whenever a study of this nature is undertaken, there is a number of limiting factors which must be recognized.

First, because of the limitations of time and financial resources, the data-gathering instrument has to be in the form of a questionnaire. When a representative group of the total population is sampled by means of a questionnaire, the sampling must be selected very carefully to insure adequate coverage for the state as a whole.

It was thought advisable to enlist the help of selected secondary school principals to devise the questionnaire. While the instrument was revised twice after trial runs, it may still reflect some of the prejudices of the individual principals who may have, in some instances, rationalized specific shortcomings, or the total lack of organized counseling and guidance services in their own schools.

It was also found that some school officials were reluctant to supply all of the information asked for due to the confidential nature of some of the information desired. (Four principals indicated they were not permitted, by board of education edict, to supply information for studies not directly under the control of the local board of education.)

Another limitation of this study was due to the nature of the data available in the cumulative record folders of the students. The results of ability and achievement tests were not always available because the school did not have a testing program, or the results of the tests were recorded on separate sheets in the counselor's office, or were not available for some other reason.

The sample. The sample used was limited to the top quartiles of forty Michigan public high school graduating classes. Of the forty schools contacted, thirty-eight responded to the questionnaire, another indicated that the senior class had graduated and could not be reached. One school returned the questionnaires in a form that could not be used, leaving a total of thirty-seven schools which are included in this study.

A return of ninety-five per cent of the schools contacted is a remarkable return and should insure a valid sampling.

The thirty-seven schools represented a total graduating class of 4,451 students, 1,137 of which were listed in the top quartiles of their respective graduating classes. Of this group, a total of one hundred fifty-three students, or thirteen and four-tenths per cent did not plan to continue their formal education in an institution of higher learning. This is in contrast to the forty to fifty per cent of the top quartiles who did not continue in formal education for the nation as a whole.

IV. ORGANIZATION OF THESIS

In Chapter II, a review of the literature related to the failure of the academically talented youth to continue their formal education will be given. The methodology employed in obtaining the data will be discussed in Chapter III, followed by an exposition of the results obtained in Chapter IV. Chapter V will contain implications derived and a summary of the investigation, with recommendations for further study. Chapter VI will contain suggestions for increasing the number of students continuing their education who are in the top quartiles of their graduating classes. These suggestions will be based upon information gained during interviews with secondary school administrators and observations of on-going programs in selected secondary schools.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature discloses several related studies which have examined different aspects of the problem of this thesis. However, the writer did not find a study which has examined the top quartiles of Michigan public high school graduating classes in an effort to find the reasons advanced for not attending a junior college, college or university.

In the spring of 1950, Ralph Berdie[12] asked every high school senior in Minnesota whether or not he planned to enter college. Students who were not planning to attend college because of insufficient funds, and whose scores on the American Council of Education Psychological Examination placed them among the upper ten per cent of high school graduates, were asked if they would go to college if they had more money. One half of the respondents said yes; the other half said no. This group was more highly selected than the upper quartile of high school graduates the writer is considering. Nevertheless, Berdie's data provides the best available basis for a guess as to the number of additional high school graduates who would be persuaded to enter college by scholarship offers. As a first guess, it would seem that roughly half of the brightest high school graduates not

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[12]R. F. Berdie, After High School, What? (Minneapolis:University of Minnesota Press, 1954), p. 81.

otherwise headed for college might take advantage of the scholarships. Berdie concluded that the availability of additional funds through scholarship programs would have little or no effect on college attendance other than making it easier for those students now attending college, or definitely planning to attend a college or university.

In a study of Michigan State University's program of general education edited by Paul Dressel, Carlin[13] found that less than two per cent of the freshman class entering Michigan State University in the fall of 1954 reported that a scholarship constituted the critical factor in college attendance for them.

A student's educational aspirations are formed gradually and come out of a variety of influences. Teachers, counselors and school experiences help steer the student toward or away from further education. This would emphasize the importance of a good guidance and counseling program as a major factor in reducing the loss of talent incurred when capable youth do not continue their education in institutions of higher learning.

The importance of guidance and counseling and its effect on college attendance was stressed by Dael Wolfle when he said:

> For complete success in making all potentially good college students want to go to college the attitudes toward higher education of many families and groups would have to be changed. Schools alone cannot accomplish such a revolution in social attitudes, but teachers and school administrators can legitimately seek to influence both students and their parents. It

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[13]E. A. Carlin, "Of Those Who Begin," Evaluation In The Basic College At Michigan State University, ed. Paul Dressel, (New York: Harper and Brothers, 1958), p. 45.

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[13]E. A. Carlin, "Of Those Who Begin," Evaluation In The Basic College At Michigan State University, ed. Paul Dressel, (New York: Harper and Brothers, 1958), p. 45.

> has never occurred to many parents to encourage their children to go to college. If teachers or school counselors informed some of these parents of their child's high ability and of the opportunities which might be open to him with advanced education, their own encouragement added to that of the teacher or counselor would enhance the likelihood that the pupil would enter college. Skillfully handled counseling may partially overcome parental disinterest and help a larger number of bright high school graduates to get to college.[14]

Several other studies referred to the importance of guidance and counseling as a factor influencing college attendance. Rothney and Roens[15] conducted an experimental study designed to measure the effectiveness of a guidance program in determining whether or not able students would show academic achievement more nearly in line with their abilities. They matched two groups of students with similar abilities, giving one group the benefit of guidance services and leaving the other group alone for a period of seven years. They found that twenty-seven per cent of the guided pupils became honor students while only ten per cent of the unguided became honor students. They also found that fifty-three per cent of the guided pupils entered college while only thirty-six per cent of the unguided pupils, with comparable ability, entered college. McGill's[16] statement, "In order to perform the task of counseling pupils, the teacher and counselor must first learn to

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[14]Dael Wolfle, "Restrictions of the Supply of College Students," College Admissions (Princeton: College Entrance Examination Board, 1954), p. 27.

[15]J. M. W. Rothney and B. A. Roens, Guidance of American Youth: An Experimental Study (Cambridge: Harvard University Press, 1950).

[16]F. D. McGill, "The Public High School Intervenes," College Admissions II (Princeton: College Entrance Examination Board, 1955), p. 18.

know the pupil" emphasizes the importance of extensive knowledge of individual students in counseling programs.

Counselors should have extensive knowledge of the student's socio-economic background and the cultural level of the family, in addition to the test data and other academic factors inherent in school achievement. Armed with this knowledge, the counselors would be in a position to inculcate the motivation so necessary for college attendance. They will find that some bright students do not go to college because they simply do not want to do so. They just are not sufficiently interested in college work to make an effort to get there. They grow up in homes in which education is not valued. Thus, there is little incentive to continue their formal education with the result that they develop other plans which do not include college attendance.

Several studies were critical of the guidance programs as they now exist in the secondary schools. A guidance program with pronounced weaknesses due to a lack of trained personnel, lack of understanding of the function of guidance programs by faculty and school patrons, or an unsympathetic school administrator will not perform a useful service for the students with whom it comes in contact. The weaknesses of secondary school guidance programs as observed by Metzler[17] may be summarized as follows:

1. Career day programs discuss only the more glamorous

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[17]J. H. Metzler, "Do You Really Have A Guidance Program?" School Executive, (December, 1959), pp. 30-31.

occupations and do not touch the many occupations students will be following as a life's work.

2. Guidance personnel are often assigned duties that detract, rather than add to the effectiveness of the guidance program. Duties such as patrolling halls, administering discipline, administering, correcting and recording test information on permanent records of the student, and other duties of a similar nature do not add to the effectiveness of the guidance function.

3. Counselors are not furnished an office where the counselor may visit with a student without outside interruptions.

4. The practice of relying on homeroom teachers who may not be interested in counseling is a distinct weakness. Further, it is almost impossible to train an entire teaching staff even if the interest is present. Another problem closely connected with the practice of using homeroom teachers is that some teachers will spend a considerable period of time with students who have a good rapport with the teacher and little, if any, with the student who has been some source of irritation.

5. Schools conducting follow-up studies should be warned that the studies are not valid unless there is a one hundred per cent return, as the students who were most satisfied with their school experiences will return the questionnaire, while those students who were dissatisfied will not bother to return it. Girls are more likely to return a questionnaire than boys.

Studies were found which referred to the importance of family background in deciding whether or not the student will continue formal

education in institutions of higher learning. Rosen[18] found that the motive for high achievement is present much less often among high school students of lower class background than among those of middle class background. This was substantiated by Hollingshead[19] when he found that families of most lower class adolescents are a hindrance to the child's efforts to find work. This study pointed out that these adolescents found it almost impossible to do better than follow occupations similar to those in which their fathers were engaged.

Many studies were found describing the influence of the father's occupation on the occupational aspirations of the adolescent. These studies are indirectly related to this research under the assumption that many occupations require a college degree as one of the necessary credentials.

A pertinent study was made by Mulligan[20] when he compared the proportion of students at Indiana University having fathers in a given occupational category with the proportion employed in that category in the state as a whole. Normally, sons from the upper end of the socio-economic scale are present at the University in considerably greater proportion than one would expect from state employment figures. The

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[18]B. Rosen, "The Achievement Syndrome," American Sociological Review, XXI (1956), pp. 211-13.

[19]A. B. Hollingshead, Elmtown's Youth (New York: John Wiley and Sons, Inc., 1949).

[20]R. A. Mulligan, "Socio-Economic Background and College Enrollment," American Sociological Review, XVI (1951), pp. 188-196.

reverse was true of the lower end of the socio-economic scale, from which sons appear less than one-fifth as often as they should on a chance basis. Additional support regarding the effect of the father's occupation on college attendance may be found in Carlin's study examining the freshman class entering Michigan State University in the fall of 1954, when he stated:

> If we add the percentages (of fathers) who receive income in the form of salary, profit, commission, and fee, the "white collar" totals are 76 percent for the fathers of freshman men and 78 percent for the fathers of freshman women.
>
> In contrast, income in the form of wages or piece-rate (both more typically associated with unskilled or semi-skilled labor) is reported for only 29 percent of the fathers of freshman men and 20 percent of the fathers of freshman women.[21]

Several other studies referred to the importance of the father's occupation in the occupational choices of the child. Super[22] found that one of the strong factors influencing the vocational choice of an adolescent was the father's job. Nelson[23] added another dimension to this inquiry when he asked, "Do modern collegians choose the vocation of their father more often than can be explained by chance?" He found that although vocational choices do not mean the same as entering a vocation, they have significance both for vocational entry and for

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[21]Carlin, op. cit., p. 36.

[22]D. E. Super, "Experience, Emotion, and Vocational Choice," Occupations, XXVII (October, 1948), pp. 23-28.

[23]E. Nelson, "Father's Occupations in Students Vocational Choices," School and Society, V (October 28, 1939), pp. 572-76.

educational planning. The study did show, however, that the college students who participated in the study chose fathers' occupations more often than on the basis of chance.

In Peters[24] investigation of the influential factors in helping three hundred eighty Missouri high school seniors select the vocation they would like to follow for the rest of their earning life, he found the foremost factor influencing first and second choices of occupations are parents. The importance of peer relationships was also found in this study when it was noted that the second most important factor influencing the first occupational choice was a friend.

The residence of the adolescent has been found to be of significance in predicting college attendance. This is an important finding directly related to this thesis, as potential ability is not allocated according to a geographical distribution.

Stouffer[25] found several studies which indicated that, with everything else being equal, urban boys and girls are more likely to go to college than rural boys and girls. This is supported by Lipset's[26] theory which states that, "because rural people have fewer educational opportunities and advantages and fewer occupational choices, the level

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[24]F. F. Peters, "Factors Which Contribute to Youths Vocational Choice," Journal of Applied Psychology, XXV (1941), pp. 428-30.

[25]S. A. Stouffer, "The Great Sorting," College Admissions III (Princeton: College Entrance Examination Board, 1955), p. 2

[26]S. M. Lipset, "Social Mobility and Urbanization," Rural Sociology, XX (September-December, 1955), pp. 220-28.

of educational and vocational aspirations of rural youth is lower than those of urban youth."

