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A COMPARISON OF MICHIGAN STATE COLLEGE FIRST TERM FRESHMAN  
DROPOUTS AND NON-DROPOUTS ACCORDING TO CERTAIN FACTORS

ABSTRACT

The purpose of this study was to compare Michigan State College entering fall term freshmen who do not return for the winter term with those who do return for that term. The latter were designated as the non-dropouts and the former the dropouts. They were compared with respect to six factors: (1) scores on the American Council on Education Psychological Examination, (2) scores on the Basic College Inventory of Attitudes and Beliefs, (3) ratings on the High School Rating Scale of the Michigan State College Application Blank, (4) education of parents, (5) occupation of father and (6) sex.

The non-dropout group was composed of 393 students enrolled for the fall terms of 1948 and 1949. It was selected as a random sample of the 5,470 freshmen of those fall terms by the random number technique and found to be representative by ACE scores and sex.

The dropout group was composed of 373 students enrolled for the fall terms of 1948 and 1949.

A subgroup was formed and compared with the dropouts to see if during term dropouts differed from the total first

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term dropout group with respect to the factors studied. It was composed of 116 dropouts who did not finish the fall term and who did not give transfer, death in the family or serious injury as reason for leaving.

The data with respect to the six factors mentioned were found in the records of the Michigan State College.

The significance of the differences between the groups was determined factor by factor with either the analysis of variance or Chi square test of significance.

Significant differences were found to exist between the dropouts and non-dropouts for a number of factors. Entering fall term freshmen dropouts were found to have parents with lower socio-economic status and educational level than the non-dropouts. These dropouts tended to have less intelligence than did the non-dropouts. These differences were significant at the one per cent level of confidence.

Dropouts in comparison with non-dropouts were found to have less seriousness of purpose, less independence of effort and less participation in democratic processes. These differences were significant at the five per cent level of confidence.

Significant differences were not found to exist between the subgroup dropouts and dropouts except for



tractability. The dropouts were found to have the most tractability. This difference was significant at the five per cent level of confidence.

Since this land grant institution is supposed to offer as near equality of educational opportunity as possible for all, the data with respect to occupation of father and education of parents of Michigan State College students were compared with the Michigan and national Census figures.

Michigan State College non-dropouts had about eleven per cent of their fathers with occupations listed in the lower two socio-economic groups; for the state of Michigan forty-five per cent of the employed males were so classified.

Michigan State College non-dropouts had about thirty-six per cent of their parents with education beyond high school; for the country as a whole about fourteen per cent went to college.

The most significant differences found to exist between dropouts and non-dropouts were with respect to intelligence, education of parents and occupation of parents. Subgroup dropouts tended to differ a little but not much from dropouts.

A handwritten signature in dark ink, appearing to read "P. P. Furber". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.



**A COMPARISON OF MICHIGAN STATE COLLEGE FIRST TERM FRESHMAN  
DROPOUTS AND NON-DROPOUTS ACCORDING TO CERTAIN FACTORS**

**By**

**James W. Russell**

**A THESIS**

**Submitted to the School of Graduate Studies of Michigan  
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in partial fulfillment of the requirements  
for the degree of**

**DOCTOR OF PHILOSOPHY**

**Department of Education**

**1952**

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REMARKABLE AGREEMENT IS OBSERVED WITH THE RESULTS OF OTHER STUDIES.

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## CHAPTER I

### INTRODUCTION

This study dealt with the description of first term freshman dropouts and non-dropouts at Michigan State College for the years 1948 and 1949.

#### I. THE PROBLEM

Statement of the problem. This study dealt with a comparison of fall term entering freshman dropouts with fall term entering freshman non-dropouts at Michigan State College according to a number of factors. These factors were scores on the American Council on Education Psychological Examination, scores on the Basic College Inventory of Attitudes and Beliefs, ratings on the High School Rating Scale found on the Michigan State College Application Blank, occupation of father, education of parents and percentages of men and women.

There were three groups used: (1) dropouts, (2) non-dropouts and (3) subgroup dropouts. The dropouts consisted of fall term entering Michigan State College freshmen for the years 1948 and 1949 who did not register for the winter term. The non-dropouts consisted of a random sample of fall term entering freshmen. The subgroup



dropouts consisted of those dropouts who left during the term minus those who gave transfer, death in family or serious injury as reason for dropping out.

The number of cases involved were as follows:

1. Total fall term entering freshmen	5470
2. Total fall term dropouts 1948 & 1949	373
3. Random sample of non-dropouts 1948 and 1949	393
4. Subgroup dropouts	116

Representativeness of the samples. The random sample of non-dropouts was selected by the random number technique and found to be representative by ratio of men to women and scores on the American Council on Education Psychological Examination.

Research methodology. This research dealt with the description of one population in relation to another and therefore may be classified as normative survey research.

Importance of the study. It is important to know more about first term freshman dropouts in order to facilitate:

1. Helping students to adjust to college.
2. The choice of a student body for Michigan State College.
3. The improvement of academic services.





Delineation of the study. This study was limited to first term dropouts because:

1. Thereby it was possible to reduce the number of variables.
2. This group was unique in that:
  - a. Almost no students were asked to leave.
  - b. They were in college only a very short time and probably had not given it a fair try.
  - c. Most of the students studied were in the transitional period between high school and college.

The particular factors used for comparison were chosen because:

1. The data were available in the records of Michigan State College.
2. Similar data will probably be used by Michigan State College workers in the future.
3. The choice of factors provided a wide coverage of areas in the lives of students.
4. A more suitable combination of factors was not noted.

First term entering freshman non-dropouts were chosen for comparison because:

1. They seemed to be the most comparable group

available. Graduates were another possibility but the use of graduates would have brought in new variables, thus making the data more difficult to interpret.

The subgroup was formed because:

1. It seemed possible that these subgroup dropouts might be different from dropouts with respect to some of the factors studied.

2. By removing those who listed death in family and serious injury as reason for leaving, some students who apparently had to withdraw were removed. By removing those who listed transfer as reason for leaving college, some students who were in a sense not dropouts at all were thereby eliminated.

Some limitations of the study are:

1. The validity of some of the instruments used in the comparison is open to question, although they do not differ greatly in this respect from other instruments of their type.

2. The data are applicable primarily to Michigan State College and may be applied to conditions in other institutions only to the extent that conditions in those other institutions are similar to those of Michigan State College.

3. Dropouts and non-dropouts could have been compared according to other factors besides those used in this study possibly with promising results.

4. The causes of dropping out of college are not shown as an outcome of this study.

5. It is not known whether those who dropped out will ever return. Some could reasonably be expected to return and finish their education at Michigan State College. A check was made to see if many had returned for the third term of the school year in which they enrolled. Only a small per cent had returned.

## II. DEFINITION OF TERMS

Dropouts. A first term freshman dropout is a first term entering freshman who registered at Michigan State College for the first time in the fall quarter of 1948 or 1949 but failed to register for the second quarter of the same year.

Subgroup dropouts. A subgroup fall term entering freshman dropout is a dropout who did not complete the fall term and who either gave no reason for dropping out or did not give transfer, death in family or serious injury as reason for leaving.

Non-dropouts. A non-dropout is a first term entering freshman who registered at Michigan State College for the first time fall quarter of 1948 or 1949 but who also registered for the winter quarter of the same year.

### III. ORGANIZATION OF THE REMAINDER OF THE THESIS

This chapter has introduced the problem. The next chapter reviews the literature related to dropping out at the college level, dropping out at the high school level, summaries of studies related to predicting scholastic success and to each of the factors used in the comparison of the groups studied.

The third chapter outlines the procedures followed and the materials used. The fourth through the tenth chapters show the results found as a result of the use of the materials and procedures. The final chapter summarizes the study, discusses the implications of the results and suggests needed future research.

## CHAPTER II

### REVIEW OF THE LITERATURE

The first part of this chapter will be devoted to a review of the literature related to school leavers at the college and secondary levels. This will be followed by a review of some surveys of literature dealing with the prediction of scholastic success. The remaining sections, except for the last one, will be devoted to some studies related to the factors used in this study.

#### Literature on dropping out at the college level.

Mitchell<sup>1</sup> in 1942 reported a study of reasons given by Michigan State College freshmen for dropping out of college. The reasons were given either at the time of leaving or in response to follow-up inquiries at a later date. The percentages of first year dropouts leaving college by the end of each fall term for three years were given as forty-eight for 1937-1938, thirty-six for 1938-1939 and twenty-eight per cent for 1939-1940. The percentages of students giving each of six of the more frequently mentioned reasons were

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<sup>1</sup> Fred T. Mitchell, "Why Freshmen Leave College," Journal of Higher Education, 13:95-100, February, 1942.

lack of money 20.8 per cent, not interested discouraged 15.6 per cent, transferred 8.1 per cent, on trial and low marks 39.4 per cent, illness or injury 11.1 per cent and needed at home 2.5 per cent.

Snyder<sup>2</sup> in 1940 studied reasons given by students for dropping out at the Los Angeles City College. She noted that dropouts do not think in terms of five years hence but rather see their present desires and hopes frustrated by the attempt to obtain a longer education. She suggested that dropouts have less college aptitude than do students in general. Forty-six per cent stated that they left to go to work, fourteen per cent because of illness and eleven per cent because of failure. Seven per cent listed lack of interest and seven per cent listed change of residence. No other reason was listed by more than six per cent of the dropouts. Other reasons were exclusion, preference for other schools and unsuitable choice of courses.

Coyle and Yourman<sup>3</sup> in 1950 reported a study of fall term dropping out at Brooklyn College Evening Session.

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<sup>2</sup> Louise M. Snyder, "Why Do They Leave?", Journal of Higher Education, 11:26-32, January, 1940.

<sup>3</sup> Emerson Coyle and Julius Yourman, "Follow-up of Vocational Diploma Students Who Dropped Out During or After Fall 1949 Term," (unpublished supplement to 1949-1950 Annual Report Brooklyn College Evening Session Department of Personnel Service Counseling Office, New York, 1950).

• *What is the main purpose of the document? To inform*



Continuing students and dropouts were compared with respect to tested abilities, number of courses taken and grades received. An attempt was made to find out why students dropped out by asking them over the telephone or by mail. Thirty-five per cent of all the matriculated Vocational Diploma students registered fall 1949 failed to return for the next term. Twenty-nine per cent of these were other than entering freshmen.

The most commonly mentioned reasons given by the sixty-seven per cent responding were employment, transfer and illness.

Important differences in intelligence were not noted. Intelligence test scores averaged about the same for both groups.

Banzet<sup>4</sup> at Michigan State College reported in 1951 an attempt to contact students who withdrew from Michigan State College during 1949-1950 and ask them why they left and learn if they may be encouraged to return and complete their program. Students having less than twenty-seven or more than one hundred and eighty-four credits, those having a grade point average below 2.2, those who asked for transcripts of their grades to be sent to other institutions

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<sup>4</sup> Ernest W. Banzet, "Summary Report on Student Withdrawals From Michigan State College, 1949-1950," (unpublished report, Board of Examiners, Michigan State College, 1951).



and those who left for disciplinary or scholastic action were left out of the study. Of the students contacted, 26.2 per cent replied. The most important reasons given were marriage, military service and finances.

Moon<sup>5</sup> in 1928 at the University of Chicago studied reasons why students left college by writing them letters and asking them why they left. He found the chief reasons listed were finances, health, home conditions and some form of dissatisfaction. Letters were sent to 278 students who entered in 1925-1926 and 200 others asking them why they dropped out of college. Two hundred and forty replies were received.

Hale<sup>6</sup> compared the holding power of junior colleges and regular four year colleges. It was found that junior colleges have a significantly greater power than do senior colleges. Thirty-eight junior colleges and twenty-one standard colleges were studied through a comparison of lists of students found in the catalogues of the institutions studied.

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5 G. R. Moon, "The Student Who Drops Out of College," *School and Society*, 27:576-8, May, 1928.

6 Wyatt W. Hale, "Comparative Holding Power of Junior Colleges and Regular Four-Year Colleges," *Phi Delta Kappan*, 13:69-74, October, 1930.

Cuff<sup>7</sup> at Eastern Kentucky State Teachers College in 1928 advanced two lines of proof to show that lack of intelligence causes elimination. First of all, the average percentile ranking on an intelligence test rose from one college year to the next. Secondly, the average intelligence percentile ranking for those dropping out was lower than it was for those who remained. More men dropped out than women and country people dropped out at a higher rate than did city people. The size of the family was not found to be related to standing in grade points. Seventy-seven per cent of freshmen believe that the chief cause of their failure was lack of application. About seventy-five per cent of those eliminated stated at the time of enrollment that they did not expect to remain.

A study by Booker<sup>8</sup> based on a review of the literature is worth mentioning here in spite of the lack of specific information included in the report. He referred to studies but failed to say what studies or how they were conducted. He concluded that studies have shown that scholastic failure

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7 Noel B. Cuff, "Problem of Eliminations From College," School and Society, 30:550-2, October, 1928.

8 Ivan A. Booker, "Reducing Withdrawals," Journal of Higher Education, 4:249-54, May, 1933.



is by far the largest single cause of withdrawing from college and therefore remedial work for failing students is the answer to the dropout problem.

Mercer<sup>9</sup> in 1943 reported a valuable piece of work done through the use of the case study method in the investigation of causes of leaving college without graduating. She found problems of health, finances, personal and family relationships in three fourths of the leaving group. Twenty-nine students entering in 1937 and failing to complete college were studied. The sources of data were the cumulative records, interviews with students and members of the families of the individuals studied as well as conferences with staff members. She says:

a. Problems of health, family relationships, and finance predominate in the group who left without receiving a degree.

b. The leaving group were less active participants in the affairs of the college community than were the honor group.

c. Fewer members of the leaving group earned a major part of their college expenses than did the honor students.<sup>10</sup>

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<sup>9</sup> Margaret Mercer, "Personal Factors in College Adjustment," Journal of Educational Research, 36:581-65, April, 1943.

<sup>10</sup> Ibid., p. 568.

Williams<sup>11</sup> in 1938 at the University of Michigan studied the records of 1,026 students who did not return in September 1937 to the College of Literature, Science and the Arts. The factors of sex, age and residence within or without the state were not found to differentiate between those who drop out and those who do not drop out. Discipline was not found to be an important cause of withdrawal. Except for those asked to leave, grades could not be considered a major cause for withdrawal. He concluded that although there is an obvious waste from the point of view of the institution in losing so many students, those who fail to return may have made a wise choice. This study, he suggests, overlooks the students reasons for leaving. The failure of the author of this study to use statistical measures makes it difficult to evaluate some of the data.

Smith<sup>12</sup> made a contribution by attempting to explain why there was a relatively low drop out rate at the non-degree offering Rochester Institute of Technology. The factors

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11 Robert L. Williams, "Academic Records of Students Eliminated From the University of Michigan," School and Society, 47:515-29, April, 1938.

12 L. F. Smith, "Student Survival in a Technical Institute," School Review, 53:894-921, May, 1945.

contributing to this low rate were given as:

1. Range of admissions procedures.
2. Emphasis on counseling.
3. Functional curriculum.
4. Cooperative plan.
5. Shorter course.
6. Exist interviews.<sup>13</sup>

The gross survival rate among the 1,707 students studied was found to be sixty-seven per cent and the net survival rate was found to be sixty-one per cent.

Hilton and Carpenter<sup>14</sup> suggested that each of the five types of institutions studied should be aware of the large percentage of students who drop out during the first year; provision should be made to provide offerings suitable to their needs. A practical course of two years with a certificate for those completing it was suggested. They studied the persistence of 3,023 students who entered nine Missouri Colleges in 1936 or 1937. Forty per cent were found to drop out during the first year.

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<sup>13</sup> Ibid., pp. 298-99.

<sup>14</sup> W. A. Hilton, and W. W. Carpenter, "Persistency of students," Journal of Higher Education, 14:268-70, May, 1943.



A follow-up study of non-graduating women from the College of Education at Ohio State University reported in 1943 by Greene<sup>15</sup> led him to suggest that the needs of those who drop out are not being met in college. The value of certain courses was questioned. Dropouts expressed dissatisfaction in the area of vocational, academic and personal counseling. The post college success of the dropouts was found to be very limited. One hundred and ninety-five women who entered the College of Education as freshmen between 1933 and 1936 and dropped out sometime after the first quarter of the freshman year and before the first quarter of the senior year were reached by letter or interview and asked about their college experience. On the basis of the study Greene offered a list of recommendations for dealing with the dropout problem. Among these recommendations were:

Personnel officers should devise means to locate early students who are potential dropouts, and give them assistance in making wise vocational choices.

Student programs should be planned in terms of the student's total situation, taking into account such factors as health, outside employment, abilities, interests, social needs and probable length of attendance, as well as academic requirements.

The curriculum should be carefully examined in

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<sup>15</sup> Founta D. Greene, "Follow-up Study of Non-Graduating Women from the College of Education, Ohio State University," Educational Administration and Supervision, 29:427-33, October, 1943.



terms of social and individual needs of students and in terms of the purposes of the institution so that inadequate courses may be modified or withdrawn and new material added which will more nearly meet individual, social, and institutional needs.<sup>16</sup>

McNeeley<sup>17</sup> in 1938 reported a study of 15,535 students in twenty-five universities. Data related to factors such as age at entrance, location of home, place of lodging, participation in extra-curricular activities, engagement in part-time work, academic achievement and students' reasons given for leaving were collected. He says:

The factor of age at entrance was found to have a bearing on student mortality. Of the students entering at the immature age of less than seventeen years, there were forty-seven per cent of them who left the universities as compared with seventy-two per cent for the students entering at the mature age of twenty-nine years or over. The percentages of students leaving the universities advanced concomitantly with each advance in age. Distance of the homes of the students from the institution appeared to be related to mortality. In twenty-one of the twenty-five individual universities higher percentages of the students with homes in another state left the institutions than those with homes within the county in which the institution is located.

The place of lodging also seemed to exercise some influence on mortality. Approximately three-fourths of the universities had a higher mortality among the students lodging at a rooming house or college dormitory than among those lodging at home with parents or at a fraternity or sorority house.

Larger percentages of students left the universities who did not participate in such activities. Similarly, larger percentages of the

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<sup>16</sup> Ibid., p. 432.

<sup>17</sup> John H. McNealey, "College Student Mortality," Bulletin No. 11 Office of Education, United States Government Printing Office, Washington, D. C., 1948.

students who did not engage in part time work left the universities than who engaged in part time work.<sup>18</sup>

Lack of money was listed as a reason for leaving by 22.4 per cent, not interested discouraged 17.6 per cent, on trial and low marks 44.4 per cent, illness or injury 7.6 per cent and needed at home 1.6 per cent.

