

# PENNSYLVANIA HIGH SCHOOL SENIORS, 1958

– THEIR MENTAL ABILITY

– THEIR ASPIRATIONS

– THEIR POST-HIGH SCHOOL ACTIVITIES



A Report

of the

JOINT STATE GOVERNMENT COMMISSION

1959

The Joint State Government Commission was created by Act of 1937, July 1, P. L. 2460, as amended 1939, June 26, P. L. 1084; 1943, March 8, P. L. 13; 1956, May 15, P. L. (1955) 1605, as a continuing agency for the development of facts and recommendations on all phases of government for the use of the General Assembly.

JOINT STATE GOVERNMENT COMMISSION  
1957-1959

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## LETTER OF TRANSMITTAL

*To the Members of the General Assembly of the  
Commonwealth of Pennsylvania:*

In view of the intense interest in education, particularly post-high school education, the Executive Committee of the Joint State Government Commission initiated a study of high school seniors in attendance at public, parochial and private schools of Pennsylvania for the purpose of ascertaining their intellectual ability, courses pursued in high school, family characteristics, educational aspirations and post-high school activities.

A task force was duly appointed to undertake the study. This report, which is supplemented by a technical report, presents some of the major facts and findings of the task force.

In addition, the Executive Committee appointed a panel of advisors who undertook an independent evaluation of the problems of higher education in Pennsylvania and furnished the Commission with a report, which, on behalf of the Commission, is gratefully acknowledged.

The Joint State Government Commission acknowledges the cooperation of the administrative officers and staffs of the public, parochial and private schools, colleges and universities, all of whom contributed materially to the study undertaken by the task force.

BAKER ROYER, *Chairman*

*Joint State Government Commission  
Capitol Building  
Harrisburg, Pennsylvania  
April 1959*





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## INTRODUCTION

Attempts at the evaluation of educational policy are likely to prove futile until a choice has been made among alternative educational objectives. Although the ends of education are many, it is helpful to distinguish, for the purpose at hand, between education that purports by the use of the tools of "experimentalism" to facilitate "life adjustment" and education which aims to improve the competency of an individual in definable areas of knowledge.

There seems to be substantial agreement among state departments of education, the United States Office of Education, and school administrators as to the primary aims of "life adjustment" education. For example, the Pennsylvania Department of Public Instruction officially observes that "the elementary school program for boys and girls" should be designed to "Help them adjust more perfectly to their age-mates, and as they later become adults bring them into more complete adjustment to the world of people."<sup>1</sup> Again, as regards secondary education, the United States Office of Education notes that "Life adjustment education is designed to equip all American youth to live democratically with satisfaction to themselves and profit to society as home members, workers, and citizens . . . . Many high schools . . . continue to be dominated by traditional curriculum patterns which emphasize verbal and abstract learning or place undue emphasis on specialized courses useful to a relatively small number of pupils."<sup>2</sup>

It would appear that the "life adjustment" approach has found its collegiate counterpart in what may be designated as the "open-door" approach.

<sup>1</sup> Commonwealth of Pennsylvania, Department of Public Instruction, *Elementary Education: Local Participation in State-wide Revision of the Elementary School Curriculum*, Bulletin 233-A (1946).

<sup>2</sup> United States Office of Education, *Developing Life Adjustment Education in a Local School*, Circular No. 253 (February 1949).

This approach is well illustrated by the remarks of a Midwestern educator who speaks of the role of the state university as ". . . growing out of and flourishing in the very soil of democracy, supported and maintained by the people, committed unequivocally to a more highly trained intelligence of the masses, believing that the door to intellectual opportunity should never be closed, maintaining a wide open door for all those who are willing to make the trial."<sup>3</sup>

The educationists who subscribe to the "life adjustment" approach usually frown upon such practices as the measurement of a student's performance by reference to objective standards and the encouragement of competitive scholarships and, they insist, quite logically, that school systems be appraised by reference to enrollment. In the phraseology of the United States Office of Education, school systems should be ". . . —available to all, enrolling all, and meaningful to all— . . ."<sup>4</sup>

Given the objectives of "life adjustment" education, it seems reasonable to approximate its success in terms of the relative number of students in full-time attendance at some educational institution. For example, school attendance in Pennsylvania is compulsory from the 8th birthday (although most pupils enter earlier) to the 17th birthday. In England-Wales, attendance is compulsory from the 5th birthday to the 15th birthday, and in the Union of Soviet Socialist Republics, attendance is

<sup>3</sup> See "The Role of the State University in the Educational Matrix," an address by Stanley J. Wenberg, Assistant to the President, University of Minnesota, published in *Summary of Proceedings of the Conference of State Higher Education Study Commissions*, Council of State Governments (1958). See also *A Study of the Need for Additional Centers of Public Higher Education in California*, California State Department of Education (1957).