Lipset's theory was not fully accepted by Haller and Sewell,[27] as they found that residential differences in educational and occupational aspiration do not explain differences in eventual occupations of girls. They found, also, that occupational achievement cannot be predicted from information on residence alone, as boys who live on farms wish to enter high prestige occupations with the same frequency as do the boys who do not live on farms. However, they did find that boys from a rural background have less interest in a college education than boys from an urban environment. This would indicate that while boys from a rural background have similar desires concerning the high prestige vocations, they are not as aware of the educational requirements which are necessary prerequisites of most of the high prestige vocations.

Berdie's[28] follow-up study of all high school seniors in Minnesota also found that a larger proportion of the metropolitan boys planning to go to college actually went than did boys of rural backgrounds. Stouffer[29] also found that on a secondary level, the

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[27]A. O. Haller and W. H. Sewell, "Farm Residence and Levels of Educational and Occupational Aspiration," American Journal of Sociology, LXII:4 (January, 1957), pp. 407-11.

[28]R. F. Berdie, After High School, What? (Minneapolis: University of Minnesota Press, 1954).

[29]Stouffer, loc. cit.

average young person continues longer in school if he lives in a city than if he lives in a rural area.

Social pressures faced by the parents play an important part in predicting college attendance. This was emphasized by Stouffer when he said:

> Among urban white collar people, who are at least high school graduates and especially among those who live in the fastest growing areas of American population--the residential suburbs of our larger cities--a college education for their children is becoming a social necessity. If a son or daughter does not go to college the neighbors are likely to regard the fact as evidence of the stupidity of the child or the failure of the parents. Such social pressure is well-nigh irresistible, and there is no sign of its slackening.
>
> Among the working-class populations the picture is different. While all around them are some examples of working-class boys who have reached college via a high IQ, good marks, and a special push from the high school, or alternatively, and not unimportantly, from football, college may be only vaguely and dimly visualized as a possibility. If the father is an unskilled or semi-skilled laborer whose formal education ended with grade school, or the early years of high school, he feels he is giving his son a better break than he had by seeing to it that he finishes high school. Even if the economic burden of a college education were to be made bearable by proposing that the son or daughter live at home, take a part-time or full-time job, and attend college classes at night, the working class parent would remain somewhat dazed and incredulous about the prospect. Like other parents, he hopes that his children will "do better" than he did, but college is outside of his reference framework.[30]

In a questionnaire distributed to one hundred eight boys and one hundred nine girls in the upper thirty-five per cent of their class, Cunningham[31] found that fifty-nine per cent of the seniors made

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[30]Stouffer, op. cit., p. 4.

[31]S. D. Cunningham, "Vocational Plans of a Select Group of High School Seniors," The School Review, XI:3 (April, 1938), pp. 281-86.

vocational choices within four years of the test date. Thirty-five per cent of this group made a choice after the beginning of their junior year. This indicates that students are beginning to crystallize their occupational choices at the ninth and tenth grade level. This would mean that educational and occupational counseling, to be effective, should begin at an earlier date than the sophomore year as it now does in most of the public school systems in Michigan. To illustrate the general lack of pre-high school counseling programs, the writer was surprised to learn of a public school system serving a city with a major university within its boundaries that started an organized counseling program in the junior high school as recently as the 1959-1960 academic year.

In the final analysis, the choice of an occupation is one of the points of life at which a young person is called upon to state rather explicitly his concept of himself and to say definitely that, "I am this or that kind of a person." Holding and adjusting to a job is a process of finding out whether the job permits him to play the kind of role he wants to play--whether the role the job makes him play is compatible with his self concept. Finally, it is the process of testing and finding out whether he can live up to the concept he has of himself.

The importance of the problem with which this study is concerned was well stated by Stouffer when he said:

> Let us examine this situation from the viewpoint of an uneasy sense of responsibility of some high school teachers and counselors. Every year they see a picture at graduation time which arouses misgivings. Most of the bright boys and girls from the white collar families go on to college,

together with many who lack the ability to do college work. Even the latter feel they must let something of college rub off on them, to escape social stigma. But among the brightest from the working class families there are thousands who not only do not go to college, but who quit high school before graduation. Many a potential engineer who might have blossomed out at an M.I.T. or Cal. Tech., many a good thinker who might have been a lawyer or college professor, becomes a career casualty because his meager surroundings failed to supply him with the proper incentives.

It is this group of boys and girls, very considerable in number, together with their counterparts in the rural population, whose lost potential constitutes the most tragic waste of human resources in the nation.[32]

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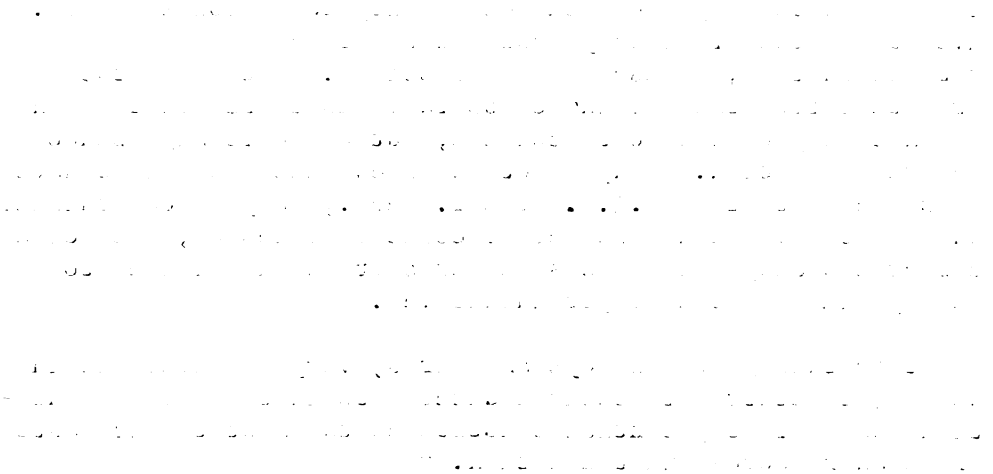
[32]Stouffer, loc. cit.



CHAPTER III

METHODOLOGY

The sample. The sample included in this study was selected from the top quartiles of the graduating classes of forty Michigan public high schools who were not planning to continue their formal academic training beyond the high school at a junior college, college or university. The high schools were selected according to size of the high school and the typology of the communities served by the schools.

The size of the high school was determined by the high school classification list, as published by the Michigan High School Athletic Association.

The classifications are listed as follows:

Class A - 900 or more students

Class B - 400 to 899 students

Class C - 200 to 399 students

Class D - less than 200 students

Basic sociology texts contain numerous examples of community typology. For the purpose of this study, the writer classified the communities of the state into four basic groups which are:

1. Large industrial cities with a population in excess of 35,000.

2. Suburban residential centers adjacent to the large industrial cities with a population between 10,000 and 35,000.

3. Small incorporated cities with a population between 2,500

and 9,999.

4. Small semi-isolated rural agricultural unincorporated or incorporated villages or cities with a total population of less than 2,500.

The data-gathering instrument which seemed most appropriate for a study of this nature was a questionnaire. By using this kind of an instrument, the investigator is able to obtain a larger sampling than is possible by conducting personal interviews with individual students.

As a point of departure, a suggested questionnaire was constructed and submitted to four Michigan public high school principals who expressed an interest in helping to construct a meaningful data-gathering instrument. After the principals had an opportunity to react to the questionnaire, a trial run was made at one school to test it for clarity. The initial revision was followed by a second revision incorporating additional items which the principals concerned were interested in obtaining. The questionnaire was then submitted to two members of the professional staff of the College of Education for additional comments and suggestions.

To pre-test the questionnaire, the writer visited students in the top quartiles of the graduating classes in Mt. Clemens, Boyne City, and Petoskey who were certain they would not continue their formal academic training beyond the high school. Part of the time spent with each student was devoted to completing the questionnaire with additional time alloted for an opinion-interview regarding their reactions to specific items in the questionnaire.

The field trial indicated a need for a few minor revisions in the wording of the questionnaire, after which it was submitted to the supervisor of the tabulating department of Michigan State University for suggestions pertaining to the arrangement of the questions to facilitate the tabulation of the results.

Gathering the Data. The questionnaires were sent to the principals of forty Michigan public high schools. The schools were selected on the basis of size and the types of communities served by the schools.

The principals were asked to:

1. Administer the questionnaire to all students who ranked in the top quartile and were certain they would not continue their formal academic training in the foreseeable future in a junior college, college or university.

2. Indicate on the questionnaire the number in the senior class and the ranking of the student by code before giving the questionnaire to the student.

3. Give the I.Q. score of the student concerned, the name of the test and form used to obtain this data, and percentile ranking on a national norm, if available, on the blank following number 74-75.

Table I shows a summary of the returns by the size of schools and type of community served.

The Data are coded. After examining each questionnaire for internal consistency, the data were coded, then keypunched and verified on I.B.M. cards.

TABLE I

QUESTIONNAIRES TABULATED BY SIZE OF SCHOOL AND COMMUNITY TYPOLOGY

Type	Class	No. of Schools	No. of Respondents
Large industrial cities with a population in excess of 35,000	A	3	49
	B	2	14
	C	3	3
Suburban residential centers adjacent to the large industrial cities with a population between 10,000 and 35,000	A	2	14
	B	3	5
	C	2	6
Small incorporated cities with a population between 2,500 and 10,000	B	4	17
	C	4	11
	D	1	3
Small semi-isolated rural agricultural unincorporated or incorporated villages or cities with a total population of less than 2,500	B	2	9
	C	8	18
	D	3	5

As a first step in analyzing the data, a frequency count for each item in the questionnaire was made. This provided an overview from which it was possible to judge which inter-item comparisons, of the thousands which are possible, might profitably be made.

The Data are sorted as they relate to the Hypothesis. The problem of financing a college education was mentioned more often than any other single factor during the course of the interviews which preceded the circulation of the questionnaire. The lack of money was used as a reason for not continuing formal education on several occasions when the male respondent admitted ownership of a late model automobile. Further inquiry revealed that many of these students were earning wages ranging from seventy-five dollars to two hundred dollars per month on after-school and weekend jobs. While a few of the respondents indicated that some of the money earned was used to supplement the family income, a greater proportion of the respondents were more inclined toward "conspicuous consumption" with the money earned on part-time jobs.

It was decided that a question asking for the approximate family income would be a more meaningful factor in determining whether or not the family had the financial ability to meet the college expenses incurred by the student.

The data which are pertinent to hypothesis one, "students in the top quartiles of public high school graduating classes who do not plan to continue their formal education beyond the high school are not able to do so for financial reasons," are compared:

Approximate family income to the:

A. Occupational aspiration of the respondent

B. Number of respondents who gave lack of money as a reason for not continuing formal academic training

C. Number of respondents who indicated a desire to earn money as a reason for not continuing formal academic training

The level of education attained by the parents will usually determine the presence of, or lack of a library in the home. During the course of the preliminary interviews, a question was asked of students whose fathers had not completed a high school education, "What kind of reading material is readily available in your home?" The respondents generally indicated a daily newspaper, a news magazine such as Time or Newsweek, weekly and monthly magazines such as Saturday Evening Post and The Ladies Home Journal, and a few indicated they had purchased a few paper-backed novels. This would support Hollinshead's statement when he says:

> The so-called lower class lacks the urge for education--in part because of a lack of ability, but in a larger part because of lack of motivation in the home or the surrounding environment. This lack of motivation stems from lack of cultural materials, such as books, periodicals, and neighborhood cultural influences. The children of ministers and school teachers, however, reach the top rung of the educational ladder out of all proportion to their numbers. Allowing for many exceptions, we may say that those who gain most in social status and economic improvement from education seem to come from secure, modest homes having loaded bookshelves.[33]

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[33]B. S. Hollinshead, Who Should Go To College (New York: Columbia University Press, 1952), p. 37.

The relevant data with regard to hypothesis two, "students in the top quartiles in public high school graduating classes who do not plan to continue their formal education beyond the high school have parents who do not have a history of collegiate training," were compared as follows:

Level of education attained by the father to:

A. Occupational aspiration of the respondent

B. Occupational level of the father

C. The approximate family income

D. The number of respondents who indicated a lack of money as a reason for not continuing formal academic training

The occupational level of the father is the third important factor in predicting the likelihood of college attendance for a son or daughter with which this thesis will be concerned.