Sheedy<sup>19</sup> reported in 1949 a study of students enrolled in the Basic College of Michigan State College. Part of this study was devoted to withdrawals for the years 1944 and 1945.

The class entering in 1944 was composed almost entirely of freshmen. He divided it into five groups according to their academic progress as follows:

- Group I 33 per cent who have graduated.
- Group II 13 per cent still in Michigan State College with every prospect of graduating.
- Group III 41 per cent who dropped out of college voluntarily.
- Group IV 10 per cent who were asked to withdraw because of academic deficiencies.
- Group V 3 per cent who withdrew before any grades were recorded.<sup>20</sup>

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<sup>18</sup> Ibid.

<sup>19</sup> Joseph W. Sheedy, "Academic Survey of the First Basic College Class," Michigan State College, East Lansing, Michigan, 1949.

<sup>20</sup> Ibid.

Of those who withdrew voluntarily (group III) thirty-seven per cent had grades well below C. This same group had scores on the American Council on Education Psychological Examination averaging in about the third tenth.

Of those who were asked to withdraw for scholarship deficiencies, twenty (two per cent of the original class) were listed as freshmen. The latter group had a credit point ratio of point one six. Although many of those dropping out for scholarship deficiencies were in the lowest tenths of the American Council on Education Psychological Examination distribution, there were also many of this group in the highest tenths.

The second class of the Basic College entering in 1945 was made up as follows:

Group	I	37 per cent graduating
Group	II	12 per cent with every prospect for graduating.
Group	III	35 per cent dropped out voluntarily.
Group	IV	12 per cent withdrew for scholastic deficiencies.
Group	V	4 per cent voluntarily withdrew. <sup>21</sup>

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<sup>21</sup> Ibid.

The behavior of groups II and IV in 1945 was almost identical with the behavior of the corresponding groups in 1944, as listed above. It is interesting to note that these were war years during which men were especially susceptible to call to the Armed Services and women tempted by war jobs. Yet, in spite of the nature of the times, not much variation occurred from year to year in regard to the factors studied. It is also interesting to note that for both classes only a small section withdrew for scholastic deficiencies.

The need for guidance as a preventative measure for college mortality was stressed by Wagner.<sup>22</sup> She pointed out that those persons who dropped out for financial reasons or due to change of goals may have needed guidance in high school or college. Those who dropped out by the end of the first term for financial reasons, she assumed, did not understand the costs involved in going to college. Those who dropped out by the end of the third term for financial reasons may not have been able to budget the available money and might have been greatly helped by counseling regarding the problem of budgeting. She suggested that provision

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<sup>22</sup> G. D. Wagner, "Student Mortality Among College Home Economics Freshmen," Journal of Home Economics, 33:244-5, April, 1941.

of a terminal course might also help in keeping people in college. This might be especially true for the home economics group since many of them may want to become home makers and feel that two years of college is enough.

This study by Wagner<sup>23</sup> was conducted at the College of Agriculture, Forestry, and Home Economics at the University of Minnesota for the three academic years from 1936 to 1939. Interviews, letters and records were the sources of data. She says:

A need for better vocational guidance in the secondary schools was evidenced by the fact that a third of the girls who dropped home economics did so because of an interest in some other course. Many of them should have been directed into other fields before beginning their college careers. It is doubtful if some of the girls with an honor-point ratio below 0.5 should have been encouraged to enter home economics in college.<sup>24</sup>

Dressel<sup>25</sup> in 1943 at Michigan State College reported a study of persons advised to withdraw from college. Only one fifth were found to lack intelligence sufficient for satisfactory college work. Finances and disinterest accounted for most of the difficulties of the remainder. The purpose of the study was to determine whether the practice of advising failing students to withdraw was worth the expenditure of time and effort needed to properly

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23 Ibid., p. 245

24 Ibid., p. 245

25 Paul L. Dressel, "Liberal Arts Students Advised to Withdraw," Journal of Higher Education, 14:43-5, January, 1943.

consider the cases. It was decided that the practice should be continued.

Agate<sup>26</sup> in 1941 at the University of Louisiana reported a study on intelligence, economic background, and present occupation upon remaining in college. The non-dropouts averaged twenty-three points higher than the dropouts on the intelligence test. The children of fathers in the highest occupational categories were found to persist in college much longer than those in the unskilled categories. She found that those who were able to complete college achieved on the average a higher level of occupation than did those who failed to complete college. This study was conducted at the University of Louisiana in 1941.

In 1941 Pace<sup>27</sup> at the University of Minnesota reported a valuable piece of work on the following-up of 951 former university students. Some differences were found to exist between the graduates and non-graduates, although he concluded that the most significant finding was that there were not many differences between the two groups. The graduates were found to be in higher occupational categories than the

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26 Grace B. Agate, "Persistence in College Related to Intelligence, Economic Background and Present Occupation," (unpublished Doctor's dissertation, the University of Louisiana, Pineville, 1941). 166 pp.

27 Charles R. Pace, They Went to College, The University of Minnesota Press, Minneapolis, 1941. pp. 148.





non-graduates and were better satisfied with their work. Only slight cultural differences were found to exist between the two groups.

In 1928 Gibson<sup>28</sup> reported a study of the elimination of students in New York State College of Agriculture at Cornell University. Reasons given most frequently for not graduating were changed occupational goals, financial inability to meet college expenses, health, and need at home.

Eaton<sup>29</sup> in 1942 reported a study conducted at the Indiana University of 861 undergraduate students who were enrolled in the 1939-40 school year but who withdrew from the University during or at the end of the school year. These dropouts made up eighteen per cent of the undergraduate student body. The dropout rate varied very little from school to school within the University. The percentile rankings of the dropouts were far below those of the student body as a whole. About sixty per cent of the withdrawals were men and forty per cent were women. There was little difference in the aptitude of the sexes. More than one

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28 A. W. Gibson, "Elimination of Students in New York State College of Agriculture at Cornell University," Cornell University, Utica, 1949.

29 Merrill T. Eaton, "A Study of Indiana University Withdrawals," Bulletin of School of Education of Indiana University, 28:5-16, February, 1942.



fourth of the subjects leaving school said they were going to transfer. Almost a third left to find employment or because of financial difficulties. Low scholastic achievement, poor health and marriage were listed by subjects as important causes of withdrawing.

Jordan<sup>30</sup> reported a study conducted at the University of North Carolina in 1925. He found that thirty-eight per cent of those who began as freshmen during the years studied left school before or at the end of two years. The non-dropouts were superior to the dropouts in mental ability and scholastic achievement. Poor scholarship was given as the primary reason in over half of the cases. Other causes listed each affected comparatively few cases.

Stuit<sup>31</sup> in 1938 reported a study of sixty-three dropouts at the Teachers College of the University of Nebraska. In answer to a questionnaire as to reasons for withdrawal, thirty-one listed scholastic records, eight dissatisfaction with the university, six marriage and nineteen miscellaneous reasons. He expressed the opinion that these dropouts did not profit from their college experience. He says:

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30 Arthur M. Jordan, "Student Mortality," School and Society, 22:821-4, December, 1925.

31 Dewey B. Stuit, "A Follow-up Study of Freshmen in the Teachers College of the University of Nebraska," School and Society, 48:282-284, August, 1938.



Certainly these students did not profit from their experience of failure. The bitter comments attached to some of the questionnaires testify to this fact.<sup>32</sup>

Tallman<sup>33</sup> in 1927 studied 507 students who dropped out of the State University of Iowa. He reported that the scores made on the Iowa High School Mental Survey were significantly higher than those for the group which did not enter college. For those who dropped out of the freshman class, lack of funds was the most frequently mentioned reason for withdrawing.

Pope<sup>34</sup> in 1931 reported a study of 247 women withdrawing from six eastern Liberal Arts Colleges. She lists reasons given by students as:

Financial difficulty, 31 per cent; academic failure, 11 per cent; desire for another type of instruction, 10 per cent; failure to gain social recognition, 9 per cent; ill health and marriage each 7 per cent; and discipline, 6 per cent.<sup>35</sup>

Those admitted by examination alone or with conditions and those on probation were poorer risks than those admitted by certificate and examination. Transfer

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32 Ibid., p. 284.

33 Russell W. Tallman, "A Critical Analysis of Student Persistence at the State University of Iowa," University of Iowa Studies in Education, Volumn IV, Iowa City, 1927.

34 Ruth V. Pope, Factors Affecting the Elimination of Women Students, Teachers College Contributions to Education, No. 485, New York, Teachers College, Columbia University, 1931.

35 Ibid.

students with less than sophomore standing in the institutions from which they came were poor risks. The size of home town or high school from which the student came or that of the class had predictive value. Rank in class proved of predictive value. Intelligence test scores also were significant.

Lord<sup>36</sup> in 1938 reported a study of college persistence in 266 American Colleges. He found that generally the freshman year was the one in which the most students withdrew. He says that of those withdrawing, 20.7 per cent left for unknown reasons; 11.5 per cent for financial reasons, 11.5 per cent failed and 2.8 per cent died. He concluded:

But in a vast number of cases, the college is at fault. The student should not have been admitted in the first place; once admitted, he should have had wiser and more efficient guidance. This is a responsibility which the college has no right to shirk.<sup>37</sup>

On the basis of a review of the literature dealing with college mortality, Feder<sup>38</sup> concluded that in spite of the fact that most studies have attributed dropping out to a single cause there are actually many causes, most of which the student is unaware of or is unwilling to face.

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36 Everett W. Lord, Student Persistence in American Colleges, Indianapolis, Indiana: Alpha Kappa Psi. Fraternity, November, 1938.

37 Ibid.

38 Walter S. Monroe, Editor, Encyclopedia of Educational Research, Revised Edition, The Macmillan Co., N. Y., 1950.





Literature on dropping out below the college level.

Minor<sup>39</sup> made a significant contribution by a very comprehensive study of dropping out in the public schools of Virginia. She studied 646 pupils who withdrew from schools in three representative counties in Virginia from 1937 to 1940. These were compared to 2,515 in school pupils enrolled in the same grades and schools during the spring of 1941.

She suggests that perhaps her most significant finding was the high proportion of parents and pupils in the withdrawal group with unfavorable attitudes toward school and education. Of these, indifference of parents was considered the most outstanding. She says that an extremely high percentage of withdrawals was found to lack interest in school. Occupation of father and religious affiliation differentiated between the two groups. Teachers with less than five years' experience had proportionately fewer withdrawals than any other experience group. Location of school did not influence the withdrawal rate. This study is unique in its choice of factors for comparing the leavers and non-leavers and appears to be one of the best studies of dropping out reviewed.

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<sup>39</sup> Lillian P. Minor, "Certain Factors Influencing Children to Leave the Elementary School," (unpublished Doctor's Thesis George Peabody College for Teachers, 1943).



As part of a more inclusive study, Bell<sup>40</sup> made a contribution to the understanding of why pupils leave school without graduating. In 1938 he reported a study of 10,853 out of school youth in Maryland. Occupation of father, race and sex were found to be outstanding in determining how much school boys and girls received.

A study of boys and girls who had left school without graduating was made in 1944 by the University of Chicago's School of Social Science Administration.<sup>41</sup> This study contributed information about the experiences of boys and girls who left school at a time when the war made jobs plentiful. In eight representative schools 381 persons under eighteen were studied. Interviewers went to their homes and attempted to find out why these young people left school and what had happened to them since they left. They discovered the following facts:

1. 15 per cent were under compulsory school age.
2. Excessive industrial wages were the biggest drawing force.
3. 78 per cent had paid employment.

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40 Howard M. Bell, Youth Tell Their Story, (Washington, D. C.: American Council on Education, 1938).

41 Illinois Child Labor Committee, "Study of Chicago Students Leaving School Before Graduating," Monthly Labor Review, 59:135-6, July, 1944.



4. 5 per cent were in military service.
5. 17 per cent withdrew because of illness, domestic requirements at home, or future plans for gainful employment.
6. Semi-skilled, unskilled, and service jobs predominated.
7. There were frequent violations of labor laws regarding working conditions and hours.
8. Psychological restlessness and frequent change of employment predominated.<sup>42</sup>

Johnson and Legg<sup>43</sup> contributed some information about what students say as to why they left school. He interviewed some 440 boys and girls fourteen and nineteen years of age who had dropped out of school in Louisville. The primary reasons for leaving were listed as failure in school subjects and discouragement and dissatisfaction with courses in school.

Gragg<sup>44</sup> made an important contribution with an excellent study in which he compared high school dropouts and non-dropouts according to a number of factors. In this study reported in 1948 he says:

Chi-square tests of significance of difference between the characteristics of graduates and the

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42 Ibid.

43 Elizabeth S. Johnson and Caroline E. Legg, "Why Young People Leave School," National Association of Secondary School Principals, 32:14-24, November, 1948.

44 William L. Gragg, "A Study of Factors Related to the Persistence of Pupils in Public Secondary Schools," (unpublished Doctor's Thesis Cornell University, 1949).

characteristics of dropouts revealed that differences exist between the two groups to a degree sufficient to warrant consideration of some of the factors in the prediction of school elimination.

Those factors included in this study for which the tested differences between graduates and dropouts were great enough to permit their utilization in predictive analysis were:

1. Retardation in school amounting to two or more grades.
2. An intelligence, aptitude, or achievement score on a standardized test which places the pupil in the lowest decile among the pupils tested.
3. Absence from school for more than one-third of the total number of school days in the year immediately prior to the time the pupil reaches the maximum age of compulsory school attendance.
4. Failure in school marks in more than two subjects in the year immediately prior to the time the pupil reaches the maximum age of compulsory school attendance.<sup>45</sup>

Eckert and Marshall<sup>46</sup> in 1935 found that dropouts differed significantly from graduates in school adjustment and plans for the future.

Dillon<sup>47</sup> reported a study of early school leavers

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<sup>45</sup> Ibid.

<sup>46</sup> Ruth E. Eckert and Thomas O. Marshall, When Youth Leave School, Regents' Inquiry, McGraw Hill, New York, 1938.

<sup>47</sup> Harold J. Dillon, Early School Leavers, National Committee 419 4th Ave., New York 16, New York, 1949.



based on a sample composed of 1,360 persons in different types of communities. Information was obtained about the dropouts from the school records, school personnel and from the individuals themselves. No comparison was made with a sample of non-dropouts.

On the basis of the findings of this recent study, Dillon<sup>48</sup> concluded that the following were symptoms of vulnerability to early school leaving:

1. Fairly consistent regression in scholarship from elementary to junior to senior high school.
2. Frequent grade failure in the elementary school.
3. High frequency of grade or subject failure in the junior and senior high school.
4. Marked regression in attendance from elementary to junior to senior high school.
5. Frequent transfers from one school to another.
6. Evidence of a feeling of insecurity or "lack of belonging" in school.
7. Marked lack of interest in school work.<sup>49</sup>

This study appears to be a valuable piece of work; however, it would have been more useful if the dropouts had been compared to students continuing in school with respect to some of the factors.

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48 Ibid.

49 Ibid.



Literature related to high school rating scales.

Garrett<sup>50</sup> in his comprehensive study of the literature dealing with the prediction of scholastic success noted that many investigators have shown that little or no relationship exists between personality measuring devices, including rating scales, and scholastic success. He further concluded, however, that the evidence is far from conclusive. He says:

The various tests of character and personality have practically no value as predictors of college scholastic success, but the rating scales on which high school teachers and principals rate students on an instrument of prediction of college success, as is clearly shown in the studies, do show promise. Especially is this true of such characteristics as studiousness, persistence, and ability to budget time. This will no doubt be an active field for experimentation and research in the immediate future.<sup>51</sup>

Masoner<sup>52</sup> after a comprehensive review of the literature dealing with rating scales concludes that personality rating scales have considerable promise. He also shows their very extensive use in studies reported in the literature and in business, industry and education.

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50 Harley F. Garrett, "A Review and Interpretation of Investigations of Factors Related to Scholastic Success in Colleges of Arts and Sciences and Teachers Colleges," (unpublished Doctor's dissertation, the University of Colorado, Boulder, 1948).

51 Ibid.

52 Paul H. Masoner, "A Critique of Personality Rating Scales," (unpublished Doctor's dissertation, the University of Pittsburgh, 1949).



As to their use in schools, he says:

It is important in this connection to note that the number of rating scales, inventories, anecdotal reporting and other measures of personality that have been developed in industrial schools or school systems are probably in the hundreds or even thousands.<sup>53</sup>

As to their validity, he says:

1. Returns from the schools canvassed indicate that a considerable number of secondary schools regard rating as an important phase of the pupil personnel program.

2. One of the important present methods for the appraisal of personality is the rating scale. There is no denial of the subjectivity and the inadequacy of personality rating as an exact method of measurement. Nevertheless along with self-inventories, projective techniques, anecdotal records, laboratory techniques, and other procedures, personality rating represents an important technique for the assessment of the personal characteristics of individuals.<sup>54</sup>

Literature related to occupation of father and education of parents. Dear<sup>55</sup> found that those in the laboring type of occupations, except farming or printing, kept their children in school fewer years than did those in non-laboring occupations.

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53 Ibid.

54 Ibid.

55 Ernest R. Dear, "Distribution and Persistence According to Paternal Occupations Represented in the Secondary Schools in Michigan," Journal of Educational Research, 26:585-592, April, 1933.

Osborn<sup>56</sup> in 1943 reported differences in social and economic background by American Council on Education Psychological Examination scores. Six hundred and fifty students in three institutions of higher learning were used in the study. The distribution by ACE scores was divided into fifths and then the persons in each fifth were compared with those falling in each other fifth by factors related to socio-economic background.

The parents of those in the highest fifth of the distribution of ACE scores had a higher median income, better reading facilities, and contributed more to the support of their children than did the parents of students in the lowest fifth. The superior students went to college sooner after high school. A larger percentage of the superior ones came from the homes of professional people. The aspirations of those from the upper levels of the ACE distribution were higher than those of the students from the lower levels.

Neff<sup>57</sup> points out that many studies use occupation

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56 Richard C. Osborn, "How is Intelligence Test Performance Related to Social and Economic Background?", Journal of Educational Psychology, 34:215-28, 1943.

57 Walter S. Neff, "Socio-Economic Status and Intelligence: A Critical Survey," Psychological Bulletin, 35:727-754, 1938.



of father as a criterion of economic status. He summarized eight studies correlating intelligence test scores and criteria of economic status, the latter not always being occupation of father. The lowest correlation was + .21 and the highest + .53. He says:

But all summarized studies tend to show that low cultural environment tends to depress I. Q. approximately to the degree agreed as characteristic of laborer's children and that high environment raises I. Q. correspondingly. All, then, of the twenty-point mean difference in I. Q. found to exist between children of the lowest and highest status may be accounted for entirely in environmental terms.<sup>58</sup>

Literature related to the American Council on Education Psychological Examination. Commins<sup>59</sup> summarized data related to the ACE. He points out that an attempt has been made by the authors, L. L. and T. G. Thurstone, to make each new edition experimentally equivalent to the previous. New editions come out each year. The scale is broken down into two subscores designated as Q and L. The full significance of these partial scores will not be apparent, says Commins, until considerable additional

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58 Ibid.