<sup>4</sup> Federal Security Agency, Office of Education, *Vitalizing Secondary Education: Education for Life Adjustment*, Report of the First Commission on Life Adjustment Education for Youth, Bulletin 1951, No. 3 (1951).

compulsory from the 9th birthday (although many pupils enter earlier) to the 14th birthday. On the basis of such data as are available, it seems reasonable to assume that probably more than 95 percent of persons in the compulsory attendance age groups attend school full time. Again, in Pennsylvania in 1955-1956, 20.5 percent of the persons aged 18-22 attended college. In this connection, it should be noted that the percentage figure does not include students still in high school or attending technical institutes and business schools offering advanced training. In England-Wales in 1951-1952, of the group of persons aged 15-18, between 15 and 17 percent attended secondary or collegiate institutions, and of the persons aged 19-22, 6 percent were full-time students primarily at collegiate institutions. In the Union of Soviet Socialist Republics in 1955-1956, it has been estimated that 33 to 38 percent of the age group 14-17 were enrolled full time in school, and 8 to 12 percent of the age group 17-22 attended institutions offering advanced training.<sup>5</sup>

Though the number of men and women of college age currently attending institutions of higher learning in Pennsylvania is relatively high, it has been contended that in the future college enrollments will substantially increase because of estimated population growth and increasing interest in college attendance.<sup>6</sup> In connection with these predictions, which fail to recognize the extent to which anticipated increases in earning capacity affect college attendance, it should be observed that over the past thirty years the difference between the income of college and university trained men and women

<sup>5</sup> Pennsylvania data obtained from the Pennsylvania Department of Public Instruction; England-Wales data obtained from *World Survey of Education*, UNESCO (1955); Union of Soviet Socialist Republics data obtained from *World Survey of Education*, UNESCO, (1955); A. G. Korol, *Soviet Education for Science and Technology* (1957); and *Education in the USSR*, United States Department of Health, Education and Welfare, Office of Education (1957).

<sup>6</sup> *Higher Education in the Commonwealth*, Report of the Governor's Commission on Higher Education (February 1, 1957).

and the earnings of the working population as a whole has decreased.<sup>7</sup>

Though emphasis upon quantity since the turn of the century has given American education its distinct character, in the recent past inquiries concerning the quality of education have been undertaken with increasing frequency. For instance, the President's Committee on Education Beyond the High School observes, "If an unwelcome choice were required between preserving quality and expanding enrollments, then quality should be preferred, because it would do neither individuals nor the Nation any good to masquerade mass production of mediocrity under the guise of higher education."<sup>8</sup> Quite often these inquiries into quality have been coupled with queries regarding equality of educational opportunity. There have been assertions that equality of educational opportunities, particularly on the post-high school level, is an ideal rather than a reality. Ever since the first invasion of space by a satellite which did not bear the label "made in the U.S.A." there have been angry and anxious remonstrances. Some of the remonstrators have informed the public in no uncertain terms that unless equality of educational opportunity—that is, equal opportunity for all students with the ability prerequisite to mastery of the arts and sciences—is made an operating institution, the nation will continue to "lose talent," "waste human resources," and ultimately fail in the competition for world leadership.

Government on all levels—Federal, state and local—has been urged to provide all those who have adequate intellectual capacity and motivation with the means to take advantage of educational opportunity beyond the high school level. The means urged are many. Some advocate publicly-financed scholarships, some urge increased state

<sup>7</sup> See David M. Blank and George J. Stigler, *Demand and Supply of Scientific Personnel* (1957), and H. S. Houthakker, "Education and Income," *The Review of Economics and Statistics* (February 1959).

<sup>8</sup> The President's Committee on Education Beyond the High School, *Second Report to the President*, (July 1957).

assistance to privately-owned institutions of learning, others wish to bring opportunities of higher education to every doorstep by the establishment of community colleges, and many favor comprehensive student loan plans. All these suggestions have been woven into the fabric of higher education. Basically, they do not represent innovation, and policy decisions, in the main, relate to extensions of accepted practices.

The most significant extension in recent years has been in the area of student loans. In 1956, the Commonwealth of Massachusetts established a general plan designed to enable residents to borrow on their own signatures for the purpose of completing their collegiate education. The State of New York established a similar plan in 1957, and the Federal Government entered the student loan field in 1958.

Briefly, the New York and Massachusetts plans make it possible for a student attending college full time to borrow on his own signature from a commercial bank. In both states the loans are guaranteed by a specially-established fund, privately subscribed in Massachusetts and supplied by legislative appropriation in New York. In Massachusetts, students who have successfully completed the freshman year are eligible for loans up to \$500 per year, subject to a per-student limit of \$1,500. In New York, the annual limits for loans are as follows: freshmen, \$500; sophomores and juniors, \$750; seniors and graduate students, \$1,000; subject to an over-all limit of \$5,000 per student. In both Massachusetts and New York the interest rate is administratively determined. In Massachusetts, loans must be repaid within three years after graduation, whereas the repayment period in New York is six years.