The writer expects to support the hypothesis, "students in the top quartiles of public high school graduating classes who do not plan to continue formal academic training beyond the high school have parents with occupations for which collegiate training is not essential." The data will be expected to indicate that a very small number of the respondents have fathers who are in the professional, managerial, or white collar group. Also, the data will be expected to show an overwhelming proportion of the parents of the respondents coming from an unskilled labor, or at best, a skilled labor background.

With respect to hypothesis three, the data will be compared:

Occupational level of the father to:

A. Occupational aspiration of the respondent

B. Number of respondents who gave lack of money as a reason for not continuing formal academic training

C. Number of respondents who indicated a desire to earn money as a reason for not continuing formal academic training

CHAPTER IV

PRESENTATION AND REVIEW OF DATA

The Data Are Presented. Questionnaires were returned from thirty-seven schools representing a total graduating class of 4,541 students. The information submitted by the schools indicated that 1,137 students in this group were in the top quartile of their graduating class. Of this top quartile, 153 students, or thirteen and one-half per cent, did not plan to continue their formal education after graduating from high school. While this figure is considerably less than the forty per cent of the top quartiles not continuing their education beyond the high school on a national basis, it still represents a substantial pool of talent loss.

The distribution of male and female respondents in this sample is almost an exact duplication of the proportion of males and females not continuing their education found in studies completed in other states. A study made by the College of Education at Indiana University found almost two females for each male who were not planning to continue in formal education in the class graduating in June of 1954.

As we examine the reasons offered by respondents for not continuing formal academic training in Table II, we find that the financial problem is the most important single reason for not continuing formal education. Seventy-eight students, or fifty-one per cent of the total group of respondents, gave lack of money as a reason for not continuing their formal education. One hundred students, or

TABLE II

REASONS OFFERED FOR NOT CONTINUING FORMAL ACADEMIC TRAINING

	Reason	True in my case	Percent	Not true in my case	Percent
1.	Lack of money	78	51	73	48
2.	No clear cut plan for the future	70	46	79	52
3.	Marriage	61	40	88	58
4.	Dislike school	11	7	140	92
5.	Dislike study	20	13	131	86
6.	Family does not think it is necessary	14	9	135	88
7.	Needed at home to help support family	9	6	141	92
8.	My friends are not going on for more education	16	10	134	88
9.	Do not feel that I want to work that hard	18	12	127	83
10.	Do not have clothes needed	14	9	136	89
11.	Do not want to leave friends	11	7	139	91
12.	Do not want to leave home	11	7	137	90
13.	Not worth sacrifice of time and money	23	15	125	82
14.	Plan to enter family business	7	5	141	92
15.	Want to start earning money	100	65	50	33
16.	Plan to enter the Armed Forces*	22	14	127	83
17.	Do not want to work my way, etc.	20	13	128	84

*Forty-three per cent of the male respondents indicated they will enter the Armed Forces.

sixty-five per cent of the total group, said they were not going to continue their education because they were more interested in earning money. An additional nine students, or six per cent of the total group, stated they were unable to continue their education because they were needed at home to help support a family.

A lack of motivation due to the absence of a clear-cut plan for the future was a factor with seventy respondents, or forty-six per cent of the total group. Twenty-three students of the seventy thought the effort required for success in college was not worthwhile, in view of the fact they had no specific occupational or vocational plans. An additional twenty students in this group of seventy indicated they did not feel that working their way through college was worth the cost in "personal sacrifice."

The influences of peer relationships seemed to be of little significance. Only ten per cent of the respondents stated they were not continuing their education because their friends were not doing so, and seven per cent said they did not want to leave their friends.

The following questions will not be considered further in this thesis, because less than ten per cent of the respondents gave them as reasons for not continuing their education:

4. Dislike school

6. Family does not think it is necessary

7. Needed at home to help support the family

10. Do not have the clothes needed

The Data are compared to the Approximate Family Income. The

problem of financing a college education looms as a major problem when we examine the approximate level of family income reported in Table III. This table shows that fifty-four per cent of the total respondents had approximate family incomes of less than $4,999. While the table shows that seventeen per cent of the male respondents had family incomes of less than $4,999, a more important figure is the thirty-seven per cent of the female respondents who indicate family income of less than $4,999. This is important because boys earn higher wages for terminal jobs than do the girls.

TABLE III

APPROXIMATE LEVEL OF FAMILY INCOME

	Male		Female		Total	
Family Income	Number	Percent	Number	Percent	Number	Percent
$ 0 - $2,000	2	1	15	10	17	11
2,000 - 3,499	6	4	8	5	14	9
3,500 - 4,999	19	12	35	22	54	34
5,000 - 7,499	16	10	27	18	43	28
7,500 - 9,999	8	15	11	7	19	12
10,000 or more	0	0	6	4	6	4

The effects of the approximate family income on the occupational aspirations of the respondent are shown in Table IV. The respondents indicating an occupational aspiration which may be classified in the unskilled labor group were found reporting approximate family incomes

TABLE IV

COMPARISON OF APPROXIMATE FAMILY INCOME TO THE OCCUPATIONAL ASPIRATION OF THE RESPONDENT

Approximate Family Income	Occupational Aspiration of Respondent				
	Unskilled labor	Skilled labor, including supervisory work	White collar, clerical, sales, etc.	Managerial, business owner	Professional
None reported to $1,999	2	2	13	3	2
$2,000 to $3,499	2	6	5	1	6
3,500 to 4,999	0	2	25	1	8
5,000 to 7,499	0	1	21	4	12
7,500 to 9,999	0	1	7	4	9
10,000 or more	0	0	2	1	3

The total number of occupational aspirations indicated by respondents will not equal the total number of reported family incomes as some respondents indicated more than one occupational aspiration. Thirty-three respondents checked "other" without identifying an occupation.

of less than $3,499. None of the respondents reporting an approximate family income of $10,000 or more aspired to an occupation classified as unskilled or skilled labor. Only one respondent reporting an approximate family income between $7,500 and $9,999 indicated an aspiration which may be classified in the skilled labor group.

For students aspiring to the white collar occupations, including secretaries, stenographers, beauticians, general clerical jobs, and retail sales, the two respondents reporting an approximate family income of $10,000 or more were girls. Both girls were planning marriage soon after graduation.

Of the seven respondents who reported approximate family income between $7,500 and $9,999 with occupational aspirations in the white collar group, five were girls. The two male respondents in this group were planning to follow in their fathers' footsteps as salesmen.

The respondents aspiring to managerial positions or owning small businesses were, with a single exception, male respondents. Most of these respondents expressed an interest in owning and operating establishments such as service stations, clothing stores, and in two cases, a tavern. The single female respondent expressed an interest in owning and operating a beauty salon.

Of the fifty respondents expressing an occupational aspiration that would fall in the professional category, twenty-four reported an approximate family income in excess of $5,000, while sixteen of the respondents reported an approximate family income of less than $4,999.

A comparison of the approximate family income to the number of

respondents who reported a lack of money as a reason for not continuing formal education is found in Table V.

TABLE V

COMPARISON OF APPROXIMATE FAMILY INCOME TO THE NUMBER OF RESPONDENTS WHO INDICATED A LACK OF MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Approximate Family Income	Male	Female	Total
None reported to $1,999	1	11	12
$2,000 to $3,499	5	14	19
3,500 to 4,999	13	22	35
5,000 to 7,499	2	7	9
7,500 to 9,999	1	2	3
10,000 or more	0	0	0
Total	22	56	78

An examination of Table V will show sixty-six students, or eighty-five per cent of the respondents giving lack of money as a reason, report approximate family incomes of less than $4,999. Only twelve students, nine of whom are female, report approximate family incomes of $5,000 or more. Each of the three male respondents reporting approximate family incomes of $5,000 or more--and who give lack of money as a reason for not continuing formal education--own automobiles.

An examination of the questionnaires of the nine female respondents reporting approximate family incomes of $5,000 or more

reveals that seven of the nine respondents were planning an early marriage. One respondent reported that her family did not think college attendance was "as important for her as it was for her older brother." The other respondent in this group stated that she did not feel she wanted to put forth the effort required for success in college. Further examination of this questionnaire disclosed an intelligence test score (California Test of Mental Maturity, Advanced, Short Form, '57) of ninety-eight.

A comparison of approximate family income to the number of respondents who indicated a desire to earn money as a reason for not continuing their education is made in Table VI.

TABLE VI

COMPARISON OF APPROXIMATE FAMILY INCOME TO THE NUMBER OF RESPONDENTS WHO INDICATED A DESIRE TO EARN MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Approximate Family Income	Male	Female	Total
None reported to $1,999	0	12	12
$2,000 to $3,499	5	6	11
3,500 to 4,999	12	28	40
5,000 to 7,499	8	17	25
7,500 to 9,999	3	7	10
10,000 or more	0	2	2
Total	18	72	100

A significant finding is that each of the twelve female respondents reporting approximate family incomes of less than $2,000,

also reported their fathers deceased. Sixty-two of the one hundred respondents who gave a desire to earn money as a reason for not continuing their formal education reported approximate family incomes of less than $5,000. The desire to earn money does not appear to mean the same as a need to earn money for the thirty-seven respondents reporting approximate family incomes of $5,000 or more. This is particularly true of the nine female respondents reporting approximate family incomes of $7,500 or more and who gave this reason for not continuing formal education. Each of the nine female respondents noted that an early marriage was planned. Further examination of individual questionnaires of the thirty-seven respondents reporting approximate family incomes of $5,000 or more showed that thirty-five of the thirty-seven live within commuting distance of a junior college, college or university.

The Data are compared to the Educational Level attained by the Father. Data concerning the educational level attained by the fathers is presented in Table VII. An examination of the data contained therein will show forty-six respondents, or thirty per cent of the total group, reported their fathers had less than a high school education. Sixty-two respondents, or forty-one per cent, stated their fathers had graduated from high school. An additional thirty-two respondents, or twenty-one per cent, indicated their fathers had completed some type of an apprenticeship program, a trade school program, or a technical school program.

The apprenticeship programs included such areas as tool making, die and pattern making, and watch making. The trade school courses

listed areas such as plumbing, sheet metal work, automotive repair, and air conditioning. The technical courses included radio and television repair, tool design and electronics.

TABLE VII

EDUCATIONAL LEVEL ATTAINED BY THE FATHER

	Male		Female		Total	
Educational Level	Number	Percent	Number	Percent	Number	Percent
Less than high school education	14	9	32	21	46	30
Completed high school	22	14	40	27	62	41
Completed apprenticeship, trade, or technical school course	12	8	20	13	32	21
Completed college or university course	3	2	10	6	13	8
Total	51	33	102	67	153	100

Only thirteen respondents indicated their fathers had graduated from a college or university; and of this number, five fathers were deceased. Eleven respondents, or eight per cent, stated their mothers were college graduates. However, there were only four respondents who reported both parents had completed a college or university level program, and the four respondents reporting collegiate training for both parents were girls.

The fact that less than three per cent of the respondents reported both parents completing a college or university level course lends strong support to the second hypothesis, "students in the top

quartiles of public high school graduating classes who do not plan to continue their formal education have parents who do not have a history of collegiate training."

The level of education attained by the father is compared to the occupational aspiration of the respondent in Table VIII. This table shows that the occupational aspiration of the respondent increases as the level of education attained by the father increases.

Table IX compares the educational level attained by the father to the occupational level of the father, as perceived by the respondent. For those reporting less than a high school education, twenty-five respondents reported their fathers were working in jobs that were classified as unskilled labor. An additional twenty-two respondents reported their fathers completing a high school education and were working on jobs classified as unskilled labor. While there were four respondents who indicated their fathers had completed an apprenticeship, trade, or technical school program and were working at unskilled labor, there were no respondents who reported their fathers had completed college level courses and were working in this group.