59 O. K. Buros, Third Mental Measurement Yearbook, Rutgers University Press, New Brunswick, 1948. p. 217.

study is made regarding them.

Super<sup>60</sup> has also summarized data related to the ACE. He states that the correlation between this test and grade point average for four years of college is .45. He quotes one study as indicating that the test has odd-even reliability of .95 for the total scores, for the 1938 edition. The extensive work previously done on the other forms of the test is, according to him, applicable to each new form each of which is considered equivalent to the others.

Literature related to summaries of studies related to the prediction of scholastic success. Numerous surveys have been made of studies related to the prediction of scholastic success. The most complete of these surveys was made by Garrett<sup>61</sup> and reported in 1948. On the basis of his review of the literature, he concluded the following:

Extensive experimentation has been made in the field of mental tests, achievement tests, and high school record, but insufficient data are available on the possibilities of college aptitude tests, personality inventories and rating scales by high school principals, teachers and students.

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60 Donald E. Super, Appraising Vocational Fitness, Harpers & Brothers, New York, 1949. p. 120

61 Garrett, op. cit.





Practically all writers have warned against allowing one factor to be the sole determinant for college entrance. Likewise, nearly all agree that the accumulative predictive value of combinations of factors is the most valid means of determining probable scholastic success in college.<sup>62</sup>

He lists the average correlations found on the studies reviewed between certain factors and grade point average as follows:<sup>63</sup>

High school average	.59
High school rank	.49
General achievement tests	.48
Intelligence	.46
General College aptitude tests	.41
Achievement tests in specific subjects	.40
Special aptitude tests	.47
Character and personality tests	.09

Johnson<sup>64</sup> in 1950 reported a review of the literature dealing with the prediction of scholastic success. He concluded that high school rank or scholarship appears to be the best single index for the prediction of scholastic success. He also points out that most studies of the prediction of scholastic success are based on classroom

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62 Ibid.

63 Ibid.

64 Walter F. Johnson, "A Study of Efficiency of Certain Factors for Predicting Achievement of Veterans at Junior College Level in the College of Science, Literature and Arts at the University of Minnesota," (unpublished Doctor's dissertation, Minnesota, 1950).

Durflinger<sup>65</sup> summarized many studies of prediction from 1934 to 1943. In this study reported in 1943, he found a median correlation of .52 which he considered to be higher than those reported prior to that time. He attributes this higher correlation to the new type of examinations used for predicting scholastic success and the changing methods of evaluation on which grades are based.

Borow<sup>66</sup> in 1946 discussed current problems related to the prediction of college performance. He points out that although high school records are the best single predictor of college success, they are often based on subjective studies of one kind or another and grading systems vary greatly from one school to another.

Numerous studies have shown, he points out, that the average intelligence test correlates about .45 with grades in college. Content examinations correlate .50 and the high school rank about .55.

Improvement of the prediction depends upon future

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65 Glenn W. Durflinger, "The Prediction of College Success - A Summary of Recent Findings," Journal of the American Association of Collegiate Registrars, 19:68-78, 1943.

66 Henry Borow, "Current Problems in the Prediction of College Performance," Journal of the American Association of Collegiate Registrars, 22:14-26, 1946.



efforts toward better grading methods, achievement tests and use of measures of non-intellectual influences on achievement in college.

Literature related to situation response attitude inventory methodology. McNemar<sup>67</sup> critically surveyed the literature dealing with attitude inventory methodology. In his report he discussed a situation response attitude inventory reported by Pace<sup>68</sup> and quite similar in basic design to the "Basic College Inventory of Attitudes and Beliefs." McNemar agreed with Pace that the methodology showed promise for future research.

Rosander<sup>69</sup> made a valuable study of the validity of a situation response inventory. He compared a situation response type of inventory with an opinion scale. The Thurstone method of scale construction was used in the construction of both. Both were validated by comparison of groups considered likely to have the opinions which the scale and inventory were supposed to measure and by

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67 Quinn McNemar, "Opinion Attitude Methodology," Psychological Bulletin, 43:289-374, July, 1946.

68 Charles R. Pace, "A Situations Test to Measure Social-Political-Economic Attitudes," Journal of Social Psychology, 10:331-344, August, 1939.

69 A. C. Rosander, "An Attitude Scale Based Upon Behavior Situations," Journal of Social Psychology, 8:3-15, February, 1937.



inter-correlation of the two instruments. He concluded:

We may use these data to support the validity of the opinion scale, but there is more to the behavior scale than just that. The behavior scale is so much more specific that one obtains a sharper picture of an individual's attitude pattern toward the negro than that obtained from the more or less general statements of opinion which appear in the opinion type scale. This type of paper and pencil scale brings us more closely to the potential behavior of the individual than does the opinion type scale, and is therefore likely to be much more predictive of actual behavior. This however is a hypothesis which needs to be investigated further.<sup>70</sup>

Summary of the review of the literature. Eighteen out of twenty-seven studies of withdrawing at the college level included reasons given by dropouts for leaving college, seven studied their intelligence, nine their scholarship, two post college occupation, two occupation of father, two age, two place of residence, one extra-curricula activities, one education of parents and one case study data.

A few studies were mentioned on dropping out below the college level, literature related to scholastic success and for each of the factors used in comparing the groups.

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70 Ibid.

## CHAPTER III

### THE MATERIALS AND PROCEDURES USED

Six factors were employed in the comparison of the groups: (1) the American Council on Education Psychological Examination, (2) the Basic College Inventory of Attitudes and Beliefs, (3) the High School Rating Scale, (4) occupation of father, (5) education of parents and (6) percentage of men and women. In this chapter these factors and the statistical analysis used in comparing the groups according to them will be discussed.

The American Council on Education Psychological Examination. The ACE is a series of tests of scholastic aptitude published by the American Council on Education and administered to entering college freshmen in numerous institutions of higher learning located throughout the country.

There are three scores for this test: Q, L and total. It is a timed test taking about one hour to administer. The norms are based on cases from numerous institutions most of which are small.

A new form of this test comes out each year. Each form is supposed to be experimentally equivalent to those which precede it. Each form is not validated anew, however, but is assumed to be as valid and reliable as those before it.

This test is given to most entering freshmen at Michigan State College after they have registered for the first term. The scores for this entire group are published in a single book for the use of staff members. The scores are divided up into ten equal groups and the groups numbered from one to ten, with one being the highest and ten the lowest.

The Basic College Inventory of Attitudes and Beliefs.

Over a period of years the Board of Examiners of Michigan State College has been developing an attitude inventory for use in the evaluation of the curriculum of the Basic College of Michigan State College. This undertaking originated in the action of a faculty committee. The latter included representatives of each of the seven divisions of the Basic College and was appointed to study the value of the Basic College curriculum. One line of investigation was related to the development of a scale to be used in measuring changes of attitudes accompanying exposure to the Basic College curriculum.

The first step in the construction of the scale or inventory was to decide upon the nature of the attitudes to be measured. These were to be related to the objectives of the Basic College of Michigan State College. The committee endeavored to determine the ten objectives common to all



seven divisions of the Basic College. Mayhew and Hill,<sup>1</sup> the actual authors of the inventory, constructed the items and worked with the committee in determining the overall pattern of the inventory. They reported that the committee agreed upon ten objectives common to all seven divisions of the Basic College. They say:

The objectives were finally stated as follows on the assumption that, while teachers should be unwilling to state categorically a desirable point on each scale, they could agree on the desirability of moving students' attitudes away from the extremes.

1. Belief in discussion and majority decision vs. acceptance of arbitrary action on the part of the minority.
2. Rejection of all authority vs. uncritical acceptance of authority.
3. Active participation in democratic processes vs. indifference and non-participation.
4. Respect for the general welfare vs. unconcern for the rights of society or of elements of society.
5. Respect for and demand for evidence vs. uncritical acceptance of unvalidated statements.
6. Concern for, and interest in, all fields vs. limitation of interest to a specialized field.
7. Openmindedness vs. uncritical adherence to law and custom.
8. Active concern for others vs. self centeredness or indifference.

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<sup>1</sup> Lewis B. Mayhew and W. H. Hill, "Attitude Inventories," Journal of Higher Education, 21:375-9, October, 1950.



9. Definite goals or philosophy vs. simple expediency.

10. Acceptance of responsibility for decision and action vs. indecision.<sup>2</sup>

Since the inventory was to be of the situation response type, it was necessary to have some verbally described situations for use in the inventory. Staff members were solicited for actual situations involving materials from their courses. Some of these were used in the inventory.

Mayhew and Hill<sup>3</sup> constructed a large number of items to use with the situations in reference to the continuums described above. The committee passed judgment on the items. The items which were retained were then sorted into three piles along the continuums by a group of persons chosen especially for the task. The resulting scale was then reduced to three points - either extreme and mid-point. Mayhew and Hill<sup>4</sup> then constructed items illustrating each point. These items were to compose the initial form of the inventory.

The initial form of the inventory, Form A, was tried out on a group of over 700 students during the

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2 Ibid.

3 Ibid.

4 Ibid.

fall term of 1948 and readministered spring quarter 1949 to 393 of the same group. The changes in attitudes were then noted. It was found that the means of the scores had moved significantly in one direction or the other along the continuums.

An item analysis was made and weak items were dropped. Intercorrelations were made between the subscores, and small positive correlations were found. Reliabilities were estimated by the test retest method at around .89 for the total test and approximately .55 or .60 for the subscores.

An experienced counselor went over the items of the inventory with students who had taken it. An attempt was made to find out how well the students understood the situations and the responses to them. An attempt was also made in these interviews to see if the students were giving by their responses true pictures of how they felt about the issues.

Inventory answer sheets were picked at random and the names of the persons who filled them out were sent to instructors who knew them well, with the request that these instructors describe these students in terms of the dimensions of the inventory. The descriptions were compared to the inventory results with considerable agreement seen.



A sample copy of the Basic College Inventory of Attitudes and Beliefs has been included in Appendix A.

The High School Rating Scale. The high school rating scale data, as well as that for education of parents and occupation of father, was found on the counselor's page of the Michigan State College Application Blank. This page is torn off from the application blanks of those who enter Michigan State College and sent to the Counseling Center to be placed in the files.

Above the rating scale are the words, "Candidate's Personal Qualifications." Eight traits are included in the scale. Each trait has six degrees of possession: very low, low, average, fairly high, high and very high. The traits are: potential intellectual capacity, actual intellectual performance, seriousness of purpose, originality, tractability, social-mindedness, independence of effort and popularity. The instructions to the high school official are: (a) "please indicate your judgment of the candidate by placing check marks on the scale of ratings given below," (b) "If a rating on any trait is omitted, it will be understood that you do not have sufficient knowledge of the candidate to express judgment. Such omissions will not put the candidate at a disadvantage."

There are two rather obvious weaknesses to the scale. First of all, the traits are not described. Secondly, the rater cannot quickly tell whether the scale is in terms of continuums or categories. In spite of these weaknesses, it is reasonably in keeping with current practice of scale construction. The rating scale is so dependent for its validity upon the ability of its users that when good judgments are available, rating scales are often used to validate other instruments.

Occupation of father. On the counselor's page, a space is provided for the student to give his father's occupation and his mother's occupation. Occupation of father is used in this study as a criterion of socio-economic status as it has been in some previous studies. It is far from a perfect indication of this factor; however, it seemed to be useful in addition to being the best one available for use here.

Education of parents. Right beneath the place provided for the listing of father's occupation is a place for indicating education of parents.

It seemed possible that this factor, like occupation of father, could have direct and indirect influences on the ability, achievement, attitudes and opportunities of the student and therefore perhaps differentiate between the groups.





Percentages of men and women. The sex of each student was shown on the machine records rosters by a number after his name. Since some previous studies have shown this factor to differentiate between dropouts and non-dropouts, it would seem reasonable for us to want to see if it differentiated between first term dropouts and non-dropouts.

Statistical analysis. The significance of the difference between the means of the groups by occupation of father, high school rating scale and Basic College Inventory of Attitudes and Beliefs was tested by means of the analysis of variance test of significance.

The means of the groups on the scores of the Basic College Inventory of Attitudes and Beliefs were found directly from the scores. For occupation of father and the traits of the high school rating scale, numbers were substituted for categories.

For occupation of father the numbers substituted for categories were as follows:

Professional persons	1
Proprietors, managers and officials	2
Clerks and kindred workers	3
Skilled workers	4
Factory workers	4.5

Semi-skilled workers	5
Unskilled workers	6

This classification, except for factory worker, was taken from the Census classification for socio-economic status. The factory worker classification was added to take care of those students whose fathers' occupations were listed as factory worker. A factory worker could be a skilled worker, semi-skilled or unskilled worker; however, when the student only lists factory worker it is not possible to tell from this just what is meant.

For the high school ratings, numbers were substituted for categories as follows:

Very low	1
low	2
Average	3
Fairly high	4
High	5
Very high	6

The means of the numbers were then found and the significance of the differences were tested by an analysis of variance. Then the categories were substituted for the numbers representing the means. For instance for five would be substituted high.

In making the analysis of variance test of significance,



first of all the hypothesis was advanced that there was no difference between group averages. Then this was tested by going through a mathematical sequence like that shown in Table I and the hypothesis either accepted or rejected depending upon the outcome.

The final step in the process outlined in Table I is to find the value of  $F$ . Then the significance of the  $F$  value is obtained by looking in an  $F$  table. Snedecor<sup>5</sup> shows that  $F$  is equal to one mean square divided by another. In the table the numbers across the top represent the degrees of freedom for the greater mean square which in our case is the number of groups minus one. The numbers on the left represent the degrees of freedom for the error mean square.

The Chi square test of significance was used to test the significance of the differences between the number in the groups with respect to education of parents, sex and ACE scores.

In the case of education of parents it was necessary to substitute numbers for categories to make statistical treatment possible. The numbers substituted were as follows:

Below high school	1
Some high school	2
Beyond high school	3

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<sup>5</sup> George W. Snedecor, Statistical Methods  
The Iowa State College Press, Ames, Iowa, 1946. p. 216.





TABLE I (CON'T)

ANALYSIS OF VARIANCE TEST OF SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF DROPOUTS  
AND NON-DROPOUTS FOR THE HIGH SCHOOL RATING SCALE TRAIT OF POPULARITY

$$B = \frac{Y_1^2 + Y_2^2}{N \text{ for groups}} - C. T. = \frac{(1,346)^2 + (1,376)^2}{318} - C. T. =$$

$$\frac{1,811,716 + 1,893,376}{318} - C. T. = \frac{3,705,092}{318} - C. T. = 11,651.2 - 11,649.8 = 1.4$$

$$C = \frac{T_1^2 + T_2^2}{318} - C. T. = \frac{(1,375)^2 + (1,347)^2}{318} - C. T. = \frac{3,705,034}{318} - 11,649 = 1.25$$

$$E = A - (B + C) = 3.3 - 2.7 = .6 \quad W = \frac{e}{\text{Degrees of freedom}} = \frac{67.23}{632} = 1.1$$

$$e = Z - (B + C + E); e = 678.2 - 5.97 = 672.23$$

TABLE I (CON'T)

ANALYSIS OF VARIANCE TEST OF SIGNIFICANCE OF DIFFERENCE BETWEEN MEANS OF DROPOUTS  
AND NON-DROPOUTS FOR THE HIGH SCHOOL RATING SCALE TRAIT OF POPULARITY

Source	D. F.	Sum of Squares	Mean Square	F
Total	635	Z = 678.2		F = e/w =
Years	1	B = 1.4	B = 1.4	1.2-
Groups	1	C = 1.3	C = 1.3	
Y X T	1	E = .63	E = .6	
Error	632			

- Not significant



In the case of ACE scores the Chi square test was used for the same reason that it was used in the case of education of parents and sex: the data was in terms of categories and could be treated better with the Chi square test.

Chi square, as used here, is a test for determining whether a group of numbers is proportional to another set of corresponding numbers. It is found by taking the sum of the squares of differences between corresponding numbers and dividing by the corresponding expected numbers. The expected here were considered to be the numbers belonging to the non-dropouts. The process followed in finding the Chi square is illustrated in Tables II and III.

When  $X^2$  is found it is then compared with a value to a table to determine its significance. The degrees of freedom are found in our case by subtracting one from the number of groups or classes. The degrees of freedom are found on one side of the table. If the  $X^2$  is greater than the number in the table then it is significant as indicated. For instance, a certain value is listed as being the point beyond which any  $X^2$  is significant at the five per cent level of confidence for a number of degrees of freedom.

Statistical significance refers to the likelihood that the behavior could occur in a certain number of times out of one hundred by chance. If the difference between the two

TABLE II

CHI SQUARE TEST OF SIGNIFICANCE OF DIFFERENCES BETWEEN GROUPS  
WITH RESPECT TO SEX

	$f_1$	$f_2$	$f_1 - f_2$	$(f_1 - f_2)^2$	$\frac{(f_1 - f_2)^2}{f_2}$
	Dropouts	Non-Dropouts			
Males	70	61	9	81	1.34
Females	30	39	9	81	$x^2 = \frac{2.08}{3.42-}$
	Dropouts	Subgroup Dropouts			
Males	70	76	6	36	.47
Females	30	24	6	36	$x^2 = \frac{1.50}{1.97-}$

- Not significant

TABLE III

CHI SQUARE TEST OF SIGNIFICANCE OF DIFFERENCES BETWEEN GROUPS  
WITH RESPECT TO ACE SCORES

$f_1$	$f_2$	$f_1 - f_2$	$(f_1 - f_2)$	$\frac{(f_1 - f_2)^2}{f_2}$
Dropouts	Non-Dropouts			
25	10	15	225	22.5
12	10	2	4	.4
10	8	2	4	.5
10	12	2	4	.3
8	10	2	4	.4
10	7	3	9	1.3
7	13	6	36	2.8
6	11	5	25	2.2
5	10	5	25	2.5
7	9	2	2	.2
				$\chi^2 = \frac{.2}{33.1} =$
Dropouts	Subgroup Dropouts			
25	26	1	1	.04
12	14	2	4	.3
10	10	0	0	.0

TABLE III (CON'T)

CHI SQUARE TEST OF SIGNIFICANCE OF DIFFERENCES BETWEEN GROUPS  
WITH RESPECT TO ACE SCORES

$f_1$	$f_2$	$f_1 - f_2$	$(f_1 - f_2)^2$	$\frac{(f_1 - f_2)^2}{f_1}$
Dropouts	Subgroup Dropouts			
10	8	2	4	.5
8	8	0	0	.0
10	9	1	1	.1
7	8	1	1	.1
6	5	1	1	.2
5	4	1	1	.3
7	8	1	1	.1
				$\chi^2 = \frac{1.64}{-}$

- Not significant

distributions is significant at the five per cent level, then it would occur, on the average, only five times out of one hundred by chance.