Under the National Defense Education Act of 1958, students borrow directly through the institutions which they attend. Ninety percent of the loan funds are furnished by the United States Government and 10 percent by the institution.

Students can borrow up to \$1,000 per year, subject to an over-all limit of \$5,000 per student. The interest rate is 3 percent and loans are expected to be repaid within ten years. In the case of students who enter the teaching profession and serve in a public elementary or secondary school, up to 50 percent of the loan is canceled at the rate of 10 percent per teaching year.

Prior to the introduction of the Federal plan, Massachusetts commercial banks, two years after the establishment of the loan plan, were lending at an annual rate of about \$10 per full-time college student. Similarly, New York banks, one year after the establishment of the plan, were lending at an annual rate of about \$15 per full-time student. If Congressional appropriations are made in accordance with the schedule established by the National Defense Education Act, annual allotments in the amount of \$33 per full-time student will be available in Pennsylvania. In view of the relatively favorable terms of the Federal loan plan, the future of state loan plans is conjectural.

Each loan plan gives some recognition to quality. In Massachusetts, loans are restricted to a student who has ". . . satisfactorily completed the requirements of freshman year of his program of higher education."<sup>9</sup> In New York, a student must demonstrate ". . . ability and desire to complete a college course and obtain a degree."<sup>10</sup> The declaration of policy of the Federal act states in part, "We must increase our efforts to identify and educate more of the talent of our Nation. This requires programs that will give assurance that no student of ability will be denied an opportunity for higher education because of financial need; . . ." Although quality is given some recognition by each of the loan plans, it should be pointed out

<sup>9</sup> Massachusetts Higher Education Assistance Corporation, *Agreement to Guarantee Loans made under the Higher Education Loan Plan of Massachusetts Higher Education Assistance Corporation.*

<sup>10</sup> New York Higher Education Assistance Corporation, *Memorandum of Procedures in Processing Applications for Loans Under NYHEAC Student Loan Plan (1958).*

that none provides for a uniform standard of quality. Under these plans, the quality judgments are made by individual institutions of learning. The evidence shows conclusively that there are pronounced variations in standards. For example, a national survey shows that, in terms of a widely accepted index of intelligence, the average intelligence of the population of the United States as a whole equals 100. In terms of the same index, one half of the entering freshmen showed an intellectual ability ranging from 99 to 117 in one college and from 126 to 137 in another college.<sup>11</sup>

There appears to be renewed interest in finding the means to improve the competency of individuals in the arts, sciences and vocations. Hence, it becomes of critical importance to identify those who may be presumed to have both the intellectual ability and the motivation to give fair promise of success and to ascertain those facts which are pertinent in evaluating the importance of lack of resources. Mental ability without motivation is not adequate to the task. Motivation without mental ability is foredoomed to failure. Mental ability and motivation cannot be effective without resources.

Inasmuch as knowledge of intellectual ability is of critical importance in evaluating the likeli-

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<sup>11</sup> Dael Wolfe, *America's Resources of Specialized Talent* (1954).

hood of successful completion of education beyond the high school, the intellectual capacity of the young men and women who graduated in 1958 from public, parochial and private high schools in Pennsylvania has been ascertained. Measurement of intellectual capacity is not only important in connection with predictions relating to success in college, but also facilitates evaluation of subsidiary problems relating to college. For example, it will be shown that the chance of graduation of a student at the upper extreme of the intelligence scale is 30 times greater than the chance of graduation of a student at the lower extreme. Such marked variations in chances of success are of necessity associated with significant differences in cost. Again, it will be shown that some 6,000 1958 high school graduates whose intellectual ability is such as to give them less than a fifty-fifty chance of graduating from college have, in fact, entered college on a full-time basis. This finding has some bearing upon the question of plant expansion in institutions of learning.

Throughout the report, student aspirations and post-high school activities are related to intellectual ability, sex, education of parents, size of family, and occupation of father. The report also presents detailed data relating to the young men and women who, in the spring of 1958, expressed a preference for college or noncollege training.

## Section I

# IDENTIFICATION AND MEASUREMENT OF THE CHARACTERISTICS OF HIGH SCHOOL SENIORS

Mental ability, motivation and resources are the major determinants of both the likelihood that a post-high school program will be undertaken and the chances that it will be successfully completed. Hence, means must be found to measure or approximate these characteristics.