For respondents reporting their fathers were working in classifications calling for skilled labor and including supervisory work, nine had less than a high school education, fourteen completed the high school program, and twenty completed an apprenticeship, trade school or technical school program. Two respondents reported their fathers had completed a college or university level course and were working as supervisory employees at one of the automotive plants. As

TABLE VIII

COMPARISON OF THE EDUCATIONAL LEVEL ATTAINED BY THE FATHER TO THE OCCUPATIONAL ASPIRATION OF THE RESPONDENT

Educational Level Attained by the Father	Occupational Aspiration of Respondent				
	Unskilled labor	Skilled labor, including supervisory work	White collar, clerical, sales, etc.	Managerial, business owner	Professional
Less than high school education	2	5	23	3	9
Completed high school	2	4	31	8	14
Completed apprenticeship, trade or technical school course	0	3	17	1	13
Completed college or university course	0	0	7	2	4

TABLE IX

COMPARISON OF THE EDUCATIONAL LEVEL ATTAINED BY THE FATHER TO THE OCCUPATIONAL LEVEL OF THE FATHER

Educational Level Attained by the Father	Occupational Level of the Father					
	Deceased	Unskilled labor	Skilled labor, including supervisory work	White collar, clerical, sales, etc.	Managerial, business owner	Professional
Less than high school education	9	25	9	0	3	0
Completed high school	11	22	14	4	9	2
Completed apprenticeship, trade or technical school course	3	4	20	1	4	0
Completed college or university course	5	0	2	0	1	5

Table IX will show, the occupational level of the father will increase in proportion to the educational level attained.

An unusual finding came to light in Table IX. The I.B.M. card sort disclosed two respondents who indicated their fathers had completed a high school course, but were working in a profession usually requiring a college degree as a minimum credential. An examination of the individual questionnaires revealed both fathers were registered pharmacists. The writer made inquiries to several pharmacists and found it was possible to obtain a state license as a registered pharmacist after working for a licensed pharmacist for a five-year period. However, this method of obtaining a state license has not been possible for more than thirty years.

The educational level attained by the father and the approximate family income as noted on Table X are compared. Thirty-two of the forty-six respondents who report their fathers having less than a high school education also noted that the approximate family income is less than $5,000. Fourteen respondents report an approximate family income of more than $5,000, and only four of the fourteen report an approximate family income of more than $10,000.

An examination of the questionnaires of the four respondents in this group reporting approximate family incomes of more than $10,000 show fathers with the following occupations: tavern owner, garbage pick-up service (with three trucks), scrap steel broker, and a roofing and siding contractor.

Respondents reporting fathers who were high school graduates

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TABLE X

COMPARISON OF THE EDUCATIONAL LEVEL ATTAINED BY THE FATHER TO THE APPROXIMATE FAMILY INCOME

Educational Level Attained by the Father	Approximate Family Income					
	None reported to $1,999	$2,000 to 3,499	$3,500 to 4,999	$5,000 to 7,499	$7,500 to 9,999	$10,000 or more
Less than high school education	11	4	17	9	1	4
Completed high school	4	9	25	19	5	0
Completed apprenticeship, trade or technical school course	2	0	8	11	11	0
Completed college or university course	0	1	4	4	2	2

show a marked decrease in the number earning incomes of $1,999 or less and a marked increase for those earning incomes of $5,000 or more. The completion of an apprenticeship, trade or technical school program shows that those earning an excess of $5,000 outnumber those earning less than $5,000 by a twenty-two to ten margin. For those who complete a college or university level program, the margin--not quite so startling--is an eight to five ratio favoring those earning $5,000 or more. For two of the four respondents reporting an approximate family income of $4,999 or less, it would appear that the real income would be considerably more than that, as they are Protestant ministers who have a home and utilities furnished for them.

A comparison of the educational level attained by the father to the number of respondents stating they did not have the financial resources required is made in Table XI.

Eighty-one per cent of the respondents offering this reason reported their fathers did not complete a program of education or training beyond the high school level. Only three respondents--or four per cent--stated their fathers were college graduates. Further examination of the questionnaires returned by the last three respondents revealed that one was the daughter of a retired teacher (reporting an approximate family income of less than $3,499); the fathers of the two remaining female respondents were deceased.

Table XII compares the educational level attained by the father to the number of respondents who expressed a desire to earn money as a reason for not continuing their formal education. Twenty-nine

TABLE XI

COMPARISON OF EDUCATIONAL LEVEL ATTAINED BY THE FATHER TO THE NUMBER OF RESPONDENTS WHO OFFERED LACK OF MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Educational Level Attained by the Father	Respondents Giving Lack of Money as a Reason For Not Continuing Their Education					
	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Less than high school education	9	12	19	24	28	36
Completed high school	12	15	23	30	35	45
Completed apprenticeship, trade, or technical school course	1	1	11	14	12	15
Completed college or university course	0	0	3	4	3	4
Total	22	28	56	72	78	100

TABLE XII

COMPARISON OF EDUCATIONAL LEVEL ATTAINED BY THE FATHER TO THE NUMBER OF RESPONDENTS WHO INDICATED A DESIRE TO EARN MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Educational Level Attained by the Father	Respondents Indicating a Desire To Earn Money as a Reason for Not Continuing Their Education		
	Male	Female	Total
Less than high school education	6	23	29
Completed high school	14	27	41
Completed apprenticeship, trade, or technical school course	8	15	23
Completed college or university course	1	6	7
Total	29	71	100

respondents report their fathers had less than a high school education and forty-one stated their fathers had graduated from high school.

An examination of the table will show only one male respondent with a father who had a college degree. He checked the items in the questionnaire which stated he did not care for school and he would enlist in the service shortly after graduation. Four of the six female respondents with fathers who are college graduates plan to marry within a year after graduation.

The Data are compared to the Occupational Level of the Father. By examining the occupational level of the father as reported by male and female respondents in Table XIII, twenty-eight respondents report their fathers were deceased. Fifty-one, or thirty-three per cent of the total group of respondents, reported their fathers working in jobs which may be classified as unskilled labor, with forty-five respondents, or twenty-nine per cent, reporting their fathers working in the skilled labor classifications.

It is significant to note that there were no male respondents whose fathers were in the white collar or in the professional classifications. This supports several other national studies which indicate that sons of families in these classifications are oriented toward a college education at an early age.

By comparing the occupational level of the fathers to the occupational aspirations of the respondents in Table XIV, the respondents had, in many cases, indicated more than one occupational area they would like to follow for the rest of their earning life if

TABLE XIII

OCCUPATIONAL LEVEL OF THE FATHER

Occupational Level	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Deceased	9	6	19	12	28	18
Unskilled labor	18	12	33	21	51	33
Skilled labor, including supervisory work	18	12	27	17	45	29
White collar, clerical, sales, etc.	0	0	5	3	5	3
Managerial, retail business owner	6	4	11	7	17	11
Professional	0	0	7	5	7	5

TABLE XIV

COMPARISON OF OCCUPATIONAL LEVEL OF THE FATHER TO THE OCCUPATIONAL ASPIRATION OF THE RESPONDENT

Occupational Level of the Father	Occupational Aspiration of Respondent				
	Unskilled labor	Skilled labor, including supervisory work	White collar, clerical, sales, etc.	Managerial, business owner	Professional
Deceased	2	2	16	2	7
Unskilled labor	2	4	23	4	10
Skilled labor, including supervisory work	0	2	25	7	12
White collar, clerical, sales, etc.	0	0	3	0	6
Managerial, retail business owner	0	0	5	3	3
Professional	0	0	5	0	2

they had the necessary qualifications and training at the moment the questionnaire was completed. However, the white collar, clerical and sales fields were by far the most popular choices with sons and daughters of all occupational levels. This is partly true because there were exactly twice as many female respondents as there were male respondents and many of the females indicated stenography and the clerical fields for short term employment prior to marriage. Forty respondents indicated occupational aspirations which may be classified as professional providing they had the necessary training at that time. Their motivation for continuing in formal education does not match their choice of occupation.

The occupational level of the father is compared to the number of respondents who gave lack of money as a reason for not continuing formal education beyond the high school in Table XV. The respondents whose fathers were members of the unskilled labor force or in a skilled labor classification, or deceased, numbered sixty-eight--or ninety-three per cent of seventy-three respondents who give this as a primary reason for not continuing their education. There were only five respondents--all female--in the white collar, managerial and professional class who indicated lack of money as a reason for not continuing their education. This would support the findings of other studies which show that parents are more likely to place a higher priority on providing a college education for boys than for girls.[34]

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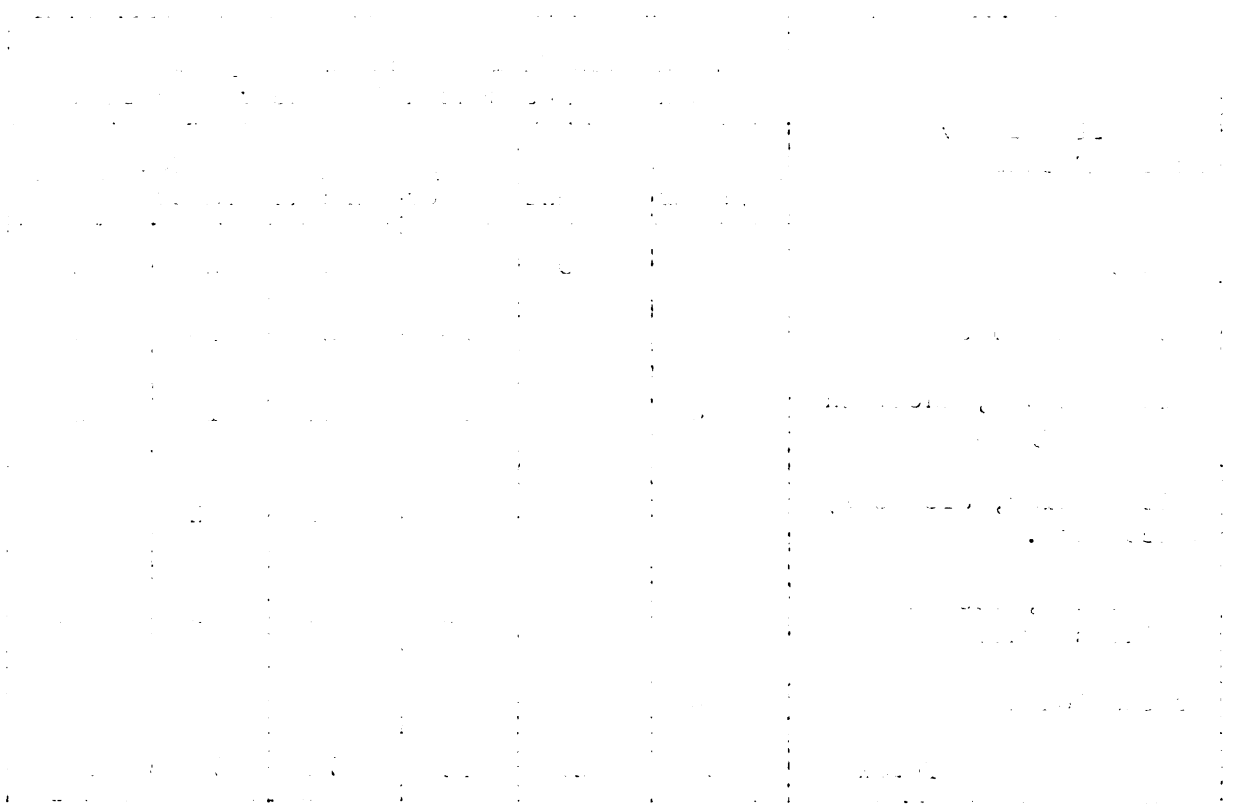
[34]R. F. Berdie, After High School, What? (Minneapolis: University of Minnesota Press, 1954); E. A. Carlin, "Of Those Who Begin," Evalua-

TABLE XV

COMPARISON OF THE OCCUPATIONAL LEVEL OF THE FATHER TO THE NUMBER OF RESPONDENTS WHO GAVE LACK OF MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Occupational Level of the Father	Respondents Giving Lack of Money as a Reason For Not Continuing Their Education					
	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Deceased	4	5	16	21	20	26
Unskilled labor	11	14	23	29	34	43
Skilled labor, including supervisory work	8	10	11	14	19	24
White collar, clerical, sales, etc.	0	0	2	3	2	3
Managerial, retail business owner	0	0	3	4	3	4
Professional	0	0	0	0	0	0
Total	23	29	55	71	78	100



The occupational level of the father is compared to the number of respondents indicating a desire to earn money as a reason for not continuing their education in Table XVI. Fifty-four respondents reported their fathers deceased or working as an unskilled laborer. Twenty-nine respondents reported their fathers working in a skilled labor classification or in a supervisory capacity. A significant finding is that there were only seventeen respondents with fathers in the white collar, managerial or professional groups, three of whom were boys.