## CHAPTER IV

### THE RESULTS INDICATED BY THE HIGH SCHOOL RATING SCALE

In this chapter the data obtained from the use of the high school rating scale will be discussed. First the results obtained from a comparison of dropouts and non-dropouts will be presented. This will be followed by a discussion of the results of the comparison of dropouts and subgroup dropouts with respect to these ratings.

#### I. DROPOUTS VS. NON-DROPOUTS

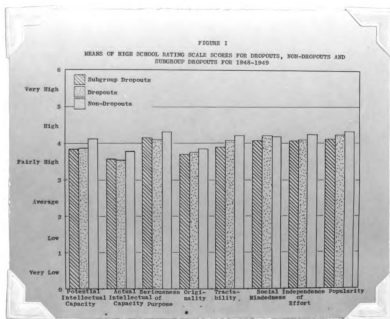
Potential intellectual capacity. Table IV shows that a difference significant at the one per cent level of confidence was found to exist between the means for the ratings for dropouts and non-dropouts with respect to potential intellectual capacity.

Figure I shows that the mean for the ratings of the non-dropouts was higher than that for the dropouts. The mean of the non-dropout ratings was in the lower part of the high category and the mean for the dropouts in the upper part of the fairly high category. This suggests that high school workers rating these students considered those who later drop out as having almost high potential intellectual capacity. This is important to note since the results on the intelligence test show dropouts tend to have below

TABLE IV  
SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF DROPOUTS AND  
NON-DROPOUTS ON SECTIONS OF THE HIGH SCHOOL RATING  
SCALE

Section	Non-Dropouts & Dropouts F	Dropouts N	Non-Dropouts N
Potential Intellectual Capacity	11.50#	322	322
Actual Intellectual Capacity	8.80#	320	320
Seriousness of Purpose	4.68*	322	322
Originality	1.56-	318	318
Tractability	3.21-	314	314
Social Mindedness	.07-	322	322
Independence of Effort	4.44*	314	314
Popularity	1.18-	318	318

# Significant at the 1% level  
\* Significant at the 5% level  
- Not significant





average intelligence, This seeming discrepancy might be explained in terms of the groups with whom the students are being compared. On the intelligence test subjects are compared to other Michigan State College entering students. On the rating scale they are presumably compared to the other high school students.

It is not clear, however, as to whom the rater should compare the student in using the rating scale. Some may have been comparing them to students in certain courses. Others may have used high school students in the whole school or whole school system. Some may have had an arbitrary standard in mind.

What the high school workers using the scale had in mind by potential intellectual capacity is not indicated. Did some mean the individual's ability to perform in relation to what he actually has produced? How does it differ from actual intellectual capacity? Did it mean something similar to what the Binet test measures? Let us hope that the raters did not vary too much with respect to their intent in the use of this scale.

Actual intellectual capacity. Table IV shows that the mean for the non-dropouts was higher than that of the dropouts with respect to actual intellectual capacity. The difference between these groups was significant at the one

per cent level of confidence.

Figure I shows that the mean rating for each of these groups was in the fairly high category. This suggests that even those who drop out were rated by high school workers as having fairly high actual intellectual capacity.

It is possible that the high school workers in marking this trait had access to objective test results; however, this is merely a possibility. Data are not available to show whether they had access to and used such test results as a basis for marking the rating scale. If they did have access to test results and used them, then these ratings might mean that the dropouts, as well as the non-dropouts, have fairly high actual intellectual capacity as measured by objective mental tests and in comparison with the norm groups of those tests.

However this trait may be defined by the raters, the non-dropouts had significantly more of it than did the dropouts. Both groups were subjected to the same process of rating and therefore the measurement may be assumed to be as fair to one as to the other.

Seriousness of purpose. Table IV shows that the mean for the non-dropouts was higher than that for the dropouts. The difference between the means of the groups for this high school rating scale trait was significant at the five per cent level of confidence.

Figure I shows that both dropouts and non-dropouts were in the high category for this trait.

Originality. The difference between the means of the scores for the groups with respect to this trait was not found to be significant statistically, although the non-dropouts averaged a bit higher than the dropouts.

The ratings for both groups averaged in the fairly high category.

Social mindedness. Table IV shows that the mean for the non-dropouts was slightly lower than that of the dropouts with respect to scores for this trait.

Figure I shows that the means for both groups fell in the lower part of the high category for this trait.

Independence of effort. Table IV shows that the mean of the ratings for the dropouts was lower than that of the non-dropouts with respect to independence of effort. This difference was found to be significant at the five per cent level of confidence.

Figure I shows that the means for both groups fell in the lower part of the high category for this trait.

Popularity. Table IV shows that the mean of the ratings for the dropouts was lower than that for the non-dropouts. This difference was not statistically significant.

Figure I shows that the means for both groups fell in the lower part of the high category for this trait.

## II. DROPOUTS AND SUBGROUP DROPOUTS

Potential intellectual capacity. Table IV shows that the differences between the means of the dropouts and subgroup dropouts was not statistically significant.

Figure I shows that although the mean for the subgroup dropouts was lower than that for the dropouts for this trait, this difference was almost imperceptible. Both were in the fairly high category.

Actual intellectual capacity. Table V shows that the difference between the mean of the ratings for the dropouts and subgroup dropouts was not significant, although the subgroup dropouts were almost imperceptibly higher than the dropouts with respect to this trait as is shown in Figure I. Both were in the fairly high category.

Seriousness of purpose. Table V shows that significant differences were not found to exist between dropouts and subgroup dropouts.

Figure I shows that both groups were in the high category. The subgroup dropouts were slightly higher on the average for ratings on this trait.

Originality. Table V shows that significant differences were not found to exist between these groups with respect to this trait, although the dropouts were slightly higher than the subgroup dropouts with respect to ratings on it.

TABLE V

SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF SUBGROUP DROPOUTS  
AND DROPOUTS ON SECTIONS OF THE HIGH SCHOOL RATING SCALE  
1948 & 1949

Section	Dropouts & Subgroup Dropouts F	Subgroup Dropouts N	Dropouts N
Potential Intellectual Capacity	.22-	110	322
Actual Intellectual Capacity	.28-	111	320
Seriousness of Purpose	.36-	109	322
Originality	.70-	108	313
Tractability	2.09*	108	314
Social Mindedness	1.25-	110	322
Independence of Effort	.00-	107	314
Popularity	1.12-	110	218

# Significant at the 1% level

\* Significant at the 5% level

- Not significant



Tractability. Table V shows that a difference significant at the five per cent level of confidence was found to exist between the dropouts and subgroup dropouts with respect to ratings on this trait.

Figure I shows that the dropouts were higher than the subgroup dropouts on ratings for tractability. The dropouts averaged in the high category and the subgroup dropouts in the fairly high category.

Social mindedness. Statistically significant differences were not found to exist between dropouts and subgroup dropouts with respect to social mindedness, although the dropouts were high on ratings for this trait than were the subgroup dropouts. Both were in the high category.

Independence of effort. A statistically significant difference was not found to exist between dropouts and subgroup dropouts with respect to this trait as is shown in Table V.

Figure I shows that the difference between the subgroup dropouts and dropouts was almost imperceptible on ratings for this trait. Both fell in the high category.

Popularity. A statistically significant difference was not found to exist between dropouts and subgroup dropouts with respect to popularity.

Figure I shows that both groups fell in the high category for this trait.

## CHAPTER V

### THE RESULTS INDICATED BY DATA RELATED TO EDUCATION OF PARENTS

In this chapter will be considered the data related to education of parents. The differences between dropouts and non-dropouts, dropouts and subgroup dropouts and non-dropouts and U.S. population age 25 years of age as of April 1947.

#### I. DROPOUTS AND NON-DROPOUTS

Education of mother. Table VII shows that the difference between dropouts and non-dropouts with respect to education of mother was significant at the one per cent level of confidence.

The greatest differences were seen at the beyond high school level. The non-dropouts had a larger percentage of mothers with education beyond high school than did the dropouts. Twenty-six per cent of the dropouts and thirty four per cent of the non-dropouts had education beyond high school. Sixteen per cent of the non-dropouts and nineteen per cent of the dropouts had education of grade school level only.

Education of father. Table VII shows that the difference between dropouts and non-dropouts with respect to education of father was significant at the one per cent



TABLE VI

PERCENTAGE OF PARENTS OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS HAVING  
EDUCATION UP TO HIGH SCHOOL, SOME HIGH SCHOOL OR BEYOND HIGH SCHOOL 1948-1949

	Dropouts			Non-Dropouts			Subgroup Dropouts		
	1948	1949	1948-49	1948	1949	1948-49	1948	1949	1948-49
<u>Education of Mother</u>									
Grade School	17	21	19	14	17	16	25	25	25
Some High School	57	52	55	49	51	50	55	54	54
Beyond High School	26	27	26	37	32	34	20	21	21
<u>Education of Father</u>									
Grade School	29	31	30	18	24	21	36	33	34
Some High School	45	39	42	41	41	41	41	40	41
Beyond High School	26	30	28	41	35	38	23	27	25



TABLE VII

SIGNIFICANCE OF DIFFERENCE BETWEEN DROPOUTS AND NON-DROPOUTS  
AND SUBGROUP DROPOUTS AND DROPOUTS BY EDUCATION OF PARENTS  
1948 & 1949

Parent	Subgroup Dropouts	Dropouts	Non-Dropouts	Chi-Square	
	N	N	N	Dropouts Subgroup Dropouts	Dropouts vs Non-Dropouts
Fathers	111	351	376	1.05-	23.50#
Mothers	112	359	380	3.49-	11.51#

# Significant at the 1% level

\* Significant at the 5% level

- Not significant

level of confidence.

There was almost no difference between the groups with respect to the per cent of parents of fathers with some high school education.

Table VI and Figure III show that the dropouts had a much smaller percentage of fathers with education beyond high school; the non-dropouts had a much larger percentage of parents with education beyond high school than did the dropouts. The dropouts for both years combined had twenty-eight per cent of their fathers with education beyond high school; the non-dropouts had thirty-eight per cent of their fathers so classified. Thirty per cent of the dropouts and twenty-one per cent of the non-dropouts listed parents with education at the grade school level.

## II. DROPOUTS AND SUBGROUP DROPOUTS

Education of mother. Table VII shows that the difference between dropouts and subgroup dropouts with respect to education of mother was not statistically significant.

Table VI and Figure II show that there tended to be a larger percentage of mothers with education at the grade school level for the subgroup dropouts than for the dropouts. There tended to be a smaller percentage of mothers with education beyond high school for the dropouts than for the subgroup

FIGURE II

PERCENTAGE OF MOTHERS OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS HAVING EDUCATION UP TO HIGH SCHOOL, SOME HIGH SCHOOL OR BEYOND HIGH SCHOOL  
1948 - 1949

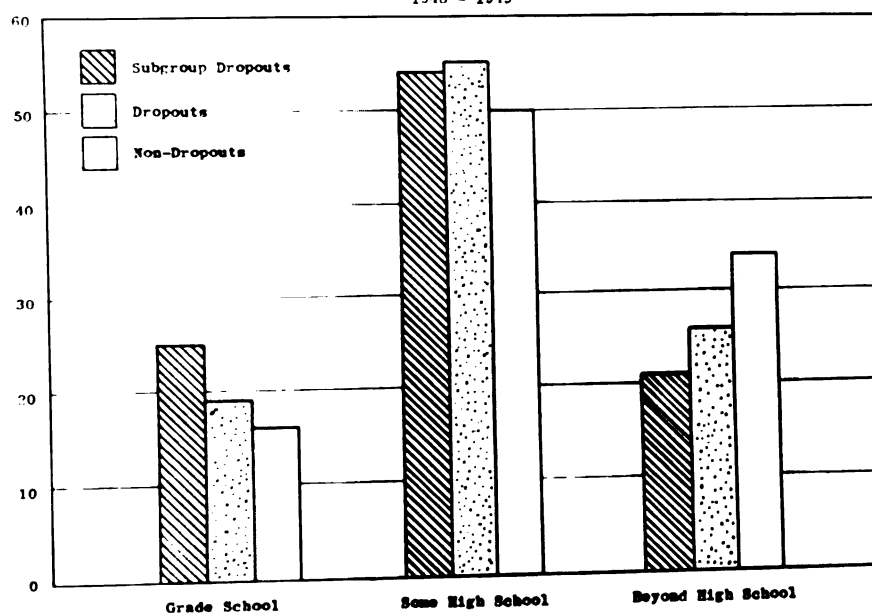
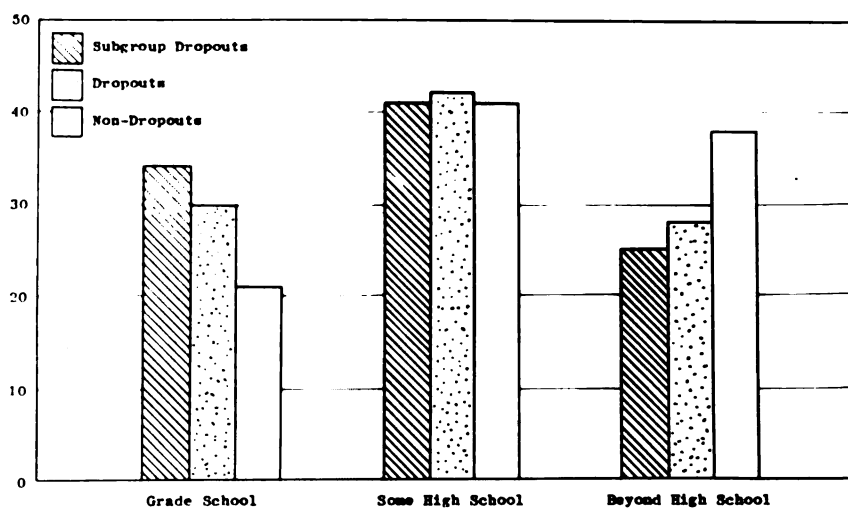


FIGURE III  
PERCENTAGE OF FATHERS OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS HAVING EDUCATION UP  
TO HIGH SCHOOL, SOME HIGH SCHOOL OR BEYOND HIGH SCHOOL  
1948 - 1949



dropouts. Twenty-five per cent of the mothers of subgroup dropouts and nineteen per cent of those of the dropouts had education at the grade school level. Twenty-one per cent of the mothers of subgroup dropouts and twenty-six per cent of those of dropouts had education beyond high school.

Education of father. Table VII shows that the difference between the dropouts and subgroup dropouts with respect to education of father was not statistically significant.

Dropouts had a smaller per cent of fathers with education at the grade school level than did subgroup dropouts. Dropouts had a larger per cent of fathers with education beyond high school than did the subgroup dropouts. Thirty per cent of the fathers of dropouts were listed as having education at the grade school level as compared to thirty-four per cent for the subgroup dropouts. Twenty-eight per cent of the dropouts had fathers with education beyond high school as compared to twenty-five per cent for the subgroup dropouts.

### III. NON-DROPOUTS AND U. S. POPULATION AGE 25 YEARS AND OVER AS OF APRIL 1947

Education of mother. Table VIII and VI showed that a much larger percentage of the U. S. population age 25 years of age and over as of April 1947 had education at the grade school

TABLE VIII

EDUCATIONAL ATTAINMENT OF U.S. POPULATION  
Source: Bureau of Census; data are of April, 1947

School years completed	Age 25 years and over Percentage
Grade school	
1-4	10.4
5+6	8.8
7+8	30.3
High school	
1-3	16.3
4	20.5
College	
1-3	6.7
4 or more	5.4
Not reported	1.6
Total	100.0
Median school years completed	9.0



level than did the Michigan State College non-dropout mothers. A much larger percentage of Michigan State College non-dropout mothers had some high school education than did the U. S. population. A very much larger percentage of Michigan State College mothers had education beyond high school than did the U. S. population. Approximately fifty per cent of the U. S. population had education at the grade school level as compared to sixteen per cent for the Michigan State College mothers. Approximately thirty-seven per cent of the U. S. population and fifty per cent of the Michigan State College mothers had education at the high school level. Approximately fourteen per cent of the U. S. population and thirty four per cent of the Michigan State College non-dropout mothers had education beyond high school.

Education of father. A much smaller per cent of the Michigan State College non-dropout fathers than U. S. population had education at the grade school level. The difference between these groups was comparatively small at the high school level. At the college level it was vastly larger for the non-dropout fathers. Approximately fifty per cent of the U. S. population had education at the grade school level whereas twenty one per cent of the Michigan State College non-dropout fathers listed education at this level. Approximately thirty-seven per cent of the U. S. group as compared to forty-one per

cent of the non-dropout fathers had education at the high school level. Approximately fourteen per cent of the U. S. population had education beyond high school as compared to thirty-eight per cent for the Michigan State College group.

## CHAPTER VI

### THE RESULTS INDICATED BY SCORES OF THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION

This chapter will be devoted to a discussion of the results obtained by comparing the groups according to ACE scores.

Non-dropouts and dropouts. Table III shows that the difference between dropouts and non-dropouts with respect to American Council on Education Psychological Examination scores was found to be significant at the one per cent level of confidence.

Table IX shows that the differences between the groups was much greater at each end of the distribution than in the middle. Forty-seven per cent of the dropouts were in the lower three tenths as compared to twenty-eight per cent of the non-dropouts in these lowest three tenths. Eighteen per cent of the dropouts were in the upper three tenths as compared to thirty per cent of the non-dropouts in these same tenths.

Previous studies have tended to show differences in intelligence between those who drop out and those who do not drop out. Coyle and Yourman<sup>1</sup> in their study of first semester dropouts found little difference between the mean intelligence test scores of dropouts and non-dropouts. On the other hand,

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<sup>1</sup> Coyle and Yourman, op. cit.



Cuff,<sup>2</sup> Agate,<sup>3</sup> Jordan<sup>4</sup> and Pope<sup>5</sup> showed college dropouts tend to be lower on intelligence test scores than non-dropouts.

Garrett<sup>6</sup> claims that many studies have shown fairly high correlations between intelligence test scores and grades in college do exist. Whether the higher rate of dropping out among those in the lower tenths of the class among these first term entering freshmen is related to lack of success in academic efforts would be difficult to say. It may be true that those in the lower tenths can see that they are not doing well in college and drop out in anticipation of later failure; however, the extent to which this is true, if it is true at all, is not indicated by the evidence at hand.

Dropouts and subgroup dropouts. Table III shows that the difference in scores between the subgroup dropouts and dropouts was not significant statistically.