An examination of the questionnaires of the three boys with fathers in managerial positions revealed that each one was planning to enter a family owned business: a service station-garage, a dry cleaning plant, and a clothing store.

Information concerning the number and type of community organizations the parents of the respondents held membership in was sought in the questionnaire. The responses are presented in tabular form in Table XVII.

It was found that next to the church, the labor union had the largest representation. Thirty-seven respondents, or twenty-four per cent of the total group, reported that their fathers were members of a labor union.

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tion In The Basic College At Michigan State University, ed. Paul Dressel, (New York: Harper and Brothers, 1958); B. S. Hollinshead, Who Should Go To College (New York: Columbia University Press, 1952).

TABLE XVI

COMPARISON OF THE OCCUPATIONAL LEVEL OF THE FATHER TO THE NUMBER OF RESPONDENTS WHO INDICATED A DESIRE TO EARN MONEY AS A REASON FOR NOT CONTINUING THEIR EDUCATION

Occupational Level of the Father	Respondents Stating a Desire to Earn Money as a Reason For Not Continuing Their Education		
	Male	Female	Total
Deceased	5	15	20
Unskilled labor	12	22	34
Skilled labor, including supervisory work	9	20	29
White collar, clerical, sales, etc.	0	4	4
Managerial, retail business owner	3	8	11
Professional	0	2	2
Total	29	71	100

TABLE XVII

COMMUNITY ORGANIZATIONS TO WHICH PARENTS BELONG

	Organization	Number	Percent
1.	Veterans organization (or auxiliary)	14	9
2.	Parent Teacher Association	36	24
3.	Rotary Club	4	3
4.	Kiwanis Club	3	2
5.	Other luncheon clubs	13	8
6.	Lodge (Masonic, Moose, Elks, etc.)	20	13
7.	Labor Union	37	24
8.	Chamber of Commerce	4	3
9.	American Association of University Women	3	2
10.	Professional Association (medical, engineers, teachers, etc.)	17	11
11.	Church	82	54
12.	No organization	19	12

The Data are reviewed. The level of family income as reported by the respondents, the educational level attained by the father, and the occupational level of the father are important determinents in predicting college attendance for our capable youth. Each of the above factors will be reviewed as they relate to the hypotheses stated in Chapter One.

The data relative to the approximate level of family income give strong support to the first hypothesis, "students in the top quartiles of public high school graduating classes who do not plan to continue their formal education are unable to do so for financial reasons."

Fifty-one per cent of the respondents in this study indicate they are not continuing in formal education because they do not have the money needed to finance a college education. This figure is noted in Table II.

An examination of the data presented in Table III will show two male and fifteen female respondents reporting an approximate family income of less than $2,000. An examination of the individual questionnaires of the seventeen respondents reveals that sixteen came from homes where the father is deceased. The seventeenth respondent reported his father ill and unable to work and that his mother was employed as a waitress. The questionnaire of the last respondent also disclosed that he was the eldest of four children. Further, he would be needed at home to help support the family.

An additional fourteen respondents reported approximate family incomes in the $2,000 to $3,499 range. The probability of college

attendance for the twenty per cent reporting approximate family incomes of less than $3,500 is remote. The student would need a high degree of motivation to enter a four-year period of sacrifice and self denial necessary to finance--and complete the requirements for--a college degree.

The problem is a little less acute for the fifty-four respondents reporting approximate family incomes of $3,500 to $4,999. It is a major problem for the thirty-five female respondents, however, as it is more difficult for girls to earn the difference between what the family can afford to contribute and the total cost of attending college.

The respondents reporting approximate family incomes of $5,000 to $7,499 appear to give a higher priority to more immediate goals. Each of the sixteen male respondents, for instance, reports ownership of a late model automobile.

When the writer interviewed the male respondents in this family income group, he asked this question of seven males who reported ownership of an automobile, "Why do you feel that owning an automobile is important?" The responses ranged from "my friends have one," to "I need it to get to work after school." The three respondents interviewed who said they needed a car for transportation to work after school also admitted spending most of their earnings paying for and maintaining the car.

During the interviews conducted with ten female respondents who reported approximate family incomes of $5,000 to $7,499, the writer noted that nine of the ten wore diamond engagement rings. The diamond

engagement ring seemed to be as important a status symbol for the girls in this group as the automobile for the boys.

It would appear that the willingness to spend money for education in the families earning an approximate annual income of more than $5,000 is likely to be complicated by environment, family expectation, and individual motivation to the extent that it is difficult to justify lack of money as a reason for the respondents in this group to terminate their education with a high school diploma. This is supported by the data found in Table V.

A comparison of the approximate family income to the number of respondents who indicated a lack of money as a reason for not continuing their education will show sixty-six of the seventy-eight respondents giving this reason reporting approximate family incomes of less than $5,000. Only twelve respondents reporting approximate family incomes of $5,000 or more give this as a reason for not continuing in formal education.

On the basis of the data reported by the respondents, the hypothesis, "students in the top quartiles of public high school graduating classes who do not plan to continue their formal education beyond the high school are not able to do so for financial reasons," is accepted for students who report approximate family incomes of less than $5,000. The hypothesis will have to be rejected for students who report approximate family incomes of more than $5,000.

Data related to the Educational Level attained by the Father. The level of education attained by the father seems to be another

important factor in predicting the likelihood of college attendance for a son or daughter. While it is almost a universal wish for parents to desire more of everything for their children than they had, the prospect of attending college seems to be a very remote possibility in many cases. This seemed to be particularly true when parents, especially the fathers, have not completed a high school education.

An examination of the data contained in Table VII will show thirty per cent of the respondents reporting fathers with less than a high school education. An additional forty-one per cent report their fathers have completed a high school education. While twenty-one per cent report their fathers have completed an apprenticeship, trade, or a technical school course, only eight per cent indicate their fathers have a college degree.

The probability of college attendance is least likely for respondents with fathers who have less than a high school education. Parents of respondents in this group are not faced with the social pressures of college attendance for their children as are the parents who have graduated from high school and who may now be in the skilled labor, white collar, or managerial group. A common expectation of parents who have less than a high school education is for the boys to find a job and marriage for the girls.

Forty-one per cent of the fathers of respondents have completed a high school education. The effects of the approximate family income and the level of occupation attained by the father are closely related to this group of respondents, however, as thirty-eight respondents in

this group (see Table X) reported an approximate annual family income of less than $5,000.

A comparison of the educational level attained by the father to the occupational level of the father is made in Table IX.

An examination of the table will show sixty-seven respondents (forty-four per cent) who report their fathers having a high school education, or less than a high school education, also state their fathers are deceased or working in unskilled labor. Enlarging this group to include fathers who are working in skilled labor and have completed an apprenticeship, trade school, or technical school program, will increase the number to one hundred seventeen respondents, or seventy-six per cent.

The weight of the evidence indicates that the second hypothesis, "students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher learning have parents who do not have a history of college training," can be accepted.

An examination of the data related to the third hypothesis, "students in the top quartiles of public high school graduating classes who do not plan to continue their formal education in an institution of higher education have parents with occupations for which collegiate training is not essential," indicated that this hypothesis can be accepted.

Examination of the data contained in Table XIII reveals one hundred twenty-four respondents--or eighty per cent--report their

fathers deceased, working in unskilled labor, or in a skilled labor classification. Some additional training may be required for the skilled labor group, but it does not necessarily mean that the additional training will culminate in a college degree. The most common practice in industry is to offer on-the-job training for promising employees before promoting them to a higher level of responsibility.

The relationship of the occupational level of the father to the number of respondents indicating a lack of money as a reason for not continuing their education may be noted in Table XV. Seventy-three of the seventy-eight respondents who gave this as a reason report their fathers deceased, in unskilled labor, or in a skilled labor group. The most striking information contained in Table XV is the total absence of male respondents in the white collar, managerial, and professional groups. While there were only five female respondents in the latter groups, it would appear that even these segments of our occupational classifications place a higher priority on additional formal education for boys.

Additional support for the influence of the occupational level may be found in Table XVI. Eighty-three of the one hundred respondents indicating a desire to earn money as a reason for not continuing in formal education report their fathers deceased, in unskilled labor, or in skilled labor. Only seventeen--three male respondents--report their fathers in the white collar, managerial or professional group.

Further examination of the occupational aspirations of the respondents in Tables VIII and XIV will reinforce the importance of

adequate finances in predicting college attendance. There are thirty-seven respondents aspiring to professional occupations with fathers who have less than a college education. Of the twenty-six male respondents with professional aspirations, twenty-four indicate a lack of finances and report approximate family incomes of less than $5,000. However, twelve of the twenty-four also report they have no clear plans for the future. An examination of the questionnaires of the eleven female respondents with professional aspirations and having fathers with less than a college education discloses some additional evidence on the negative influence of inadequate finances. Ten of the eleven girls said they did not have the money for a college education and also reported approximate family incomes of less than $5,000.

The interrelationship of family income, level of education attained by the father and the occupational level of the father is an important consideration in predicting college attendance for our capable youth.

A re-examination of Tables III (approximate level of family income), VII (educational level attained by the father), and XIII (occupational level of the father), will show fifty-four per cent of the respondents reporting approximate family incomes of less than $5,000, seventy-one per cent indicating their fathers have a high school education, or less, and fifty-one per cent reporting their fathers in less than a skilled labor classification. Each factor considered in the three hypotheses reinforces the other two for over one-half of the respondents.

The tables will also show only sixteen respondents report approximate family incomes of $7,500 or more; eight per cent of the fathers with college degrees and five per cent of the fathers in a professional occupational classification.

An interest in the results of the I.Q. or ability tests of the respondents was expressed in Chapter One. An hypothesis concerning the I.Q. test results of the students in the top quartile not continuing in formal education was not stated.

The scores of the five different tests are expressed in percentiles according to national norms in Table XVIII. The median percentile is 69.6 and the mean percentile is 70.1.

Thus, it would seem that many of the students in the top quartile according to the grade point average would not be in the top quartile in ability. This is not a startling finding, however, as it is a very typical pattern of ability test scores and grade point averages. Every public high school principal, counselor, and teacher can cite numerous examples of over-achievers, and students with a high level of ability but with little or no motivation for academic success. Further, psychologists and counselors have agreed that most of the tests are biased in terms of certain environmental experiences.

An unknown percentage of the twenty-two male respondents who are planning to enter military service may still continue in formal education after completing a service enlistment.* The writer has

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*See Appendix C, question No. 60.

interviewed many young men who were considering entering Michigan State University after two or three years in the service.

The data were not compared according to size of high school or community typology as there were such minute differences in the percentages of replies to specific questions in the questionnaire.

Questions 74 and 75 asked for the intelligence, ability or achievement test scores for each respondent, if the information was in the student's permanent record folder.

TABLE XVIII

DISTRIBUTION OF INTELLIGENCE TEST SCORES EXPRESSED IN PERCENTILES

Percentile	Number of Students
90	8
80	45
75	3
70	10
69	17
66	17
60	26
55	1
50	16
40	3
No test data	7
Median percentile 69.6	
Mean percentile 70.1	

CHAPTER V

SUMMARY AND CONCLUSIONS

The data provide some answers to the questions with which this thesis is concerned.

Some of the students in the top quartiles of their graduating classes do not continue in formal education in institutions of higher learning because their families do not have sufficiently high incomes to send them.

It is difficult to believe that a family with an annual income of less than $3,500 can afford to send a son or daughter to college without some kind of financial assistance. The twenty per cent of the respondents who reported an approximate annual family income of less than $3,500 would appear to be a considerably larger percentage in this income group than the national figures show for the nation as a whole. There is no way to prove this, however, because the national figures do not show the incomes of parents by the age groups of children.

The willingness of families in the lower income groups to spend money on education is likely to be complicated by other factors. The environment, family expectations, and motivation may be equally important in determining whether or not the student will enter college.

Each of the factors mentioned above will be influenced by the educational level attained by the parents, especially the father. If the father has had additional formal education to the extent of a college degree, the family is very likely to interact with families

where the father has had a comparable period of formal education. The expectations of the family with regard to their children will probably be higher than if the father had not had additional formal education.