Table IX and Figure IV show that the distributions of percentages of students whose scores fell in each decile was quite similar for dropouts and subgroup dropouts.

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2 Cuff, op. cit.

3 Agate, op. cit.

4 Jordan, op. cit.

5 Pope, op. cit.

6 Garrett, op. cit.

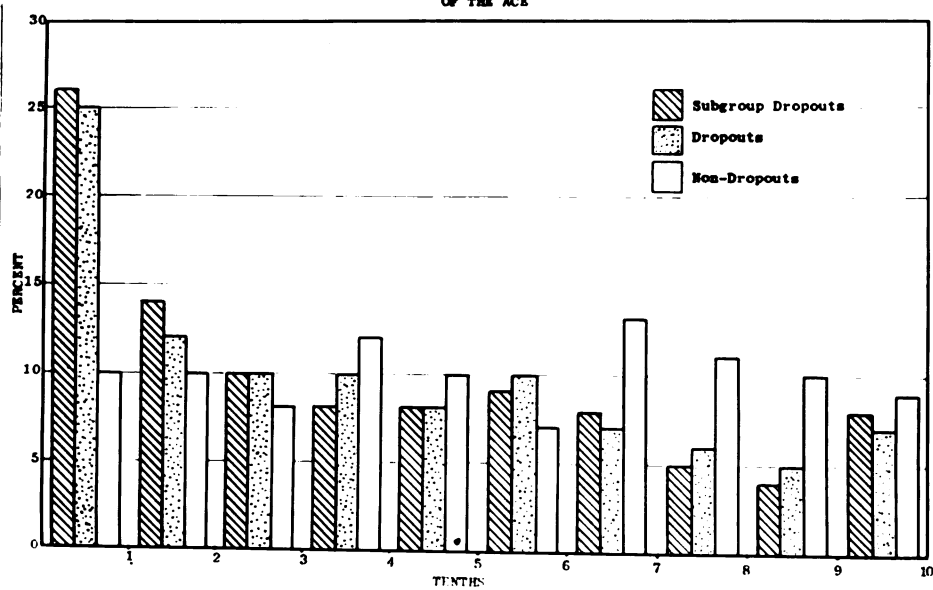
TABLE IX

PERCENTAGE OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS RECEIVING SCORES IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION

Decile	Per Cent				Per Cent				Per Cent			
	Dropouts				Non-Dropouts				Subgroup Dropouts			
	1948	1949	1948 & 1949		1948	1949	1948 & 1949		1948	1949	1948 & 1949	
1	21	29	25		6	13	10		22	30	26	
2	10	13	12		12	8	10		11	18	14	
3	12	9	10		8	8	8		11	9	10	
4	10	9	10		13	11	12		7	10	8	
5	9	8	8		11	9	10		8	9	8	
6	11	9	10		8	6	7		12	5	9	
7	6	10	7		13	13	13		7	9	8	
8	8	4	6		11	11	11		7	3	5	
9	6	4	5		9	12	10		5	3	4	
10	7	6	7		9	9	9		10	5	8	



FIGURE IV  
PERCENTAGE OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS RECEIVING SCORES IN EACH TENTH  
OF THE ACE





## CHAPTER VII

### RESULTS OBTAINED FROM A COMPARISON OF THE GROUPS WITH RESPECT TO SEX

This chapter will be devoted to a discussion of the results obtained from a comparison of the groups according to percentages of men and women composing each.

Dropouts and non-dropouts. Table II shows that the difference between the dropouts and non-dropouts with respect to sex were almost but not quite significant at the five per cent level of confidence.

Table X shows that the dropout group was composed of seventy per cent males and thirty per cent females. The non-dropout group was composed of sixty one per cent males and thirty-nine per cent females.

Cuff<sup>1</sup>, reported that men dropped out more frequently than women; however, Williams<sup>2</sup> reported that sex did not differentiate between dropouts and non-dropouts.

Dropouts and subgroup dropouts. Table II shows that the difference between dropouts and subgroup dropouts

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1 Cuff, op. cit.

2 Williams, op. cit.



TABLE X

NUMBER AND PERCENTAGE OF MALES AND FEMALES IN THE DROPOUT, SUBGROUP, NON-DROPOUT RANDOM SAMPLE AND NON-DROPOUT TOTAL ENTERING FRESHMEN FALL TERM GROUPS 1948 & 1949

Group	1948		1949		1948 & 1949							
	Males N	Females %	Males N	Females %	Males N	Females %						
Dropouts	129	69	58	31	131	70	55	30	260	70	113	30
Random Sample of Non-Dropouts	128	61	82	39	110	60	73	40	238	61	155	39
Subgroup	46	78	13	22	42	74	15	26	88	76	28	24
Non-Dropout Total First Term Freshmen	1685	62	1028	38	1627	59	1130	41	3312	61	2158	39

with respect to sex was not statistically significant.

The dropout group was composed of seventy per cent males and thirty per cent females. The subgroup was composed of seventy-six per cent males and twenty-four per cent females.

## CHAPTER VIII

### RESULTS OBTAINED FROM A COMPARISON OF THE DROPOUTS AND NON-DROPOUTS WITH RESPECT TO SCORES ON THE BASIC COLLEGE INVENTORY OF ATTITUDES AND BELIEFS

This chapter will be devoted to a discussion of the comparison of dropouts and non-dropouts with respect to scores on the Basic College Inventory of Attitudes and Beliefs.

Table XI shows that only one dimension of the nine used in the Basic College Inventory of Attitudes and Beliefs showed a significant difference to exist between the dropouts and non-dropouts. The dimension was active participation in democratic processes vs. indifference and non-participation. The difference was significant at the five per cent level of confidence.

This might be interpreted to mean that the continuing students participated more in democratic processes than the dropouts. This interpretation should be made, however, with considerable caution. In the first place, the reliability of the subscores of this instrument is not very high. In the second place the correlations between scores on the test and actual behavior are not known. On the other hand, it does not follow that because the instrument is probably not very precise, that therefore it should be ignored.

TABLE XI

SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF DROPOUTS AND NON-DROPOUTS ON SCORES FOR  
FORM C OF THE BASIC COLLEGE INVENTORY OF ATTITUDES AND BELIEFS 1949

Dimensions	Dropouts Mean	Non-Dropouts Mean	$\bar{X}-\bar{X}$	F
Belief in discussion and majority decision vs. acceptance of arbitrary action on the part of the minority	9.66	9.63	.03	.004-
Rejection of all authority vs. uncritical acceptance of authority	8.22	8.78	.56	1.57-
Active participation in democratic processes vs. indifference and non-participation	10.24	11.33	1.09	5.41*
Respect for the general welfare vs. unconcern for the rights of society or of elements of society	10.11	10.49	.38	.45-
Respect for and demand for evidence vs. uncritical acceptance of unvalidated statements	5.91	6.27	.36	.73-
Concern for, and interest in, all fields vs. limitation of interest to a specialized field	8.67	9.17	.50	1.41-



TABLE XI (CON'T)

SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS OF DROPOUTS AND NON-DROPOUTS ON SCORES FOR  
FORM C OF THE BASIC COLLEGE INVENTORY OF ATTITUDES AND BELIEFS 1949

Dimensions	Dropouts		$\bar{X}-\bar{X}$	F
	Mean	Non-Dropouts Mean		
Openmindedness vs. uncritical adherence to law and custom	8.50	8.95	.45	.96-
Active concern for others vs. self centeredness or indifference	8.81	8.65	.16	.119-
Definite goals or philosophy vs. simple expediency	6.02	6.14	.12	.098-
Total	76.10	79.00	3.10	1.87-

# Significant at the 1% level

\* Significant at the 5% level

- Not significant





FIGURE V  
MEANS OF SCORES OF DROPOUTS AND NON-DROPOUTS ON FORM C OF THE BASIC COLLEGE INVENTORY OF  
ATTITUDES AND BELIEFS 1949

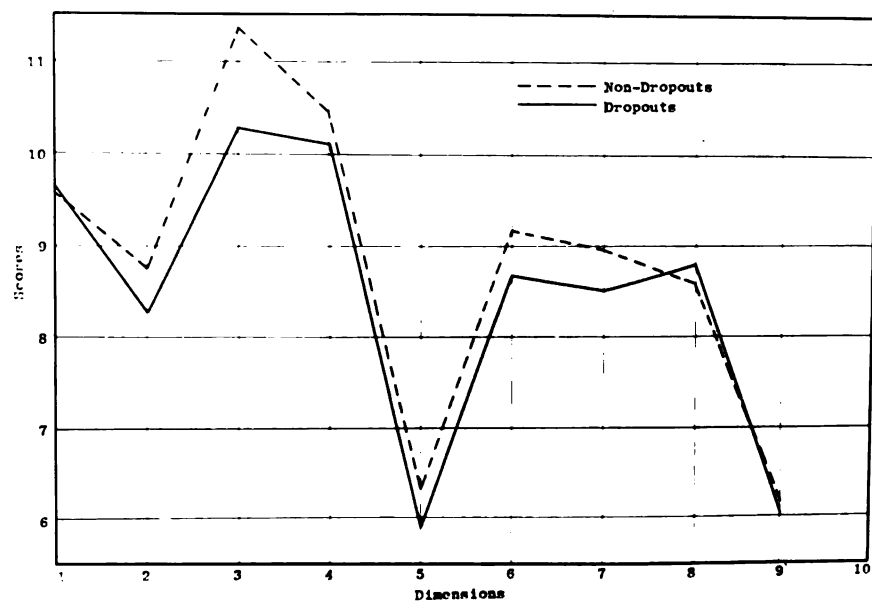


Table XI and Figure V show that except for dimensions one and eight the dropouts averaged slightly lower than the non-dropouts on this attitude inventory with only dimension number three showing a significant difference.

## CHAPTER IX

### RESULTS OF THE COMPARISON OF THE GROUPS WITH RESPECT TO OCCUPATION OF FATHER

This chapter will be devoted to a comparison of the Michigan State College non-dropouts, dropouts, subgroup dropouts and employed males of Michigan with respect to occupation of father. Occupation of father is used as an indicator of socio-economic status.

The means of the groups on numerical scores substituted for occupational categories. Table XII shows the means of the group were 2.41 for the non-dropouts, 2.79 for the dropouts and 2.96 for the subgroup dropouts for both years combined. Stated in terms of occupational categories they would be classified somewhere between the second group which was that of proprietors, managers and officials and the third group which was clerks and kindred workers. The non-dropouts were closest to the proprietors, managers and officials being about one third of the way from the proprietors, managers and officials toward the clerks and kindred workers. The subgroup dropouts were just slightly above the clerks and kindred workers and dropouts half way between the dropouts and subgroup dropouts.

TABLE XII  
STANDARD DEVIATIONS AND MEANS OF SCORES OF DROPOUTS, NON-DROPOUTS, AND SUBGROUP DROPOUTS FOR OCCUPATION OF FATHER, HIGH SCHOOL RATINGS AND THE BASIC COLLEGE INVENTORY OF ATTITUDES AND BELIEFS FORM C 1948 & 1949

	Standard Deviations			Means		
	Non-Dropouts	Dropouts	Subgroup Dropouts	Non-Dropouts	Dropouts	Subgroup Dropouts
Occupation of Father	1.45	1.72	1.12	2.41	2.79	2.96
High School Rating Scale						
Actual Intellectual Capacity	.99	1.11	1.03	3.79	3.54	3.57
Potential Intellectual Capacity	.99	1.00	.95	4.11	3.84	3.82
Seriousness of Purpose	1.11	1.13	1.15	4.30	4.10	4.14
Originality	.96	.93	.90	3.85	3.76	3.70
Tractability	.95	1.01	.95	4.22	4.08	3.90
Social Mindedness	1.40	.97	1.00	4.18	4.20	4.08
Independence of Effort	.92	1.09	1.08	4.26	4.08	4.06
Popularity	1.07	1.00	1.03	4.32	4.23	4.12
Basic College Inventory of Attitudes and Beliefs Form C (1949)	49.00	55.30	79.00	76.10		

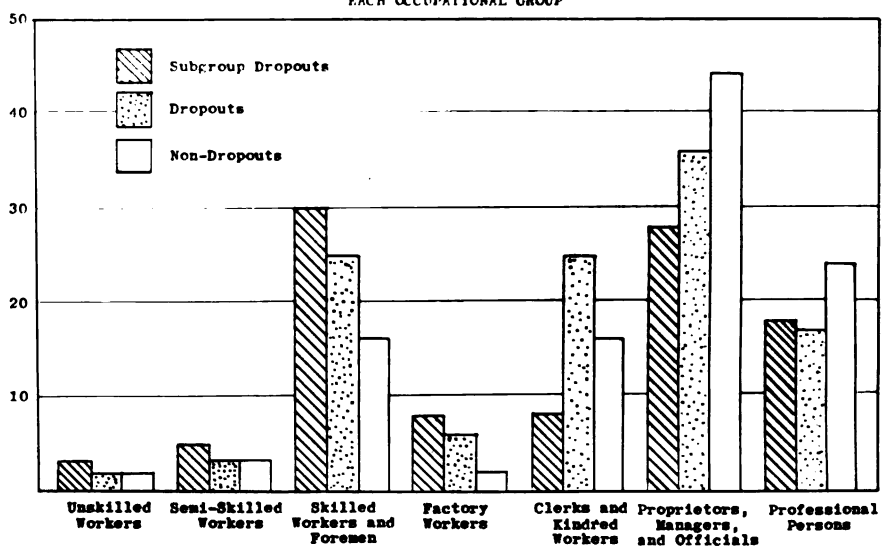
The significance of the differences between the means of the scores for the groups with respect to fathers' occupation.

The difference between the dropouts and non-dropouts with respect to scores for fathers' occupation was significant at the one per cent level of confidence. The difference between dropouts and subgroup dropouts was not found to be significant. Table XII shows that the non-dropouts were higher than the dropouts and the dropouts higher than the subgroup dropouts in the occupational hierarchy.

Figure VI illustrates these differences. The percentage of persons in the non-dropout group with fathers in skilled occupations was about half as large as that for the subgroup dropouts. The percentage of non-dropouts with fathers in the proprietors, managers and officials group was about one third larger than that of the subgroup dropouts. The per cent of subgroup dropouts with fathers in the clerical and kindred worker category was one third that of the dropouts and about half that of the non-dropouts. The percentage of fathers of non-dropouts in the factory worker category was one third that of the fathers of the subgroup dropouts. The percentage of fathers of dropouts in the professional group was one third that of the non-dropouts.

Differences between dropouts and non-dropouts by socio-economic background and ACE scores. There was a much

FIGURE VI  
PERCENTAGES OF DROPOUTS, NON-DROPOUTS AND SUBGROUP DROPOUTS IN  
EACH OCCUPATIONAL GROUP



higher percentage of dropouts than non-dropouts in the upper three tenths of the ACE distribution for the professional and proprietor groups.

In the lower three occupational groups the number of cases involved was quite small as may be readily seen by inspection of Tables XIII to XVI. There were no female non-dropouts listed for the unskilled worker category; however, one hundred per cent of the female dropouts with fathers in the unskilled occupations were in the middle four tenths of the distribution of ACE scores. There were no female children of factory workers listed for the dropout group but of the semi-skilled workers there were three fifths in the middle four tenths and two fifths in the upper three tenths.

Differences between the occupations of fathers of non-dropouts and occupations of the employed males of Michigan. Table XVII shows that about forty-five per cent of the employed males of Michigan in the year 1950 were in the lower two groups. Only about eleven per cent of the occupations of fathers of the non-dropouts were in the factory, semi-skilled and unskilled worker groups; about twenty-three per cent of the Michigan group compared to sixty-eight per cent of the non-dropouts were in the upper two.

The distribution of Michigan State College non-dropout fathers was found to be quite different from that of the





TABLE XIV

NUMBER OF FEMALE DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP 1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10 Total
Professional Persons	3	2	1	2	1	2	4	2		17
Proprietors, Managers and Officials	7	4	8	9	5	2	2	2	2	43
Clerks and Kindred Workers	1		2		1	2	1		1	8
Skilled Workers	6	1	1	1	1	2	2	1	1	17
Factory Workers	1		1							2
Semi-Skilled Workers										
Unskilled Workers					1		1			2

TABLE XV

NUMBER OF MALE NON-DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP 1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10 Total
Professional Persons	1	2	2	5	6	4	5	3	6	3 37
Proprietors, Managers and Officials	8	11	9	6	3	8	13	11	6	6 81
Clerks and Kindred Workers		2	2	2	2	1	4	2	4	3 22
Skilled Workers	1	5	4	5	5	2	3	2	6	1 34
Factory Workers	1		2				1	1	1	6
Semi-Skilled Workers				1	1		2			4
Unskilled Workers	2		1							1 4

TABLE XVI

NUMBER OF MALE DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP 1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10 Total
Professional Persons	11	1		4	2	1	1	4	1	2 27
Proprietors, Managers and Officials	18	11	9	3	7	2	5	1	2	3 61
Clerks and Kindred Workers	4	1		2	1	5	1	3	2	3 22
Skilled Workers	10	6	2	4	6	3	5	2	3	8 49
Factory Workers	4	2	1	1		3	2			13
Semi-Skilled Workers	2	2	3		1					1 9
Unskilled Workers	2	2	1	1						1 5



TABLE XVII

MAJOR OCCUPATIONAL GROUPS OF EMPLOYED PERSONS MALE FOR MICHIGAN  
1950

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Major Occupational Group	Percentage
Professional, technical, and kindred workers	6.2
Farmers and farm managers	6.8
Managers, officials, and proprietors except farm	9.9
Clerical and kindred workers	5.7
Sales workers	5.4
Craftsmen, foremen, and kindred workers	21.2
Operatives and kindred workers	29.5
Private household workers	0.1
Service workers, except private household	5.5
Farm laborers, except unpaid, and foremen	1.5
Farm laborers, unpaid family workers	0.6
Laborers, except farm and mine	6.2
Occupation not reported	1.4

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working population of Michigan.

Differences within dropout and non-dropout groups  
by fathers' occupation according to sex of their children.

Tables XVIII, XIX, XX and Figure VII show that the percentage of dropout females in the upper two socio-economic groups was much larger than that of the males. The per cent of the males in the lower three groups was much larger than that of the females in the same groups.

There was a much larger percentage of non-dropout females than non-dropout males in the professional category. The percentage was about the same for both sexes in the proprietors, managers and officials category. For the skilled workers the percentage of male children in the non-dropout group was much larger than that of the females.

Sex differences within dropout and non-dropout groups  
by socio-economic background and ACE scores. The following observations pertain to sex differences within the non-dropout group as illustrated by Figure IX, Tables XXI, XIX, XV and XIII.

1. The professional group was made up of a relatively small percentage of students with average scores in the case of both sexes.