As stated previously, the dominant interests of the parents of the lower echelons of the occupational hierarchy lie with the job, labor union, lodge group, an organization such as the parent-teacher association, and probably a church group.

The occupational level of the father will also have a bearing on the environment, family expectations and motivation of the student.

Respondents with fathers in the lower echelons of the occupational hierarchy will not usually be exposed to the environmental factors which place a value on continued formal education. The homes of these respondents will almost always lack a library of any kind. The reading material may consist of a daily paper, perhaps a news magazine, and magazines similar to the Saturday Evening Post and the Ladies Home Journal--and even these magazines are often not read.

The expectations with regard to their children will not be as great as they would be if the father were employed in a white collar, managerial, or professional occupation.

The dominant interests of fathers in the lower occupational groups seem to lie most often with the job, and related areas such as the labor union. A lodge group, and an organization such as the parent-teacher association will usually occupy some of the leisure time. A church affiliation may also occupy some of the time he is not on a job.

Conclusions. The respondents in this sample who report approximate family incomes of less than $5,000 seem to take a realistic view of their financial ability to enter a college. It is quite likely that they have been exposed to the phrase "we can't afford it" to the extent that their motivation is in the direction of obtaining a job so they may afford some of the things they have been forced to do without.

The problem of finances does not appear to be a major factor for respondents reporting approximate family incomes of more than $5,000. It would appear that the male respondents reporting approximate family incomes of more than $5,000 simply are not interested in continuing their formal education.

The level of education attained by the father is an important consideration in predicting college attendance for this group of respondents. Only eight per cent of the respondents reported fathers with a college degree. It would appear that families where the father had earned a college degree place a greater value on continued formal education than do the families where the father had not earned a college degree. This seems to be particularly true in the case of male respondents, as there were only three male respondents in this group.

The occupational level of the father would seem to be equally important in predicting college attendance for a child. There were only seven female respondents who reported their fathers in a professional classification. Eighty per cent of the respondents in this study reported their fathers in the skilled-unskilled labor or deceased classifications.

Another deterant to college attendance would be the lack of a plan on the part of the respondents after graduation from high school. Forty-six per cent of the respondents indicated they had no clear-cut plan for the future.* The absence of occupational and educational plans may be symptomatic of other negative influences which the respondents find difficult to verbalize.

Recommendations. It would seem that an earlier identification of the able student with appropriate counseling would help to reduce the loss of talent for both males and females. It would require a counselor of unusual ability to encourage an otherwise able student to elect courses which would be more challenging, when the student is most interested in following the line of least resistance. This would involve meetings with parents where the abilities of the student could be discussed objectively so that parents may also encourage the son or daughter to develop their academic talent in line with their abilities. This would not be a revolutionary action, as athletic coaches have been doing this for some time. The only difference would be in the kind of talent being developed.

Much more attention should be given to the opportunities open to educated women in our society. Since most of the young women express an interest in marriage, it should be pointed out that many of the professions open to educated women compliment, rather than oppose marriage.

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*See Appendix C, question No. 46.

Scholarship grants in greater amounts should be forthcoming from society as a whole to provide for the financial needs of able students who could not otherwise afford to continue in formal education. The total society should contribute in this area as everyone benefits from the contributions of educated men and women.

Leaders in secondary education should attempt to develop community scholarship "booster clubs" in a number equal to the "band booster" and "athletic booster" clubs which abound in many of the communities of the state. This would be a source of continued satisfaction to the participants, as the cycles of successful and unsuccessful seasons would not be as extreme in the accomplishments of academic talent as they are in athletics and music.

Suggestions for further study. The writer would like to see this study followed by other studies concerned with the loss of talent which takes place when students with ability do not continue in formal education in institutions of higher learning.

Studies should be made which would:

1. Compare the characteristics of students in the top quartiles of graduating classes who do continue in formal education with students who do not plan to continue.

2. Determine the age level at which occupational and educational aspirations become crystalized with students who plan to continue their formal education in institutions of higher education.

3. Isolate and measure the effects of motivational factors which determine whether or not a student will continue in formal education.

CHAPTER VI

ADDENDUM

Thomas Jefferson has said, "We must dream of an aristocracy of achievement arising out of a democracy of opportunity." If additional formal education for our able students is denied for reasons which the public high school--and society as a whole--could minimize, a democracy of opportunity is not being provided.

Identification of the able student. There is no one method of identifying the able student. Some interest groups have advocated tests as the most objective measuring instrument for determining ability. This position is countered by statements indicating that tests are subjective in terms of environmental factors surrounding the student.

Several speakers who have addressed meetings attended by the writer during the past two years stated that the ability level of students should be identified at an early age and programs must be planned which would challenge the student so that he might maximize the utilization of his ability.

Some school systems have advocated a multi-track curriculum which would channel students into programs based upon the results of intelligence or ability tests. Further, they have indicated the track followed by the student on the certificate or diploma issued to the student upon graduation from the secondary school.

Other school systems have maintained that the best single

indicator of student ability is the grade average earned by the student. For supportive evidence, these school systems state that students form naturally homogeneous groups based upon the course elections made by the student after careful counseling by teachers or counselors.

There are certain principles which should be followed by school administrators, counselors and teachers in identifying students of superior ability.

The first principle is that the process of appraisal must be a process which would continue over several years. It should include an adequate testing program administered periodically. A single test is not a valid instrument in determining ability, as there are many factors which are ignored when a single test is used. These factors may be: the time of day during which the test is administered, short-term emotional upsets which may be hampering the student, the socio-economic bias of many tests and the differences in the rate of growth and maturity of the several youngsters. The appraisal should include the grades earned by the student, accompanied by yearly judgments of teachers and counselors.

The second principle which should be followed is that the identification of able students must be based on as many different kinds of evidence as it is possible to obtain. Intelligence tests provide some information. Achievement tests provide additional information. School grades and rank in class offer another kind of evidence. Each of these is important, as there is no single instrument which

would give a clear picture of the talents of students.

Another principle which should be noted is that the appraisals should consider the environmental problems faced by the student. The environmental factors help determine the interests of the student and the motivational factors which play such an important part in scholastic achievement.

Counseling. Someone has said, "For the American youth who really wishes to succeed, a college degree has become a basic requirement. Unlike in previous decades, however, the degree is no longer so much a help in competing for a good job as it is a requirement to enter the race." The truth of this statement becomes obvious after an examination of the placement records of college placement bureaus. Positions in industrial training programs which were open to graduates of secondary schools a little more than a decade ago, now require a college degree as a preliminary screening device.

The role of the counselor assumes added importance in helping students to plan a secondary school program which will help them to progress as far as their talents will take them. For some students, graduation from a secondary school will mark the end of their formal education. For the able students, with which this thesis is concerned, every effort should be directed toward encouraging them to continue their education in an institution of higher education.

The importance of continuing in formal education is not always emphasized by teachers and counselors as it should be. The writer found several instances in the medium sized schools (Class B and Class

C) where the counselor was satisfied with a surface answer such as "I do not want to go on to college," or "I can't afford it," or some other reason without attempting to probe for the reasons prompting these remarks. A counselor interviewed by the writer stated he was just as pleased if he could place an able student in a job such as a bank clerk, bookkeeper, sales trainee, or some other comparable job, if the student stated that he could not continue in formal education after graduating from high school. The reason offered for this was that college attendance was not a normal expectation of the community, and he did not see why he should "swim against the tide."

On the other hand, several examples of excellent counseling programs were found in schools of comparable size and community typology, often the neighboring school. Outside resources were called in to inform the students of the demands of different kinds of professions in one instance, with little use being made of competent resource people available in the community in another school located twelve miles away. Also, in the former case, the school had a substantial loan fund for students, while the neighboring school operated under the notion that the problem of financing an education was not a proper concern of the school.

Particularly noteworthy were the comments made by one counselor in the northern part of the state in which he stated he encouraged his able students to develop their intellectual talents on as broad a base as possible. He did not believe that the able student should be forced to make an early vocational choice which would keep the student from

gaining experiences in other academic areas. He was most concerned with trying to acquaint his students with the requirements of a number of vocational fields, being careful to point out that decisions concerning their ultimate careers should not usually be made as early as the ninth grade level. This counselor was most concerned with maintaining a continuing liaison with all of the parents of the students. He found these conferences a valuable source of information which helped to insure a more effective counseling program for the students.

Secondary schools with strong counseling programs involve the teachers in a major role, as this is the primary point of contact. It was interesting to note that where the teacher was closely involved in the counseling program, there was considerable evidence of staff stability. The superintendent of schools in one of the smaller schools stated that he believed the members of the teaching staff made their greatest contribution to the students after they had been in the school system for at least three years. He added that it would usually take at least three years for a teacher to begin to understand the mores peculiar to a given community and to learn to deal with prejudices which might stand in the way of a good educational program.

The emphasis is on success, rather than failure, in schools with outstanding counseling programs. The thrill of success is emphasized over the fear of failure. There seems to be an intangible quality by which a visitor can appraise the leadership of a school as soon as the front door is opened. There is a degree of enthusiasm which is

noticeable in a success-oriented school that is conspicuous by its absence in a failure-oriented school. Students in the former type of school will be quick to point out to visitors the things of which they are most proud in a success-oriented school.

Solving the financial problem. The possibilities for educational leadership in helping to eliminate the financial hurdle of college attendance are limitless. A few of the more imaginative school officials are establishing scholarship and loan funds through active support of community service clubs. Others are securing funds from business and industry which are used to sponsor a college education for deserving high school graduates who could not otherwise afford to continue their education. Some high schools visited by the writer had established substantial loan funds for students which authorized non-interest bearing loans up to $400 per academic year for the students who wished to continue their formal education. These funds had been established in several ways, which included the following: benefit athletic contests, community suppers, profits from magazine subscription drives, and scrap paper drives, and noon hour movie programs. In two separate instances, the local business establishments and the small local industries began to contribute to these funds after noting the efforts of the students and teachers of the hign schools concerned.

The writer has read or heard a number of statements written or uttered by persons in positions of influence supporting the thesis that a greater portion of the cost of a college education should be borne by the student. The reason offered by the writer or speaker for making

this statement was that the principal beneficiary of a college education is the recipient. This would be true if society were not concerned with advances in the sciences, in medicine, in understanding the mores of other nations, in establishing political and international policy which would insure a lasting peace, in gaining a better understanding of human behavior, and other areas too numerous to mention which would lead to richer and fuller lives for all people.

Considerable sums of money are expended by governments the world over for destructive purposes. The defense budget of this nation is at a very high level and shows no signs of decreasing. In the event of another war, it would seem reasonable to assume that a considerable proportion of our national income would be diverted to develop destructive forces which would be even more efficient than they are at the present time. It would also seem reasonable to assume that large sums of money would be spent in educating and training men to man the machines of destruction.

Examples of expenditures of this kind could be found on almost every college campus during World War II when men in uniform were sent for additional education and training in order to become more proficient for the task of the moment--namely, to destroy the enemy or its will to survive.

It does not seem reasonable to deny American youth the opportunity for additional education directed for peaceful purposes once a national emergency is over by limiting the opportunity to those who are able to finance a college education. This would imply that the

young men and women have now become a liability instead of the asset they were during the emergency.

The G. I. Bill, which made education possible for so many after World War II and the Korean War, has demonstrated that an educated man has become a productive man. The opportunities for the uneducated to become productive are becoming smaller and will continue to be so as the need for unskilled labor to man the instruments of production decreases. It would appear, then, that it would be a wise investment for society to minimize the problem of finances as one reason why young people with ability do not continue their education after graduating from high school. The probability of technological employment is far more likely for graduates of secondary schools who do not prepare themselves for the more complex jobs in the increasingly technical and competitive job market.

Motivation. While the lack of financial resources is the principal obstacle which prevents an able student coming from a family with an approximate annual income of less than $3,500 from continuing in formal education, there are a number of other factors which inhibit young people with ability in this group from attending institutions of higher learning. The style of life of a family in this income group is usually not conducive to an occupational aspiration which would require additional formal education. This lack of family encouragement for additional education for students in this group was reinforced on many occasions during a recent tour of public high schools located in the less privileged areas of the state. In several instances, a

valedictorian or a salutatorian of a high school graduating class was not planning to continue in higher education because the family did not consider it important. Greater emphasis was placed on more immediate goals such as employment for the male graduates and marriage for the female graduates.

The statement, "My parents think it more important for a boy to go to college than for a girl, because it is a waste of time and money if the girl decides to marry," was heard on several occasions during the course of interviews with these able students. Conversations with the principals and counselors of these students revealed there were several instances when specific instructions were given to the principals and counselors by the parent to stop trying to influence their children in the direction of a college education, as they could not afford to send them.

The data in this study revealed that the problem of finances was a critical problem for students coming from families earning an approximate family income of less than $3,500. It was a little less critical for those students who came from families reporting approximate family incomes of less than $4,999. An assumption can then be made that there is another inhibiting factor preventing able students from continuing their education who come from families earning more than $5,000 a year.

During the interviews conducted with high school principals and counselors during a recent tour, the comment, "He or she just does not want to continue in formal education," was heard on several occasions.

This was not a new experience, as the writer has had similar frustrating experiences while serving as a high school principal.

There are techniques which can be used, however, to increase the level of motivation for some of these able students to continue their education beyond high school.

Many high schools now honor achievement and scholarship on an equal or higher plane than athletic or other achievements. Two school administrators recently interviewed by the writer have organized scholarship banquets in which the community as a whole participates. Achievement in subject matter areas and other areas of academic interest are recognized and publicized. The results of these efforts have increased the percentage of students going on to a junior college, college or university to over fifty per cent of the graduating classes for the past five years. These efforts were particularly noticeable as the schools were located in areas which are considered as economically depressed areas in the state. An examination of the high school course of study in these particular schools will also show that the interests of the non-college bound students are not being neglected.

Local chapters of national honor societies also have limitless possibilities for motivating students to continue their education beyond high school. More important, they could serve as a stimulus to motivate students to perform more nearly in line with their ability and to help overcome other obstacles which might stand in the way of attending an institution of higher learning. Honor societies and comparable organizations in public high schools have had marked success

in overcoming pressure from other students which is sometimes directed at high achievers.

By initiating and encouraging school organizations which honor academic achievement, public schools can raise the level of expectations on the part of the school citizens. By placing a sufficiently high value on intellectual performance, a school can make it socially acceptable for students to engage in intellectual activities.

The problem of motivating these students is an important area of activity for counselors and teachers. Working with the parents and the student, a counselor or teacher can motivate the gifted student by helping him to understand the potential of his own capabilities. Some of the gifted students interviewed were not made aware of their potential which could lead to unlimited opportunities as a result of additional education beyond the high school.

During the course of visits to many public secondary schools, the writer found that efforts, on the part of teachers, to increase the level of motivation quite often consisted of statements exhorting the students to perform more nearly in line with their ability, or to suffer the consequences of a failing grade. Counselors and teachers reinforced statements of this kind with an implied threat that a recommendation for college or employment would not be forthcoming unless steps were taken by the students to earn better grades. The writer met with many students who had ability according to the results of standardized intelligence tests administered by the school, but who

were classified as under-achievers. The students indicated they were bored with uninspired teaching and the constant repetition and drill demanded as part of written assignments. These conferences further revealed that little effort had been directed toward determining what the able non-achievers were interested in, or to capitalize on this interest to raise the level of aspiration of the students.

There are techniques which could be used by secondary school personnel to help students with ability to raise the level of occupational and educational aspiration. One technique which usually meets with success is to provide for the student an opportunity to meet with a perceptive, successful person in the community--one who is recognized as a leader in the community--for additional counseling.

Our society would be better served if our colleges and universities would assume a position of leadership in providing competent resource people whose primary function would be in the area of secondary school-college relations. Periodic visits to high schools by college representatives--without the threat of inspection--who are subject matter specialists would be a welcome service to the secondary schools located in the less privileged areas of the state. To be most effective, these visits would be in the form of proffered service and to open other channels of communication between high schools and colleges, in addition to meeting with students at the request of secondary school personnel to discuss the advantages of continuing in formal education. Visits to secondary schools by college or university representatives would not be welcomed by secondary schools if the

purpose of the visit was to recruit students toward a particular college or university.

Summary. The areas of concern, then, are: the identification of the student with ability, to provide the student with adequate counseling and instruction which will encourage him to develop to the limits of his ability, to minimize the influence of negative environmental influences, and to remove insofar as possible the financial barriers often encountered by students who should continue their education on a collegiate level.

The identification of students with ability is of major importance in reducing a talent loss that our society can ill afford to lose. It is equally important to the student, as there is a condition of chronic unemployment and, at the same time, a shortage of technically trained people.

It would appear that the most fruitful area of research would be pointed toward the development of an "educational super-highway" with many entrances and exits. The entrances would permit a student to enter the most challenging programs as soon as a readiness for the specific program is demonstrated. The exits would enable the student to decelerate academically without pressures from parents, if the evidence would indicate that the student could not succeed on the particular program for reasons which cannot be resolved.

BIBLIOGRAPHY

A. BOOKS

Berdie, R. F. After High School, What? Minneapolis: University of Minnesota Press, 1954.

Carlin, E. A. "Of Those Who Begin," Evaluation In The Basic College At Michigan State University. Edited by Paul Dressel. New York: Harper and Brothers, 1958.

Conant, J. B. Education In A Divided World. Cambridge: Harvard University Press, 1948.

Hollingshead, A. B. Elmtown's Youth. New York: John Wiley and Sons, Inc., 1949.

Hollinshead, B. S. Who Should Go To College. New York: Columbia University Press, 1952.

Kahl, J. A. American Class Structure. New York: Rinehart, 1957.

Rothney, J. M. W., Roens, B. A. Guidance of American Youth: An Experimental Study. Cambridge: Harvard University Press, 1950.

Williams, R. A., Jr. American Society A Sociological Interpretation. New York: Alfred A. Knopf, 1952.

Wolfle, Dael. "America's Intellectual Resources," Educating the Gifted. Edited by Joseph French. New York: Henry Holt and Company, 1959.

B. PERIODICALS

Bradley, W. A. "Correlates of Vocational Preference," The Genetic Psychology Monograph, (1943), pp. 99-169.

Carter, H. O. "The Development of Vocational Attitudes," Journal of Consulting Psychology, IV, pp. 185-91.

Conant, J. B. "Can Our High Schools Do the Job?" Carnegie Corporation of New York, VI:7 (April, 1958), pp. 1-5.

Cunningham, S. D. "Vocational Plans of a Select Group of High School Seniors," The School Review, XI-III (April, 1938), pp. 281-86.

Feingold, G. A. "Relationship Between Intelligence and Vocational Choice of High School Pupils," Journal of Applied Psychology, VII (June, 1923), pp. 143-53.

Forer, B. R. "Personality Factors in Occupational Choice," Educational and Psychological Measurements, XIII, pp. 361-66.

Gibson, D. L. "Talent Wastage: A Special Type of Genocide." Unpublished paper delivered before the Michigan State University Twentieth Annual High School-Junior College Follow-Up Conference, East Lansing, November 28, 1956.

Ginzberg, E. "Toward a Theory of Occupational Choices," Occupations, (April, 1952), pp. 491-94.

Haller, A. O., Sewell, W. H. "Farm Residence and Levels of Educational and Occupational Aspiration," American Journal of Sociology, LXII:4 (January, 1957), pp. 407-11.

Haller, A. O., Sewell, W. H., Straus, M. A. "Social Status and Educational and Occupational Aspiration," American Sociological Review, XXII:1 (February, 1957), pp. 67-73.

Hurlock, E. B., Tausing, C. "The Vocational Attitudes of Boys and Girls of High School Age," Journal of Genetic Psychology, Section No. 44 (1934), pp. 175-91.

Kroger, R., Louttit, C. M. "Influence of Father's Occupations of the Vocational Choices of High School Boys," Journal of Applied Psychology, XIX (April, 1935), pp. 203-12.

Lipset, S. M. "Social Mobility and Urbanization," Rural Sociology, XX (September-December, 1955), pp. 220-28.

McGill, F. D. "The Public High School Intervenes," College Admissions II, Princeton: College Entrance Examination Board, 1955.

Metzler, J. H. "Do You Really Have A Guidance Program?" School Executive, (December, 1959), pp. 30-31.

Mulligan, R. A. "Socio-Economic Background and College Enrollment," American Sociological Review, XVI (1951), pp. 188-96.

Nelson, E. "Father's Occupations in Students Vocational Choices," School and Society, V (October 28, 1939), pp. 572-76.

Peters, F. F. "Factors Which Contribute to Youths Vocational Choice," Journal of Applied Psychology, XXV (1941), pp. 428-30.

Rabinowitz, R. "Attributes of Pupils Achieving Beyond Their Level of Expectancy," Journal of Personality, XXIV (1956), pp. 308-17.

Rosen, B. "The Achievement Syndrome," American Sociological Review, XXI (1956), pp. 211-13.

Stouffer, S. A. "The Great Sorting," College Admissions III, Princeton: College Entrance Examination Board, 1955, pp. 1-7.

Super, D. E. "Experience, Emotion, and Vocational Choice," Occupations, XXVII (October, 1948), pp. 23-28.

United States Congress, Public Act 85-846, National Defense Education Act.

Williamson, E. G. "On Choosing the Vocation," Occupations, XIV (April, 1936), pp. 636-46.

Wolfle, Dael. "Restrictions of the Supply of College Students," College Admissions, Princeton: College Entrance Examination Board, 1954.

Wright, W. W., and Jung, W. J. "Why Capable High School Students Do Not Continue Their Schooling," Bulletin of the School of Education, Indiana University, XXXV:1 (January, 1959).

APPENDIX A

LETTER TO THE PRINCIPALS

William L. Finni
550 Gunson
East Lansing, Michigan

Dear

Several recent national studies have indicated that almost 40% of the high school graduates who are in the top quartile of their high school graduating classes do not continue their training after the 12th grade. The enclosed questionnaire, which is being sent to the schools of the East Central Association, and other selected schools to insure wide spread geographical distribution, attempts to determine the reasons offered by the students themselves for not continuing their formal training after completing the 12th grade. It will also help to determine whether or not the national percentage applies to graduates of Michigan Public high schools.

The questionnaire is structured in this manner to facilitate transferring the data to I.B.M. cards for machine processing.

Questions 3-4 (student code) asks for the rank in class. Question 8-9 asks for the grade point average. Schools who do not make this information available to the student are asked to complete this portion after the questionnaire is returned by the student. Results of I.Q. or achievement tests and the name and form of the test should be noted on blank 74-75.

If you would give this to your Counselor, senior class advisor or other appropriate person to administer to those students who are in the top quartile of their graduating class and are not planning on continuing their formal training (college), your cooperation would be most heartily appreciated.

As you might suspect, this data will be used in a doctoral study. The results of the study will be made available to the Michigan Association of Secondary School Principals for this years annual meeting, if they wish to use it.

One final note. Please indicate the size of your graduating class on the top of the questionnaire, or at the bottom of this letter.

Thanking you in advance for your cooperation.

Sincerely,

William L. Finni

We have _____ seniors graduating this year.

APPENDIX B

COPY OF THE QUESTIONNAIRE

1-2_____School Code 3-4____Student Code 5-6_____Year of Birth
7_____ _____ Sex 8-9____Grade Point Average (Approximate or actual)
Male Female

10. Fathers education or training (check each unit completed)
    1.____High School
    2.____Apprenticeship
    3.____Trade School
    4.____Technical School
    5.____College or University

11. _____father's occupation (if deceased, indicate with O)

12. Mother's education or training (check each unit completed)
    1.____High School
    2.____Business School
    3.____Technical or trade school
    4.____College or University

13. _____mother's occupation (if any)

14. Community organizations to which parents belong.
    1.____Veterans organization (or auxillary)
    2.____P.T.A.
    3.____Rotary Club
    4.____Kiwanis Club
    5.____Other Luncheon Clubs
    6.____Lodge (Masonic, Elks, etc.)
    7.____Labor Union
    8.____Chamber of Commerce
    9.____Am. Assoc. of Univ. Women
    10.____Professional Association (Medical, Teachers, etc.)
    11.____Church
    12.____No organization

15. Approximate family income
    1.____$2000-$3500
    2.____$3500-$5000
    3.____$5000-$7500
    4.____$7500-$10,000
    5.____Over $10,000

16. ____Number of older children in family

17. ____Number of younger children in family

18. _____ _____Do you own a car?
    Yes No

19. Indicate by check, the extra class activities participated in.

1.____Athletics
2.____Band or Orchestra
3.____Chorus or Vocal Music
4.____Debate
5.____Dramatics (School plays)
6.____Interest Clubs (Science Clubs, Photography Clubs, etc.)
7.____Class Offices
8.____Honor Society
9.____Student Government
10.____No organizations

20 - 44 If you had complete freedom of choice and had the necessary training at this moment, indicate by check the occupation or profession you would like to follow for the rest of your earning life.