- 2 There was a smaller percentage of males than females of the professional category in the lower three tenths

TABLE XVIII

PERCENTAGES OF DROPOUTS AND NON-DROPOUTS IN EACH SOCIO-ECONOMIC GROUP BY SEX 1948-1949

	Dropouts Male %	Dropouts Female %	Non-Dropouts Male %	Non-Dropouts Females %
Professional Persons	14	19	19	31
Proprietors, Managers and Officials	33	48	43	45
Clerks and Kindred Workers	12	9	12	8
Skilled	26	19	18	10
Factory Workers	7	2	3	1
Semi-Skilled Workers	5	0	4	5
Unskilled Workers	3	2	1	0





TABLE XIX

PERCENTAGES OF FEMALE NON-DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE  
AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP  
1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10
Professional Persons	5	2	5	18	7	10	10	22	10	12
Proprietors, Managers and Officials	14	15	8	14	15	3	8	2	10	10
Clerks and Kindred Workers		36		18	18		18	9		
Skilled Workers	33	7		20	6		13	7	6	7
Factory Workers	50			50						
Semi-Skilled Workers	40			40			20			
Unskilled Workers										

TABLE VII

PERCENTAGE OF MALES AND FEMALES IN THE LABOR FORCE, BY SEX  
1950-1959

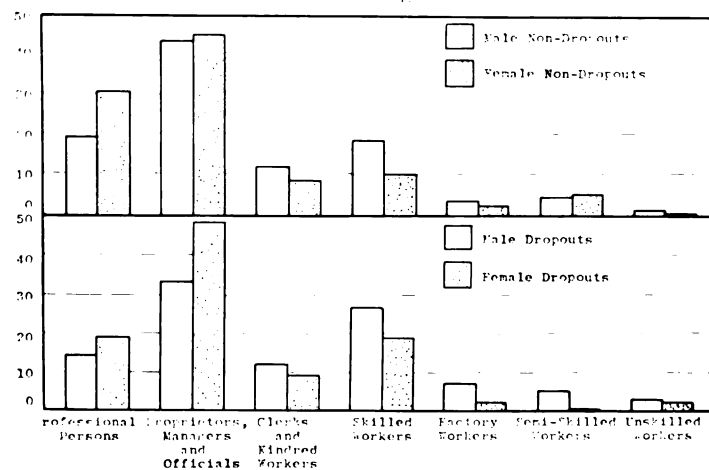


FIGURE VIII  
PERCENTAGE OF MALE AND FEMALE DROP-OUTS IN EACH TENTH OF THEIR CLASS ON THE AMERICAN  
COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP  
1948 - 1949

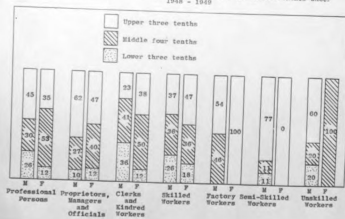


FIGURE IX  
 PERCENTAGE OF MALE AND FEMALE NON-DROPOUTS IN EACH TENTH OF THEIR CLASS ON THE AMERICAN  
 COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP  
 1948 - 1949

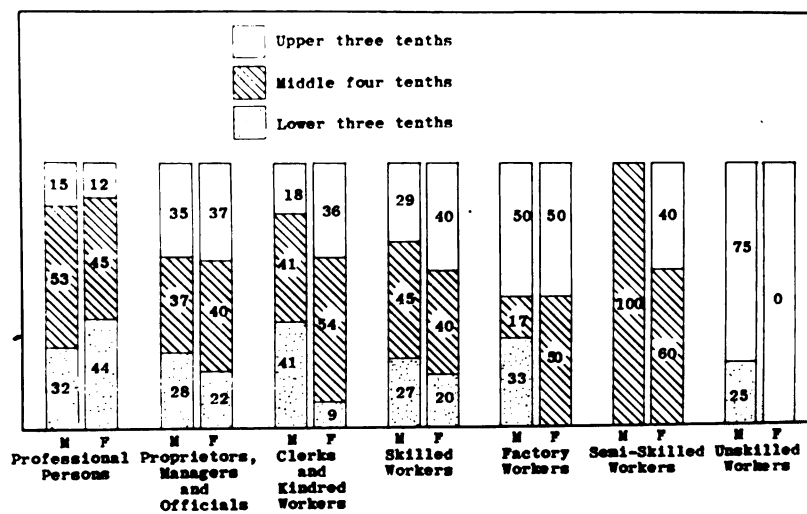


TABLE XX

PERCENTAGE OF MALE DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP 1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10
Professional Persons	41	4		15	7	4	4	15	4	7
Proprietors, Managers and Officials	29	18	15	5	11	3	8	2	3	5
Clerks and Kindred Workers	18	5		9	5	22	5	14	9	13
Skilled Workers	21	12	4	8	12	6	10	4	6	16
Factory Workers	31	15	8	8		23	15			
Semi-Skilled Workers	22	22	33		11			11		
Unskilled Workers		40	20	20				20		



TABLE XXI

PERCENTAGE OF MALE NON-DROPOUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE  
AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP  
1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10
Professional Persons	3	6	6	13	16	11	13	8	16	8
Proprietors, Managers and Officials	10	14	11	7	4	10	16	14	7	7
Clerks and Kindred Workers		9	9	9	9	5	18	9	18	14
Skilled Workers	3	15	11	15	15	6	9	6	18	3
Factory Workers	17		33				16	17	16	
Semi-Skilled Workers				25	25		50			
Unskilled Workers	50		25							25



of the distribution of ACE scores.

3. In the second group, the men were fairly well distributed over the range of scores. The females had only twenty-two per cent in the lower three tenths.

4. For the male children of clerks there were only eighteen per cent in the upper three tenths. For the females there were fifty four per cent in the middle group and only nine per cent in the lower three tenths.

5. For the skilled workers twenty per cent of the males and twenty-seven per cent of the females were in the lowest tenths.

6. For the factory workers, semi-skilled and unskilled levels very drastic sex differences were noted for both dropouts and non-dropouts; however, since the actual number of cases involved was very small, these differences are difficult to interpret.

The following observations pertain to sex differences within the dropout group as illustrated by Figure VIII, Tables XIV, XVI, XVIII, XXII and XX.

1. Sex differences within the dropout group tended to be greater for the dropouts than for the non-dropouts.

2. The female dropouts with professional worker fathers tended to fall in the middle tenths on the ACE, whereas the males tended to fall in the upper. Only twelve per cent



TABLE XXII  
 PERCENTAGE OF FEMALE DROP-OUTS IN EACH TENTH OF THEIR CLASS ON SCORES FOR THE  
 AMERICAN COUNCIL ON EDUCATION PSYCHOLOGICAL EXAMINATION BY SOCIO-ECONOMIC GROUP  
 1948 & 1949

	TENTHS									
	1	2	3	4	5	6	7	8	9	10
Professional Persons	17	12	6	12	6	12	23	12		
Proprietors, Managers and Officials	16	13	18	20	12	4	4	4	4	
Clerks and Kindred Workers	12	25			13	25	12		13	
Skilled Workers	35	6	6	6	6	12	12	6	6	6
Factory Workers	50		50							
Semi-Skilled Workers										
Unskilled Workers					50		50			

of the females as compared to twenty-six per cent of the males were in the lower groups.

3. Only a very small per cent of dropouts with parents in the second highest occupational category were in the lower three tenths.

4. The children of clerks tended to fall in the middle tenths with a very small per cent in the lower tenths. The males had thirty-six per cent in the lower three tenths as compared to twelve per cent for the females.

5. Eighteen per cent of the female children of skilled workers and twenty-six per cent of the male children of this same group were in the lower three tenths.

6. The actual number of students involved in the percentages for the lower groups for both sexes was so small that it is difficult to interpret the data. The differences, however, were very great. For each of these three levels a large percentage of the males were in the upper three tenths on the ACE distribution. There were no females listed for the semi-skilled level. One hundred per cent of the factory worker females were in the upper three tenths on ACE scores. One hundred per cent of the female children of the unskilled workers were in the middle four tenths on the ACE scores.

Sex differences between dropout and non-dropout groups by socio-economic background and ACE scores. The following

observations pertain to sex differences between the non-dropout and dropout groups with respect to occupational level of fathers.

1. For both sexes there was a much larger percentage of persons of the upper two occupational categories in the upper three deciles of the ACE scores for the dropouts than for the non-dropouts. This difference was greatest between male dropouts of the proprietors, managers and officials and non-drop of the same sex and category. There were sixty-two per cent in the former and thirty-five per cent in the later.

2. For the skilled and clerical groups the differences were not great.

3. For the lower three groups the differences were very drastic. They were alike, however, in that there were almost no persons from the lower three tenths of the ACE distribution. The number of persons involved for each sex and category was very small or zero at this end of the occupational heirarchy.

## CHAPTER X

### REASONS FOR LEAVING LISTED BY DURING TERM FIRST TERM DROPOUTS AT TIME OF LEAVING

This chapter will be devoted to a consideration of the reasons listed for leaving by during term dropouts at the time of leaving college.

Reasons for leaving listed by students at the time of leaving have been used by a number of previous studies as an important source of information about why students withdraw from college without graduating. These reasons however may or may not be a good indication of why students leave. They may be merely rationalization or opinion offered on the spur of the moment. Feder<sup>1</sup> has suggested that dropping out cannot be explained in terms of single reasons.

The primary reason for the tabulation of these reasons was to facilitate the formation of the subgroup. The subgroup was formed from those who withdrew during the terms studied minus those who gave certain reasons for leaving and those who listed no reasons.

No single reason was given by more than 13.2 per cent of these during term dropouts; however, employment, finances and responsibilities added together would equal approximately twenty-five per cent. These might be added

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

TABLE XXIII

REASONS GIVEN FOR DROPPING OUT BY SUBGROUP DROPOUTS  
1948 & 1949

Reasons	Frequency	Percentage
Financial	22	13.2
Transfer	21	12.6
Health	20	10.2
Employment	17	9.0
Dissatisfaction, no interest	15	8.4
Family death or sickness	14	3.6
Not ready for college	6	3.0
Responsibilities	5	3.0
Size of MSC	5	3.0
Desired courses not offered	4	2.4
Personal	4	2.4
Injury	4	2.4
Homesick	3	1.8
Dean's request	2	1.2
Scholarship	1	0.6
Roommate adjustment	1	0.6
Unable to adjust to college	1	0.6
Insufficient time	1	0.6
Test results too low	1	0.6
Desire to return home	1	0.6
Discipline	1	0.6
Housing	1	0.6
Postponement of college	1	0.6
Miscellaneous	5	3.0
No reason	7	4.2
Total	163	

together on the assumption that those who listed them had in mind something related to a need for money, although this may or may not be a safe assumption.

Although only about twelve per cent actually listed transfer as a reason for leaving some of the other reasons listed might be interpreted as suggesting that still other students among those who withdrew expected to continue on somewhere else or at Michigan State College. Among these reasons might be listed not ready for college, size of Michigan State College, desired courses not offered, housing and postponement of college. If these were added to transfer it would account for about twenty-two per cent.

Health and dissatisfaction no interest were listed by 10.2 and 8.4 per cent respectively.

Listing these reasons can be useful indeed for certain purposes. For instance, Banzet<sup>2</sup> at Michigan State College contacts students for the purpose of finding out why they left Michigan State College to see why they left and to consider whether it would be desirable for them to return. Then, if a student gives a certain reason as the one explaining why he left, it would seem almost undemocratic not to give consideration to his opinion even if it may not be taken as the last word in the matter.

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2 Banzet, op. cit.



## CHAPTER XI

### SUMMARY, CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This final chapter will be devoted to a summary of the study, some tentative conclusions and suggestions for future research.

#### I. SUMMARY

The purpose of this study was to compare dropouts and non-dropouts to see if they differed to a significant degree according to each of six factors: scores on the ACE, scores on the Basic College Inventory of Attitudes and Beliefs, ratings on the High School Rating Scale of the Michigan State College Application Blank, education of parents, occupation of father, and percentages of males and females.

The groups used were as follows:

Dropouts	Three hundred and seventy-three persons who registered for the fall term of either 1948 or 1949 but not for the winter term of the same year.
Subgroup dropouts	One hundred and sixteen members of the dropout group who did not finish the fall term nor list as a reason for leaving transfer,

death in the family or serious injury.

Non-Dropouts	Three hundred and ninety-three persons who registered as first term freshmen and again as second term freshmen. This group was selected as a sample of all first term entering freshmen by the random number technique and found to be representative by ACE scores and sex.
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To facilitate statistical treatment, numbers were substituted for categories for the High School Rating Scale and socio-economic status. Statistical measures were applied as follows:

American Council on Education Psychological Examination	Chi square
Basic College Inventory of Attitudes and Beliefs	Analysis of variance
High School Rating Scale	Analysis of variance
Education of parents	Chi square
Occupation of father	Analysis of variance
Sex	Chi square

The data were collected from records kept by the college as follows:

American Council on Education Psychological Examination	Published lists of names and test scores
Basic College Inventory of Attitudes and Beliefs	Machine Records sheets

High School Rating Scale	Counselor's page of the Michigan State College Application Blank
Education of parents	"
Occupation of father	"
Sex	"

A review of the literature showed no previous studies closely comparable to this one. As a matter of fact there have been almost no postwar studies of dropping out at the college level reported in the literature.

Sixteen out of twenty-five studies of withdrawing at the college level included reasons given by dropouts for leaving college, six studied their intelligence, seven their scholarship, two post college occupation, three occupation of father, two age, two place of residence, one extra-curricula activities, one education of parents and one case study data.

The results of this study suggest that for the groups studied dropouts compared to non-dropouts have:

1. Less intelligence as measured by the ACE and High School Rating Scale.
2. Homes with lower socio-economic status.
3. Parents with less education.
4. Less seriousness of purpose.
5. Less independence of effort.

6. Less participation in democratic processes.
7. A slightly larger percentage of men.
8. A larger percentage of those in the upper two socio-economic groups with scores in the upper three tenths of the ACE distribution.
9. A much smaller percentage of those in the lower three socio-economic groups with scores in the lower three tenths of the ACE distribution.
10. A much larger percentage of parents of males in the upper two socio-economic groups.
11. A larger percentage of males in the lower three socio-economic groups.

Subgroup dropouts compared to dropouts have:

1. Less, but not significantly less, potential intellectual ability as measured by the High School Rating Scale.
2. Less intellectual ability as measured by the ACE.
3. Homes with slightly lower socio-economic status.
4. A slightly larger percentage of men.
5. Slightly less independence of effort as measured by the High School Rating Scale.
6. Significantly less tractability.
7. A larger percentage of parents with only a grade school education.
8. A smaller percentage of parents who went beyond high school.
9. A much smaller percentage of fathers with occupations in the second and third highest occupational groups.

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10. A larger percentage of fathers in the lower three socio-economic groups.
11. A much smaller percentage of parents in the clerks and kindred worker group.

## II. CONCLUSIONS

### Scores on the American Council on Education

Psychological Examination. Fifty per cent of the dropouts were in the lower three tenths of their class on scores for the ACE. At first glance, it might seem reasonable to conclude that if all persons in the lower three tenths were eliminated from those considered for admissions, half of the dropping out would be prevented; however, this would probably prove to be fallacious reasoning.

If those with performance on the ACE equivalent to that of the lower thirty per cent of the entering classes used in this study were eliminated from the entering class, then the relative standing of the remainder of the entering class would be changed on the ACE and perhaps on grades. Since scores on the ACE have been found to correlate with grade point average, it is possible that many of these students would be also in the lower tenths scholastically. Their removal might change the standing of the group, perhaps resulting in the dropping out of some of those persons who would not have otherwise dropped out. It should be remembered, however, that the influence of scholastic success or failure

on first term dropping out is not shown in this study.

Possibly Michigan State College should be for persons with intelligence of the degree possessed by those falling in the lower three tenths of their class for the years studied. Research is needed to see if Michigan State College should attempt to meet the needs of students with intelligence of this level.

Scores on the Basic College Inventory of Attitudes and Beliefs. The attitudes of the dropouts were significantly further in the direction of participation in democratic processes than were the non-dropouts. It might be that persons with these attitudes were out of tune with the atmosphere of Michigan State College and therefore were unable to adjust to campus life. If this attitude were indicative of a correspondingly less participation in class discussions and campus life, it might interfere with both scholastic and social success. Although these suppositions seem reasonable, judgment should be suspended as to the meaning of the difference found until more is known about the inventory.

Ratings on the High School Rating Scale. A marked difference was found to exist between dropouts and non-dropouts according to actual and potential intellectual capacity. This lends further support to the difference

between the groups on ACE scores. It is of course possible that high school workers using the rating scale knew the intelligence test scores of the college applicants and went by them in marking the scale for potential and actual intellectual capacity.

The wisdom of breaking the ratings for intelligence down into actual and potential intellectual capacity should be studied further. The distinction between these two traits might not be too clear to all users of the scale.

A fairly significant difference was found to exist between dropouts and non-dropouts according to seriousness of purpose and independence of effort. The dropouts had less of each of these traits than did the non-dropouts. According to this evidence, the average dropout tends to be a less serious person and displays less independence of effort than the average non-dropout.

The subgroup dropouts had significantly less tractability than did the dropouts and non-dropouts. According to the dictionary tractable means docile or governable. Does this mean that those freshmen who leave during the first term rebel against the restrictions imposed upon them by the college?

Education of parents. The parents of the dropouts had significantly less education than those of the non-dropouts. The greatest differences were at the grade school and college





levels. A much larger percentage of parents of non-dropouts than dropouts went beyond high school. A much smaller percentage of parents of non-dropouts than dropouts had less than a high school education.

The percentage of persons twenty-five years of age and over in the country as a whole having education below high school is as shown in Table VIII much greater than the percentage of parents of Michigan State College non-dropouts. The percentage of persons in the country as a whole having education beyond high school is much smaller than that of the non-dropout population of Michigan State College. This suggests that the student body of Michigan State College is not representative of the adult population of the United States by education of parents.

Occupation of father. Significant differences were found to exist between dropouts and non-dropouts in respect to occupation of father. A relatively small percentage of the parents of Michigan State College dropouts and non-dropouts were in the unskilled, semi-skilled, factory worker and skilled occupational categories, whereas a very large percentage of the population of Michigan was so classified as may be seen in Table XVII. What does this suggest about the degree to which the college serves the people it

is supposed to serve?

To answer this question, it is necessary to know more about the traditions of Michigan State College. President Hannah<sup>1</sup> of Michigan State College says:

To understand the danger signals, we must keep in mind the special characteristics of the land-grant system.

One of the important characteristics is that our land-grant colleges and universities are peculiarly creatures of the several states and territories.

A second characteristic is that these institutions have been devoted to the education of the agricultural and industrial classes -- that is to say, those who labor with their hands and minds in the production of tangible goods and services. For that reason, these are known as "practical" institutions, although I prefer the phrases of a neighboring Canadian educator who refers to them as being established on the democratic, rather than the aristocratic, pattern.

A third important characteristic is that, of and by reason of their genesis and tradition, they are dedicated to the proposition that there shall be equality of educational opportunity, as nearly as equality can be achieved in a nation with as great a diversity of people and interests as our own<sup>2</sup>

This description of the land-grant colleges, one of which is Michigan State College, is open to a variety of interpretations when applied to the evaluation of the composition of the student body of a particular land-grant college. Still, one could reasonably wonder if the student body should not be approximately representative of all

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<sup>1</sup> John A. Hannah, "Nor Lose the Common Touch," Mimeographed, Michigan State College, 1949.

<sup>2</sup> Loc. cit.

the socio-economic groups of the state in which it is located. The student body of Michigan State College does not come anywhere near representing proportionally all socio-economic groups of the state of Michigan. There is evidence to suggest, therefore, that Michigan State College does not serve the people it is supposed to be serving.

One immediate reaction to this supposition might be to raise the question of the capacity of the different groups to profit from the college as it is now constituted. To what extent are the children of the lower socio-economic groups capable of profiting from attendance at Michigan State College? President Hannah<sup>3</sup> says:

There is no correlation between a boy's intelligence and the size of Father's bank account. As you know, the smartest boy in Traverse City may live on the wrong side of the tracks, and the most capable girl may be the daughter of the washwoman.

But it is a matter for much more serious concern that there are hundreds of thousands of young men and women who would benefit from college training who cannot get such training simply because it is too expensive.<sup>4</sup>

According to this, it is lack of money rather than lack of ability which keeps down the percentage of persons from the lower socio-economic groups at Michigan State College.

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3 John A. Hannah, "Educating the Good Citizen," Mimeographed, Michigan State College, 1950.

4 Loc. cit.

On the other hand, Terman and Merrill<sup>5</sup> offer evidence to suggest that there is a high correlation between socio-economic status of parents and intelligence of their children. They found a difference of around twenty points between the mean I. Q. of the children of professional persons and that of the children of day laborers. It should be remembered, however, that although there is considerable difference in the means there is a considerable overlapping of the distributions. The children of some day laborers would be more intelligent than the children of some professional persons.

More recent data collected at the University of Chicago suggest, however, that the results obtained by the authors of the revision of the Binet are not truly valid. Items similar to those of the Binet test but having content "fair" to persons at all levels were found to show no significant differences in intelligence between lower and higher socio-economic groups.

Davis and Hess<sup>6</sup> reporting on this new Davis-Hess "Culture Fair" I. Q. test say:

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<sup>5</sup> Lewis M. Terman and Maud A. Merrill, Measuring Intelligence, (Boston: Houghton Mifflin Company, 1937), pp 461.

<sup>6</sup> Allison Davis and Robert Hess, "How Fair is an I. Q. Test?", The University of Chicago Magazine, 43:5-10, January, 1951.

As we indicated, one of the basic aims of our new test was to measure mental ability, not educational achievement. Performance of both high and low status class pupils on the experimental test does not deny that the former can read or write better, on the average, than the latter, for they are better motivated to do so. It does suggest, however, that on those problems with which he is equally familiar, the low status child can match the problem-solving ability of the higher status child.<sup>7</sup>

Considering the evidence suggesting that on the Binet test there is a correlation between socio-economic status of parents and I. Q. of their children, it would seem reasonable for us to want to know if the children of the fathers having occupations classified in the lower groups have low ACE scores. This is not the case. The children of the lower socio-economic groups attending Michigan State College tend not to have low scores on the ACE.

Judgment is suspended as to the percentage of persons employed in the lower type occupations who could send their children to college with a reasonable chance that they could profit from it. In any case, considering the numerical size of the lower groups, it would seem obvious that enough persons of sufficient intelligence to profit from attendance at Michigan State College could be found from among their ranks to fill up the quota of their group.

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<sup>7</sup> Loc. cit.

Percentage of male and female. The differences between the groups with respect to sex were not found to be significant, although the difference between dropouts and non-dropouts was almost significant.

The percentages of men in the non-dropout, dropout and subgroup dropout groups were much greater than those for the females.

Within group differences were found with respect to sex according to socio-economic level. For both groups there tended to be more females from the upper socio-economic levels and more males from the lower levels. Females from the proprietors, managers and officials dropped out much faster than males at that level. Males from the semi-skilled level dropped out much faster than females from the same level.

Reasons given for dropping out by during term dropouts. The subgroup was formed from the during term dropouts minus those of this during term group who listed certain reasons for dropping out. These reasons listed at the time of leaving are difficult to interpret since they may have been based on rationalization or may have been given on the spur of the moment without careful thought or may only be indicative of the individual's lack of self understanding. Still, many past studies have used them either partially or wholly as a basis for understanding the dropout phenomenon. In

spite of the weaknesses of these reasons as a criterion of why people leave college during the first term, they are worthy of consideration along with other evidence.

Table XXIII shows that many different reasons were listed by the during term dropouts who were studied. Finances was listed by the most students; however, only about thirteen per cent of them listed it. Transfer and health were each listed by about twelve per cent, employment by nine per cent, dissatisfaction, no interest by about eight per cent and family death or sickness by about three per cent. All the rest of the reasons were listed by six or fewer per cent of the during first term freshman dropouts.

It is interesting to note that only one person in the entire group listed scholarship as a reason for leaving. This omission is significant because some previous studies have advanced evidence to suggest that it is a relatively important factor in determining the persistence of college students.

The size of the percentage of persons listing finances as a reason would seem to suggest that this is not a major factor in causing during term freshmen to leave. On the other hand, it might be true that some students leaving for financial reasons would be too proud to say so. Some students listing employment as a reason for leaving may have meant they were leaving because of finances. It does not



follow necessarily that because a student says he left for employment that therefore he means that he left because he had to go to work. Most students who withdraw without transferring to another institution probably attempt to find employment.

The fact that a student lists transfer suggests that he wants us to think that he plans to continue his education; however, it does not indicate much about the reason or reasons he had for leaving. In a sense a transfer student is not a dropout at all since he is continuing on in school. On the other hand, he may be planning to transfer because Michigan State College was unable to meet his needs.

Poor health is bound to occur in any large group over a period of time. It is not surprising that a small percentage of our subgroup dropouts left for this reason. On the other hand, this reason might be especially susceptible for use by those wanting an acceptable way out of college.

A few cases of death in the family, sickness or poor health are only to be expected.

### III. SUGGESTIONS FOR FUTURE RESEARCH

In addition to the suggestions for future research already mentioned in this chapter, a few are listed below.

1. The differences between those who apply and are accepted and those refused as to socio-economic status and I. Q.



2. The differences between MSC first term dropouts and non-dropouts according to case study data.

3. The differences between first term dropouts and sophomore dropouts according to the factors used in this study.

4. The percentage of fathers of students in all colleges of Michigan with occupations classified as being in the lower socio-economic groups.

5. The differences between first term dropouts and graduates of Michigan State College according to the factors used in this study.

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## APPENDIX

## APPENDIX A

This appendix includes a copy of the Basic College Inventory of Attitudes and Beliefs Form C.

**BASIC COLLEGE INVENTORY OF ATTITUDES AND BELIEFS**

**Form C**

**Michigan State College  
Board of Examiners**

**Directions:**

This inventory is designed so that you may express your opinions about a number of different issues with which society is faced. There are no "correct" or "right" answers since these are issues on which people disagree. You are given some information about each issue and then asked to indicate how you feel about a number of statements based on that information.

Do not mark the booklet. Use the special answer sheet and with the pencil provided you, mark the numbered space corresponding to the number of your answer.

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Board of Examiners**

## INVENTORY OF ATTITUDES AND BELIEFS

In this inventory you are asked to read a series of paragraphs dealing with twelve problems or situations. After each description of a situation you will find a series of statements about some of its various aspects and implications. You are asked to indicate your own reaction to each of these statements. Notice that each statement represents an opinion; it has no "right" or "wrong" answer. Use the following key to indicate your own personal feeling about the statements.

1. I agree with this statement.
2. I disagree with this statement.
3. I am undecided about this statement.

### SITUATION 1.

Of much concern to college students, faculty, administration, and alumni groups is the matter of subsidizing athletes, particularly football players. Many people argue in favor of paying football players, since so much of a school's prestige comes from its football team. They contend that a winning football team causes more money to come into the school, which allows for a larger faculty and better academic facilities. They believe that consistently winning teams may be had only by hiring outstanding players. They further contend that since many good football players come from poor homes, the practice of paying them helps deserving boys obtain an education otherwise impossible for them. Some school administrators have upheld the principle of paying athletes on the ground that expensive stadiums must be paid for from gate receipts which come only if professional or near-professional contests are presented. Such officials also point out that since the custom of paying players is well established in some schools it should in all fairness be encouraged in all schools.

Some opposition to subsidies comes from non-athletic students who must pay for things which the football players receive free. They reason that in time to come, they will bring as much credit and prestige to their college through their successful careers as athletes do through winning football games. Many teachers oppose subsidies since much pressure is placed on them to pass highly paid football players even though they do not understand a subject. Parents of non-playing students complain that so much time is devoted to the paid professional players that others do not receive the kinds of athletic experiences they should have.

The entire matter is further complicated by the fact that colleges are rather independent. Each college is usually controlled by a board of trustees which approves college policy and helps pay the college bills. These independent colleges feel they are free to pay athletes if they wish to and can afford to. Although certain groups of colleges have formed organizations to enforce rules governing athletics in their member schools, subsidies continue to exist.

1. Once a college has joined an organization such as the "Big Ten," it should adjust all activities related to athletics to conform with rules decided upon by the majority of member schools, regardless of hardships those rules may cause.
2. Payment of football players is like the weather; many people talk about it, but no one can do anything about it.

Go on to next page.

3. The question of subsidizing athletes involves so many people and so many schools that sufficient evidence for or against subsidizing can never be accumulated.
4. An organization such as the "Big Ten" can never justifiably criticize a college for breaking the rules, since complete evidence could never be accumulated to support the charge.
5. All alumni should do everything in their power to make their Alma Mater's teams successful.
6. Almost any evidence in support of subsidizing football players is good.
7. As each new idea for the regulation or abolition of payment of athletes is expressed it should be tried.
8. All students who feel the athletic policy of their college is not what it ought to be should do everything possible to get it changed.
9. Decisions of the athletic department concerning the payment of athletes should be governed by general rules established by the entire campus population.
10. Each college should do whatever is necessary to maintain a large stadium since it is traditionally so much a part of campus life.

Answer question 11 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

11. If I were a college president faced with the problem of payment of college football players, I would
  1. decide the matter only if forced to by public opinion.
  2. refuse to decide on the matter.
  3. allow payment of football players.
  4. forbid payment of football players.

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## SITUATION 2.

While there are some rather favorable signs that western Europe is slowly recovering from the effects of World War II, there still appears to be great need for economic help from the United States. At the present time the United States government is committed to the policy of furnishing considerable aid, but as time goes on, large-scale opposition to that policy will probably develop.

Those who oppose aid to Europe will probably use the following types of arguments:

- a. European countries failed to pay their war debts after World War I, so why should the United States again grant money with no possible hope of getting it back?
- b. Europeans caused World War II and so should suffer the after-effects.
- c. If the United States furnishes aid to Europe she endangers her own financial position.
- d. Since most Europeans will feel resentment instead of gratitude for the aid the United States gives them, Americans are foolish to give them money.
- e. European civilization is about finished and the United States should not "back a dead horse."

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Supporters of the aid policy have used and may be expected to use again the following types of arguments:

- a. The United States will be money ahead even if European countries never pay back a single dollar, since the aid given Europe is in the form of dollar credits which must be spent in the United States. This spending creates full employment in America.
- b. World War II was as vital to the United States as to any European country and America should expect to contribute dollars to make up for the years 1939-1941, when France, England, and other allied nations waged the war.
- c. The economy of the United States will be more in danger if the economy of Europe fails than if Europe recovers with the help of many American dollars.
- d. European resentment need not develop unless America grants the aid in a patronizing manner.
- e. We owe a great deal to the European countries for their contributions to the enrichment of our culture, and we should help them regain their high place in western civilization.

Whether one supports the one side or the other, the problem will have to be faced by Americans, and the way they solve the problem will vitally affect the course of modern history.

12. Whatever the Treasury Department says is the best solution to the problem is good enough for me.
13. Even at the risk of economic ruin, the United States should aid the recovery of the rest of the world.
14. Americans should restrict their concern about Europe to matters which affect business.
15. I would be willing to endure a heavy burden of taxes in order to give more aid to Europeans.
16. On such a matter as aid to Europe, the advice of authorities (economic, social, or political) serves to cloud the issues.
17. No person, group, or nation should ever jeopardize its own welfare for the sake of the general welfare.
18. If the civilization of Europe is worth saving, all Americans ought to become acquainted with every aspect of that civilization.
19. I would rather see Europeans maintain a low standard of living than reduce my living standards.
20. Authorities on international affairs can't be trusted since they usually find facts enough to support their own prejudices.
21. It is foolish to think of aiding Europe if by so doing our own nation's economic position is weakened.
22. All citizens ought to know the origins of all aspects of their own culture.

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Answer question 23 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

23. In the matter of granting American aid to other nations I

1. would decide on one side of the question or the other only if the question were put to a public vote.
2. favor all-out aid to less favored countries.
3. can't decide which side I favor.
4. favor restricting aid to amounts of money the borrowing nation could be expected to repay.

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**SITUATION 3.**

A much discussed question today concerns the attitudes a believer in democracy should assume toward Communists on the campus. Some people believe that teachers who are members of the Communist Party should be discharged on the ground that they could not teach truth if they accepted communist doctrine. These people also believe that students who are members of the Communist Party should be expelled from school because they advocate the overthrow of the system which makes their education possible. In addition, it is felt that Communist students and teachers would have a bad effect on the rest of the college.

Opposed to such restriction stands another group of people who believe that a teacher's or student's political affiliation has no bearing on his professional qualifications or academic fitness. They claim that school administrative officials would be no more justified in discharging a teacher or expelling a student because he was a Communist than they would in discharging or expelling one because he was a Republican or Democrat. They believe that as long as an individual is a citizen of the United States no one may deny him the rights of citizenship. Discharging or expelling a teacher or student because of political beliefs, they claim, would be a violation of those rights.

24. The decision to allow or prevent organization of a Communist group on a college campus should be made by the majority of those who are connected with the college in the capacity of student, teacher or administrator.
25. One can never decide whether capitalism, communism, or some other system is best, since conclusive evidence can never be accumulated.
26. The traditional right of freedom of speech is so important that it should never be restricted.
27. Any decision, made by college officials, concerning Communist organizations on the campus should be based on what they believe is the attitude of the rest of the campus population.
28. Most people can actually do very little either to advance communism or to retard it.
29. If an individual is proved a Communist, the college president should expel him at once, regardless of the opinions of the majority of the campus population.
30. There is no room for doubt that American Communists are usually just tools of the Russian government.

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31. The discharge of a teacher or expulsion of a student because of membership in the Communist Party is a matter on which the entire campus population must decide.
32. One can never know whether or not an individual is a Communist.
33. Some elements of communism might improve American life provided political and civil liberties were insured.
34. All adults should actively participate in discussions, meetings, and other activities concerning all major issues of the modern world.

Answer question 35 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

35. If I were an official in a school or college and the question of allowing a Communist organization on the campus arose, I would
  1. authorize the organization of the group.
  2. forbid the group to organize on the campus.
  3. refuse to act unless forced to by my superiors.
  4. refuse to act on such a complicated matter.

\* \* \* \* \*

#### SITUATION 4.

In Hungary, the government decided that the schools, traditionally the responsibility of the Roman Catholic Church, should be brought under state control. The Cardinal, head of the Hungarian Church, opposed the decision and ordered the priests who taught in, and the bishops who managed the schools to resist the order. For this and for other acts against the government, the head of the Hungarian Church was tried for treason and sentenced to life imprisonment. Many people, the world over, criticized the action of the Hungarian government. A great many people, however, defended the civil action on the ground that church opposition to bringing schools under state control actually was against the best interests of the state and should be punished.

36. The trend against church control of education in Hungary was undoubtedly instigated by communists in Russia.
37. If church control of schools has not worked perfectly in Hungary, some other arrangement should be attempted.
38. Relations between church and state in many European countries are so confused that we Americans can never understand them well enough to form intelligent opinions.
39. If the majority of Hungarians desired the Catholic Church to control schools, the government should not allow any non-Catholic schools to operate.
40. There is a definite limit to the kinds of measures Hungarian people would be justified in using to secure the release of the Cardinal.
41. The state can never have sufficient evidence to justify a charge that a church official's service to his church is treason against his country.
42. Laymen were not justified in interesting themselves in the control of education, traditionally the concern of the Roman Catholic Church.

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43. Decisions concerning the type of instruction offered to Hungarians should be made either by officials of the Roman Catholic Church or by state officials.
44. All Hungarians ought to try, by every possible means, to secure the help of non-Hungarian Catholics in demanding the Cardinal's release.
45. If the majority of Hungarians support the stand taken by their government, imprisonment of the head of the Hungarian Church is justified.
46. Priests and bishops, being primarily interested in spiritual matters, have no responsibility for affairs of government.

Answer question 47 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

47. If I were a public official in Hungary I would

1. allow the Catholic Church to continue to operate the schools.
2. refuse to act in a situation so complicated and subject to emotional appeal.
3. place the schools under the control of the state.
4. make a decision only if directed to do so by representatives of the people.

\* \* \* \* \*

#### SITUATION 5.

Kirsten Flagstad, an outstanding opera singer, is a Norwegian citizen. During World War II, when the Germans occupied her homeland, Miss Flagstad returned to Norway to be with her Norwegian husband who, it was said, helped the Germans seize control of Norway. During the entire period of the German occupation, Miss Flagstad lived close to the German authorities. She sang at some concerts attended by Germans, but refrained from becoming intimate with the enemies of her country.

At the end of the war, Miss Flagstad was granted permission by the State Department to return to America where she hoped to continue her musical career. She was greeted in New York by crowds of people, some of whom booed and hissed at her and called her a Nazi, while others praised her and were happy about the chance to hear her sing again. The Metropolitan Opera Company, in response to a great deal of pressure from the public, refused to allow Miss Flagstad to sing in the Metropolitan Opera House in New York. The directors of the company said that since Miss Flagstad had left this country to live in a land occupied by Nazis, she was in sympathy with Nazi beliefs and thus had forfeited her rights as a welcome guest of the United States. They were afraid that if Miss Flagstad were allowed to sing, so many season-ticket holders would cancel their orders that the company could not present the full program of opera usually given.