20.____Secretary or Stenographer
21.____Beautician
22.____Medical or Dental Technician
23.____Small business owner (store, service station, etc.)
24.____Farmer
25.____Machinist-tool maker
26.____Carpenter-mason-plumber-electrician
27.____Police officer - fireman
28.____Radio-TV technician
29.____Conservation-forestry, wildlife mgt.
30.____Government or Civil Service work
31.____Social Work
32.____School Teacher
33.____Engineer
34.____College Professor
35.____Chain Store or Department Store Mgr.
36.____Lawyer
37.____Doctor
38.____Dentist
39.____Salesman-real estate or insurance
40.____Small factory manager
41.____Research scientist
42.____Big business executive
43.____Work in a factory
44.____Other, Specify_____

45 - 61 The following are possible reasons for not continuing your advanced training. Check the most appropriate answer for each item.

	True in my case	Not true in my case	
45.	_____	_____	Lack of money
46.	_____	_____	No clear cut plan for the future
47.	_____	_____	Plan to marry
48.	_____	_____	Dislike school generally
49.	_____	_____	Dislike study
50.	_____	_____	My family does not think it is necessary
51.	_____	_____	Needed at home to help support the family
52.	_____	_____	My friends are not going on for more education
53.	_____	_____	Do not feel that I want to work that hard
54.	_____	_____	Do not have clothes needed
55.	_____	_____	Do not want to leave my friends
56.	_____	_____	Do not want to leave home town
57.	_____	_____	Not worth sacrifice of time and money
58.	_____	_____	Will enter family business

59._____ _____ Want to start earning money
60._____ _____ Plan to enter the armed forces
61._____ _____ Do not want to work my way through

62.____ ____ Have you considered a bank loan as a means of financing
Yes No further training?

63. How far do you live from an institution offering advanced training or higher education?

1.____Less than 5 miles
2.____5 to 15 miles
3.____16 to 30 miles
4.____31 to 50 miles
5.____51 to 100 miles
6.____More than 100 miles

64 - 73 Indicate by check in the appropriate column, the answer most applicable in your case for each statement.

Yes	No	I HAVE:
64.____	____	attended a career orientation program.
65.____	____	attended a college orientation or information program.
66.____	____	discussed the results of ability, achievement and interest tests with my teachers or counselor.
67.____	____	been informed of scholarship opportunities available and qualifications needed for scholarship help.
68.____	____	received help from my teachers, counselor or principal in planning my high school program in line with my plans for the future.
69.____	____	discussed career choices with teacher or counselor.
70.____	____	been encouraged to seek additional training or continue my education by teacher or counselor.
71.____	____	taken ability or achievement tests.
72.____	____	sometimes been assigned to class sections to fill a class against my wishes.
73.____	____	discussed careers with people who are active in the career I am interested in.

74 - 75

APPENDIX C

SUMMARY OF ALL REPLIES TO THE QUESTIONNAIRE

3-4. Distribution of Percentile Rank in Class for All Respondents: by sex

Percentile Rank	Male	Female	Total
98	1	0	1
97	2	1	3
96	1	5	6
95	0	0	0
94	4	4	8
93	1	1	2
92	1	6	7
91	0	4	4
90	2	9	11
89	1	3	4
88	3	4	7
87	1	6	7
86	2	7	9
85	1	5	6
84	2	7	9
83	0	6	6
82	6	3	9
81	1	3	4
80	5	4	9
79	1	4	5
78	8	6	14
77	0	7	7
76	5	3	8
75	2	4	6
	50	102	152

Median percentile of class rank for all students - 84.8

Distribution of Male and Female Respondents

Males	51
Females	102
TOTAL	153

#10. Distribution of educational level attained by the fathers of the respondents

46 Less than high school education

62 Completed high school

11 Completed apprenticeship

10 Completed a trade school course

11 Completed a technical school course

13 Completed a college or university course

0 No response

#11. Distribution of occupational level of fathers

28 Deceased

51 Unskilled labor

45 Skilled labor, including supervisory work

5 White collar, clerical, sales, etc.

17 Managerial, retail business owner

7 Professional

0 No response

#12. Distribution of educational level attained by mothers of respondents

44 Less than high school education

86 Completed high school

7 Completed business school

5 Completed technical or trade school

11 Completed college or university course

0 No response

#13. Distribution of occupational level of mothers

121 No occupation listed other than that of homemaker

10 Unskilled labor

2 Skilled labor

14 White collar, clerical or sales

2 Managerial, retail business owner

3 Professional (teaching in each case)

1 No response

#14. Community organizations to which parents belong

14 Veterans organization (or auxillary)

36 Parent Teachers Association

4 Rotary Club

3 Kiwanis Club

13 Other luncheon clubs

20 Lodge (Masonic, Elks, etc.)

37 Labor union

4 Chamber of Commerce

3 American Association of University Women

17 Professional Associations (medical, engineers, teachers, etc.)

82 Church

19 No organization

#15. Distribution of family income as reported by respondents

17 None to $2,000

14 $2,000 to $3,500

54 $3,500 to $5,000

43 $5,000 to $7,500

19 $7,500 to $10,000

6 Over $10,000

#16. Number of older children in the family of the respondent

59 None

39 One

30 Two

11 Three

14 Four or more

#17. Number of younger children in the family of the respondent

59 None

39 One

32 Two

10 Three

13 Four or more

#18. Number of respondents who owned cars

46 of 149; 4 did not answer

#19. Extra class activities participated in by respondents

45 Athletics

49 Musical organizations

4 Debate or forensics

37 Dramatics (school plays)

49 Interest clubs (photography, science, etc.)

37 Class offices

28 Honor societies

31 Student government

25 No activities

#20-44. Occupation or profession respondents would follow for the rest of their earning lives if they had complete freedom of choice and the necessary training at the time the choice was made.

54 Secretary or stenographer

9 Beautician

11 Medical or dental technician

6 Small business owner (store, service station, etc.)

3 Farmer

4 Machinist-tool maker

4 Carpenter, mason, plumber, electrician

2 Police officer, fireman

2 Radio-TV technician

4 Conservation, forestry, wildlife management

4 Government or civil service work

9 Social work

10 School teacher

7 Engineer

1 College professor

4 Chain store or department store manager

5 Lawyer

2 Doctor

1 Dentist

4 Salesman, real estate, insurance, automobiles, etc.

1 Small factory manager

5 Research scientist

5 Big business executive

1 Work in a factory

33 Other

#45-61 The following were the reasons offered for not continuing formal academic training beyond the high school.

	True in my case	Not true in my case	Did not answer	
45.	73	78	2	Lack of money
46.	70	79	3	No clear cut plan for the future
47.	61	88	4	Plan to marry
48.	11	140	2	Dislike school generally
49.	20	131	2	Dislike study
50.	14	135	4	My family does not think it is necessary
51.	9	141	3	Needed at home to help support the family

52.	16	134	3	My friends are not going on for more education
53.	18	127	6	Do not feel that I want to work that hard
54.	14	136	3	Do not have the clothes needed
55.	11	139	3	Do not want to leave my friends
56.	11	137	5	Do not want to leave home town
57.	23	125	5	Not worth sacrifice of time and money
58.	7	141	5	Will enter family business
59.	100	50	3	Want to start earning money
60.	22	127	4	Plan to enter the armed forces
61.	20	128	5	Do not want to work my way through

62. When asked if they had considered a bank loan as a means of financing additional academic training, 16 indicated they had, 132 said no, and 5 respondents did not answer this question.

63. The distances the respondents lived from a junior college, college or university.

53	Less than 5 miles	14	31 to 50 miles
40	5 to 15 miles	15	51 to 100 miles
27	16 to 30 miles	3	More than 100 miles*

*Each of the three respondents lived less than 30 miles from Northwestern Michigan Junior College in Traverse City.

#64-73 attempt to measure the guidance and counseling experiences of the students who were not planning to continue their formal education beyond the high school

	Yes	No	Did not answer	I HAVE:
64.	68	79	6	Attended a career orientation program
65.	47	102	4	Attended a college orientation or information program
66.	102	47	4	Discussed the results of ability, achievement and interest tests with my teachers or counselor
67.	73	76	4	Been informed of scholarship opportunities available and qualifications needed for scholarship help
68.	109	41	3	Received help from my teachers, counselor or principal in planning my high school program in line with my plans for the future
69.	95	52	6	Discussed career choices with teacher or counselor
70.	96	53	4	Been encouraged to seek additional training or continue my education by teacher or counselor
71.	126	26	1	Taken ability and-or achievement tests
72.	24	124	5	Sometimes been assigned to class sections to fill a class against my wishes
73.	94	52	7	Discussed careers with people who are active in the career I am interested in

74-75 _____

APPENDIX D

INTELLIGENCE TESTS CONVERTED TO PERCENTILE RANKING

California Test of Mental Maturity, Advanced, Short Form, '57

Total Factors

P.R.	Mental Age Score	I.Q. Score
99	259+	140+
95	238-249	129-134
90	225-237	123-128
80	213-224	118-122
70	205-212	113-117
60	198-204	108-112
50	188-197	103-107
40	181-187	98-102
30	173-180	95-97
20	161-172	90-94
10	148-160	81-89

Detroit Advanced Intelligence Test Form: V & W: Applies to 12th graders

	Raw Scores		I.Q. Score	
P.R.	Small & Medium Cities	Large City	P.R.	Combined Sample
99	185-194	203-287	99	118+
95	168-170	186-188	92	117
90	157	175	80	110
80	143	161	62	104
70	133	151	38	95
60	124	142	20	89
50	116	135	8	82
40	108	126		
30	90	119		
20	80	110		
10	72-74	98-99		

Henmon-Nelson Test of Mental Ability; 1959 ed.

Applies to high school students as follows:

I.Q. Equivalents to various raw scores by age:

Raw Score	Age		
	17	18	19
90	164	159	156
85	147	142	139
80	132	127	125
75	118	114	112
70	110	106	105
65	105	102	101
60	101	99	98
55	98	95	95
50	95	92	91
45	92	89	88
40	88	86	85
35	84	82	82
30	81	79	79
25	77	76	75

Ohio State University Psychological Test, Forms 19 - 22

Applies: Applicants who have taken this test during their high school years (not broken down by grades).

	Total Scores			
Percentile	Form 19	Form 20	Form 21	Form 22
99	115-119	126-131	122-128	124-128
95	101-103	111-113	108-110	109-111
90	91	97-99	95-96	95-96
80	77	81	78-79	79-80
70	67	69	66-67	68
60	59	60	57	59
50	52	53	50	52
40	47	47	44	46
30	42	42	39	41
20	37	37	35	36
10	32	32	20	31
5	28	28	27	28

Otis Group Intelligence Scale

Gamma, Form A & B; Applies to 12th graders

P.R.	Raw Score	P.R.	I.Q. Score
99	210-219	99	128
95	189-180	95	120
88	170-179	90	116
76	160-169	80	110
61	150-159	69	106
46	140-149	66	105
30	130-139	60	103
18	120-129	50	100
10	110-119	40	97
5	100-109	31	94
		20	90

Terman-McNemar Test of Mental Ability

1941, 1942; Applies to age 16 and older

P.R.	Deviation Standard Score	Deviation I.Q. Score
99	41+	136+
95	30	127
90	24	121
85	19	117
80	15	113
75	12	111
70	9	108
65	7	106
60	4	104
55	2	102
50	0	100
45	-2	98
40	-5	96
35	-8	93
30	-10	91
25	-12	89
20	-16	86