Miss Flagstad said that her return to Norway had been prompted only by a human desire to be with her husband when he needed her and not because of any political beliefs. She argued further that politics had no place in music--that if people wanted to hear her sing, and she had ample evidence that they did, her relations with the Germans should not be considered at all.

48. American citizens are entitled to question the wisdom of rulings of the State Department.
49. For people other than those vitally interested in art or politics, the Flagstad affair has no importance.

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50. The ruling of the State Department should have been considered sufficient to permit Miss Flagstad to sing any place in this country.
51. Any former friend of Nazis should be thrown in jail.
52. All adult Americans ought to be vitally interested in the decision of the Metropolitan Opera Company.
53. Any visitor from Europe certified by the State Department as being non-Nazi should receive friendly treatment from American citizens.
54. For the protection of American society no person or group of persons who oppose American principles should be allowed to enter this country.
55. Miss Flagstad should have gone to Norway to be with her husband even if she knew in advance that to do so would forfeit her right to sing at the Metropolitan Opera House.
56. No authority is truly competent to judge the desirability of guests of this nation.
57. Miss Flagstad should have gone to Norway to be with her husband even though her entire career would have been endangered.

Answer question 58 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

58. If I had been chairman of the board of directors of the Metropolitan Opera House, I would have
1. forbidden Miss Flagstad to sing.
  2. been unwilling to decide unless forced to by public opinion.
  3. been unwilling to decide such a complex question.
  4. allowed Miss Flagstad to sing.

\* \* \* \* \*

#### SITUATION 6.

Dr. X, a geologist at Harvard University, has issued a public warning that because of the inroads made on America's oil supply by World War II, because of the increased civilian demand for petroleum products, and because of the commitments in support of the Marshall Plan, America will very shortly run out of domestic petroleum. He anticipates that, counting probable but undiscovered sources, the United States has sufficient oil reserves to last, at present rates of consumption, between twenty and thirty years.

In spite of this and other similar statements from geologists, the people of the United States continue to use petroleum in unprecedented amounts.

It has been suggested that one way to save oil would be either to allow European automobiles, which run on much less gasoline than American cars, to enter the American market free of any import duty or to encourage American manufacturers to produce smaller, more economical cars. Manufacturers say that they must continue to make bigger, faster, and more expensive automobiles if they are to compete with other concerns. Spokesmen for the American automobile industry refuse to allow foreign cars to

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compete with American cars on terms of equality for, they say, if foreign cars should become popular, American workmen would be out of jobs.

Other people say that oil reserves can be preserved only if people practice a rigid policy of conservation by driving only when necessary, using coal instead of oil for heating, and driving at a slow rate of speed.

59. Americans will have done all they should do about this problem if they obey any regulations the government might pass regarding conservation of petroleum.
60. Gas rationing laws should be adopted if good substantial reasons can be advanced by those in favor of such a scheme.
61. Rationing of petroleum products could safely be left to some governmental agency provided its activities were reviewed by elected representatives of all the American people.
62. An average man would be foolish to try to influence the production of automobiles.
63. Until geologists can prove how much oil will be available no plans can be made.
64. No regulation of the supply of petroleum products should be attempted until a majority of the American people are convinced it is needed
65. The evidence concerning future petroleum supplies is so limited that long-range plans for regulation of oil supplies can never be made.
66. A satisfactory solution to the petroleum problem could be found if the majority of Americans would think about the matter and reach a decision.
67. Control of the production of America's oil supply should be left to the large oil companies.
68. While evidence about oil reserves presented by scientists is important, it should not be regarded as necessarily conclusive.
69. Any new idea concerning petroleum control deserves a trial.
70. Since America has grown great by allowing private business to exploit natural resources at will, no change in that pattern should be attempted.

Answer question 71 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

71. In regard to the problem of petroleum resources of America, I
1. will make up my mind only when circumstances force me to.
  2. favor a complete let-alone policy.
  3. favor a strict conservation program.
  4. don't think I could ever decide which side of the controversy I favor.

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#### SITUATION 7.

During the 1930's the American nation experienced the most severe economic depression of its history. Banks failed, factories closed, stores were forced into

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bankruptcy, and millions of people were unemployed. To prevent people from actually starving to death, many communities provided unemployment payments or relief supplies of food to over half their populations. Such payments frequently placed the communities' own economic position in jeopardy. To insure that only the genuinely needy received public aid, states and local communities gradually began to employ college-trained social service workers to interview applicants and to decide their relative needs.

As the depression became more intense, the federal government assumed responsibility for aiding people. At the suggestion of economists and sociologists, all sorts of emergency measures were adopted, including a public works program by which employment was created in the field of their specialty or interest for many people, trained and otherwise. Artists were hired to paint pictures to be displayed in public buildings constructed by laborers who had been unable to find other employment. Histories of local areas and institutions were written by trained historians who had been unable to find positions in schools and colleges. Free concerts performed by unemployed musicians were made available to the public.

In spite of such emergency measures the depression continued with but gradually abating intensity. Many men, unable to find means with which to support their families, took their own lives so the benefits from their insurance policies would be available to their wives and children. Others began careers of petty thievery in an effort to obtain food or other necessities for their children.

At long last the United States began to recover from the depression. Agriculture, commerce, and industry, already benefiting from the efforts of the government, became quite healthy when the threat of war created a new European demand for American products. They recovered still more as this nation began its own defense program.

72. If I were a father, I would be willing to take my own life if that were the only way I could insure my family's subsistence.
73. In times of emergency, to spend public money for such useless activities as painting or music is the height of silliness.
74. If, by taking advantage of tense moments in international affairs, the United States government could insure full employment for its citizens, it would be justified in doing so.
75. No one can justifiably expect society to provide him with food if he doesn't have a job by which to earn his support.
76. Social scientists really don't know what actually causes depressions nor do they know how to cure them.
77. In times of economic crisis each locality should care for its own needs first, without too much concern for any other groups.
78. A man would be stupid to steal and thus risk punishment in order that others might live.
79. Applicants for relief had little or no right to question the judgment of officials appointed to decide on their needs.
80. The opinions of experts concerning possible solutions should be respected but should not be accepted uncritically.

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81. Intelligent people ought to have sampled every kind of activity offered by the public works program.

Answer question 82 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

82. If this country were faced with another major depression I would favor

1. a public works program at the expense of the federal government.
2. some form of public works only if suffering became intense.
3. allowing the national economy to work itself out of the depression.
4. making each local area responsible for its own unemployed.

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SITUATION 8.

Students enrolling in college at the present time are apt to be faced with a rather difficult conflict. Many want to go to college in order to prepare for a job which will give them a greater income and a higher standard of living than they could otherwise expect. Since vocational preparation is the chief goal of these students, they want to enroll in as many courses as possible which bear directly on their vocations. Many feel that enrolling in cultural courses or general education courses is a waste of valuable time. They ask for more engineering, police administration, or whatever is their vocational choice, and less of such things as philosophy, English literature, and the like. They further argue that even if they wanted to take non-vocational subjects, many married students would not be justified in doing so since they must prepare quickly to support their families and all personal considerations must be sacrificed to that goal.

To the objection that strict vocational training is selfish since it overlooks society's need for well-rounded citizens, students respond by saying that after all this world is pretty selfish, so why should students be expected to be different?

College administrators, counselors, and others who advise students, argue that vocational training is not the most important goal of a college education. Especially in the first two years of college, they believe, students should spend a good deal of their time gaining an insight into the natural and social world in which they live. They contend that the primary goal of a college education is to gain broad general knowledge which will enable students to enjoy life in modern society regardless of the vocation they select. These people also contend that the future of American society depends more on citizens who have received a general education than on skilled technicians.

As long as the interests of many students are contrary to the beliefs of those responsible for directing their studies, conflicts and dislocations result. Students grow disheartened because their vocational work is still in the future, and teachers of general courses grow disheartened because students take such little interest in their basic education.

83. Students should have complete freedom in selecting their courses.

84. Devoting one's attention to several major areas of general interest is better than either concentrating on one area or studying a multitude of areas.

85. Neither the interests and desires of individuals nor the broader interests of society can be slighted if our society is to progress.



86. Any student who spends four years in college ought to sample every subject offered by the college.
87. Each student should plan his college course in whatever way will advance his own interests best, regardless of the needs of society.
88. Neither teachers, counselors, nor other officials should have the right to tell students they must take specific courses.
89. Students should not take courses which take time from their technical training.
90. The statement, "God helps those who help themselves", represents a pretty good principle for living in modern society.
91. Counselors trained to help students know what is good for students better than do students themselves.
92. No one can study too many different subjects in school.
93. The good of society is of paramount importance even if individual welfare must be sacrificed to it.
94. Married students should give up any personal desires which interfere with the support of their families.
95. Students should take courses which will make them well-rounded people, regardless of the effects such action would have on the welfare of their families.
96. No one is worth sacrificing one's desires for.
97. Married students are justified in making some sacrifice of personal desires to insure the economic well-being of their families but are also justified in retaining some selfish goals.

Answer question 98 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

98. Faced with the problem of selecting a college program I would probably
1. allow my advisor to select my program since he probably knows what I need.
  2. elect a non-vocational program.
  3. elect some sort of program only if my parents or advisor refused to do it for me.
  4. elect a vocational program.

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#### SITUATION 9.

The Grand Canyon of the Colorado River is one of the most beautiful spots in America. Its majestic size and its gorgeous coloration have inspired the millions of people who visit it each year. Artists have painted pictures of it from every conceivable angle, in all seasons of the year, and at all hours of the day. Important music has been written about it, such as Ferde Grofe's Grand Canyon Suite. The Canyon

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has become a significant symbol of America.

At the present time there is considerable discussion about the future of the Canyon. One group of people would like to dam off the Colorado River above the Canyon. The water would then be diverted through some mountains to irrigate dry desert land. Such diversion would mar much of the beauty and appeal of the Grand Canyon, but would permit much reclaimed land to be brought under cultivation. Advocates say that in the foreseeable future the food grown on such reclaimed land will be necessary to sustain the population of the United States.

Opponents of the plan argue that no amount of increased agricultural land is worth the loss of the beauty of the Grand Canyon. They contend that "man should not live by bread alone" and that diverting the river would be doing irreparable damage to the aesthetic soul of America.

Foreigners who feel they know the American character say they hope the Canyon will be left as it is, but they think those in favor of the irrigation project will finally have their way.

99. Whatever is to be done concerning the Colorado River will be done anyway, so people would be wasting their time if they tried to influence the decision.
100. Interested citizens should work on some smaller aspects of the problem rather than try to decide the whole question of whether or not to divert the Colorado River.
101. Foreigners are sure to criticize those things which Americans do best.
102. Since we have gotten along so far without spoiling the Grand Canyon, there is no need to change it now.
103. No one can know enough about the character of another nation to predict what its citizens will do.
104. The people whose land will be improved by irrigation should be the ones who decide whether or not to divert the river.
105. Individuals are powerless to affect such important changes as legislation authorizing diversion of the Colorado River.
106. Since America has always been a land of plenty, it is foolish to think that her deserts must ever be reclaimed.
107. Anything which might advance the material welfare of the nation should be attempted.
108. The American people should be asked to vote on the use to which the Colorado River should be put, and whatever a majority favors should be done.
109. A majority decision of the American people concerning the use of the water from the Colorado River should be binding even if it works hardships on people most closely affected by it.
110. All Americans citizens should try to influence the outcome of every national issue.
111. Most social issues can never be decided since all pertinent evidence can never be collected

Answer question 112 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

112. If I were in a position to decide whether or not to divert the river, I would

1. have it diverted.
2. refuse to decide on such a complex issue.
3. decide only if no one else would make the decision.
4. decide that the diversion would not be worth marring the natural beauty of the Grand Canyon.

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#### **SITUATION 10.**

A commission of outstanding educators, appointed by the President of the United States to study the problem of higher education, reported that this nation was failing to educate a large proportion of its population capable of profiting from college training. This commission reported that many young people, whose talents should be trained in colleges, were kept out because of several kinds of barriers. The cost of a college education, the fact that colleges were frequently remote from students' homes, the fact that colleges did not offer proper programs for certain kinds of students, and the fact that many colleges restricted the attendance of certain racial or religious groups all seemed to prevent many deserving young people from attending school beyond the 12th grade. On the strength of their findings the commission recommended that

1. high school education must be improved and should be provided for all normal youth.
2. the time has now come to make education through the fourteenth grade available in the same way that high school education is now available, that is, free and for everyone.
3. the time has come to provide financial assistance to competent students in the tenth through fourteenth grades who would not be able to continue their education without such assistance.

It recommended that the national government should provide the funds necessary to realize these proposals.

Following publication of the commission's report, some people challenged its findings and recommendations. They argued that the commission had exaggerated the number of capable students who had been prevented from gaining a college education by economic, geographic, or racial barriers. While they thought some aid might be provided to poor but qualified students, they thought the number who could take advantage of it would be rather small. They also objected to the idea that all students should be given free public education through the second year of college, on the ground that a large number of high school students do not have the ability to succeed in college work. Above all, critics of the report objected to the recommendation that the federal government provide funds to make college education easily available. Such aid, they complained, would mean federal control of what was taught and might eventually allow the political party in power to use colleges to propagandize students so as to continue in office.

113. The commission knew more about educational problems than did any of its critics.

114. College education should be restricted to native-born Americans who can afford it.

115. Since society has not provided means for employing a college-educated population, only those people whom society can use should be allowed to go to college.

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116. All new ideas about education are worth a trial.
117. No presidential commission will ever give a report free from political partisanship.
118. All people need a broad, liberal, academic training.
119. I would be willing to pay very high taxes to provide college education for all qualified Americans.
120. College training should be primarily directed toward preparing students for a vocation.
121. Every young man or woman in a democracy should be given the right to attend college.
122. Any American who really wants a college education can get one by the old-fashioned way of working through school.

Answer question 123 by indicating in the appropriate space on the answer sheet your choice of the four possible responses.

123. If the proposition that all American youth should be given the opportunity to attend college were put to me I would

1. favor it.
2. disapprove of it.
3. be unwilling to decide whether or not I favored it.
4. hesitate to decide unless I were actually pressed for a decision.

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#### SITUATION 11.

During the past several years American college students in various parts of the country have been faced with many of the same problems. Some of these have been new and seemed to be peculiar to the modern age in which they developed, while others are more perennial. Several of these problems are described below:

- a. Teachers frequently disagree with the authors of textbooks used in class about the truth of certain facts and their interpretation.
- b. Some teachers lecture during the entire class period, believing that only by such a technique can all important material be presented. Other teachers prefer to do very little talking in class, hoping that a class discussion of the subject will develop most pertinent points.
- c. College administrations have become interested in assuming a more direct control over fraternities and sororities in the interest of providing more equitable housing for all students. Members of fraternities and sororities have resented such interest because it involved the loss of some of their previous independence.
- d. Students with permanent physical disabilities, such as blindness, often ask for help from their fellow students. The time that would be involved in helping such handicapped people represents a real loss to those who might want to give such assistance.
- e. Many time-honored campus traditions have been challenged. Frequently, for example, a school song, revered for half a century or more, is discarded in favor of a newer, more original tune.

- f. The wide variety of recreational opportunities poses a very real problem of selection to the students. Lectures, concerts, athletic events, dances, parties, and study all vie with one another for the students' interest.
124. A teacher's studied opinion about interpretations of his subject should usually be accepted as true.
125. Fraternity men should look after the well-being of their organization before considering such things as general improvement of college housing.
126. If blind students come to college, they should provide themselves with readers and whatever other special help they need.
127. Students are in college primarily to prepare for a job and should not waste time on activities not closely connected with that goal.
128. Everyone's opinions about controversial issues and interpretations are equally sound and justifiable.
129. If the needs of the entire student body could be better satisfied by restricting the independence of fraternities, that should be done.
130. A school song which has lasted for fifty years should not be displaced.
131. College students should take advantage of all cultural presentations available to them.
132. The best college classes are those in which the teacher lectures and the students take notes.
133. All students should be willing to help blind students regardless of any personal inconveniences such work might cause.
134. Each generation of college students should be allowed to establish its own customs and traditions.
135. There should be many more discussion-type classes, in which everyone is expected to contribute ideas, than lecture-type classes.

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## **SITUATION 12.**

Just as college students the country over are faced with the same kinds of problems, so workers in offices, factories, and stores are faced with similar problems. A few such problems are described below:

- a. Decisions concerning union membership of employees of an entire factory are frequently made by a vote of the workers. If the majority favors unionization, all workers are expected to join, pay dues, and support all union activities. If the majority opposes unionization, none of the workers are expected to seek union benefits.
- b. Many businesses are so organized that one person is held responsible for all work done in an entire section or division. Regardless of the number of individuals working in the division, all work is done in the name of the section or division chief.

- c. In some organizations all employees are encouraged to help make all decisions concerning kinds of work done, salaries, hiring and firing, and the like. In other places such participation is sharply discouraged.
- d. Certain skilled tradesmen are sometimes limited in the amount of work they may do in any one day in order to spread employment to the greatest number of people. In other trades, however, a premium is placed on workers who can produce the greatest amount in the shortest time, even though such practice means fewer people can secure employment.
- e. Management frequently will not grant long-term contracts to workers on the ground that evidence concerning future markets is so unpredictable that the company could not afford to tie up too much money in steady payrolls. Some employers, however, do provide long-term contracts of employment in order to keep the same workers from year to year.
- f. In some businesses the invention of new techniques and labor-saving machinery is constantly encouraged since better products are frequently the result. In other places, however, such changes are discouraged as involving extra cost and upsetting the established ratio of work and workers.

- 136. The decision of the majority of the workers concerning unionization should be binding on all employees.
- 137. Persons in authority should only be executives for those who actually do the work.
- 138. Limiting the amount of work done by each employee is unfair to fast workers and should be discouraged.
- 139. No procedure, institution, or device should be maintained unless it is distinctly useful.
- 140. Management cannot accumulate evidence of future developments conclusive enough to warrant long-term contracts to workers.
- 141. Working conditions, terms of employment, and the like should be prescribed by whoever pays the wages.
- 142. Employees should restrict their participation in a business to the successful performance of their own jobs.
- 143. No worker can justify producing a great deal if, by doing so, he restricts the employment of others.
- 144. Most evidence points to a permanent conflict between labor and management.
- 145. The person in authority should receive most credit since he bears the responsibility for all employees under him.
- 146. Workers should be encouraged to actively participate in all or most of the affairs of management.
- 147. If I were the owner of a business I would rather make little or no profit for a protracted period of time than discharge employees.
- 148. The business of business is high profits.
- 149. Many industrial procedures should be continued because they are part of the tradition of that industry.
- 150. Workers are entitled to a good wage regardless of the interests or needs of the owners of the business.









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