The tasks at hand present varying degrees of difficulty. No objective measures of motivation are available; all appraisals of motivation are largely matters of judgment. In the case of resources, which, given access to family records, could be measured in terms of income and assets, subjective evaluations are required to determine the extent to which income or assets are available for education.

Mental ability cannot be measured directly but must be inferred from performance. For example, if a student can identify correctly all of the words in a vocabulary test in 20 minutes, it is inferred that he has a given verbal ability. It is further inferred that his verbal ability is superior to that of another student who requires 30 minutes to complete the test and to that of some third student who is unable to identify all of the words. Specific tests, frequently measuring several aspects of ability, have been designed which permit a relatively objective measurement of intelligence.

With a view of ascertaining student characteristics, a survey involving direct contact with high school seniors, their guidance counselors and the administrative officers of the institutions which they attended, was conducted in the spring of 1958. In order to ascertain the extent to which aspirations were realized, a follow-up survey was conducted in the fall of 1958. The study was conducted on a

sample basis. Contact was made with approximately 10,000 students.<sup>1</sup>

Pennsylvania schools—public, parochial and private—use a variety of tests to ascertain the mental ability of their students. Under the circumstances, it became necessary to develop a procedure which would permit conversion of the individual test results into comparable measures of intelligence. Because of the specialized nature of the operation involved, the Commission engaged the American Institute of Research, specialists in psychological testing, to develop conversion coefficients. Scores obtained on the various mental ability tests used in Pennsylvania schools were converted into stanine (standard nine) scores.<sup>2</sup>

Table 1 shows the relationship between stanine categories and intelligence test scores. Inasmuch as more than two thirds of the 1958 seniors had taken either an Otis Test of Mental Ability or a California Test of Mental Maturity, the table presents stanine conversions for these tests. The table shows that students scoring 122 or over on an Otis test, or 126 or over on a California test, fall into the ninth stanine category. At the other extreme, all students scoring 78 or less on an Otis test or 76 or less on a California test, fall into the first stanine category.

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<sup>1</sup> See *Pennsylvania High School Seniors, 1958: Their Mental Ability, Their Aspirations, Their Post-High School Activities, A Technical Supplement*, Joint State Government Commission (1959) for a discussion of sampling procedures.

<sup>2</sup> See *Pennsylvania High School Seniors, 1958: Their Mental Ability, Their Aspirations, Their Post-High School Activities, A Technical Supplement*, Joint State Government Commission (1959) for a discussion of conversion procedures.

Table 1  
RELATIONSHIP BETWEEN STANINE CATEGORIES AND SCORES RECEIVED  
ON OTIS TEST OF MENTAL ABILITY AND CALIFORNIA TEST  
OF MENTAL MATURITY

<i>Stanine Category</i>	<i>Otis I.Q. Score</i>	<i>California I.Q. Score</i>
(1)	(2)	(3)
1 .....	78 and below	76 and below
2 .....	79- 84	77- 83
3 .....	85- 90	84- 90
4 .....	91- 96	91- 97
5 .....	97-103	98-104
6 .....	104-109	105-111
7 .....	110-115	112-118
8 .....	116-121	119-125
9 .....	122 and above	126 and above

SOURCE: American Institute for Research, Pittsburgh, Pennsylvania.

Table 2 shows, by stanine, the estimated distribution, in absolute numbers and in percentages, of the 106,700 high school seniors of 1958. Examination of the table shows that approximately

23,600, or 22.1 percent are in stanine five. As regards the extremes, approximately 7,000, or 6.6 percent are in stanine nine and 1,500, or 1.4 percent, are in stanine one.

Table 2  
ESTIMATED DISTRIBUTION OF PENNSYLVANIA HIGH SCHOOL SENIORS BY STANINE CATEGORY  
SENIOR CLASSES OF 1958

<i>Stanine Category</i>	<i>Number</i>	<i>Percent</i>
(1)	(2)	(3)
1 .....	1,500	1.4
2 .....	3,600	3.4
3 .....	8,700	8.2
4 .....	16,000	15.0
5 .....	23,600	22.1
6 .....	21,500	20.1
7 .....	15,200	14.2
8 .....	9,600	9.0
9 .....	7,000	6.6
All Stanine Categories .....	106,700	100.0

SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Section II outlines the post-high school aspirations of the graduating seniors as of the spring of 1958 and the post-high school activities of these seniors as of the fall of 1958. Section III relates personal characteristics (mental ability, motivation

and sex) and family characteristics (education of parents, size of family, and occupation of father) to aspirations and activities. In Section IV an attempt is made to relate both student aspirations and post-high school activities of students to the organization of education in Pennsylvania.



## Section II

# POST-HIGH SCHOOL ASPIRATIONS AND ACTIVITIES: A COMPARISON

### Aspirations, Spring 1958

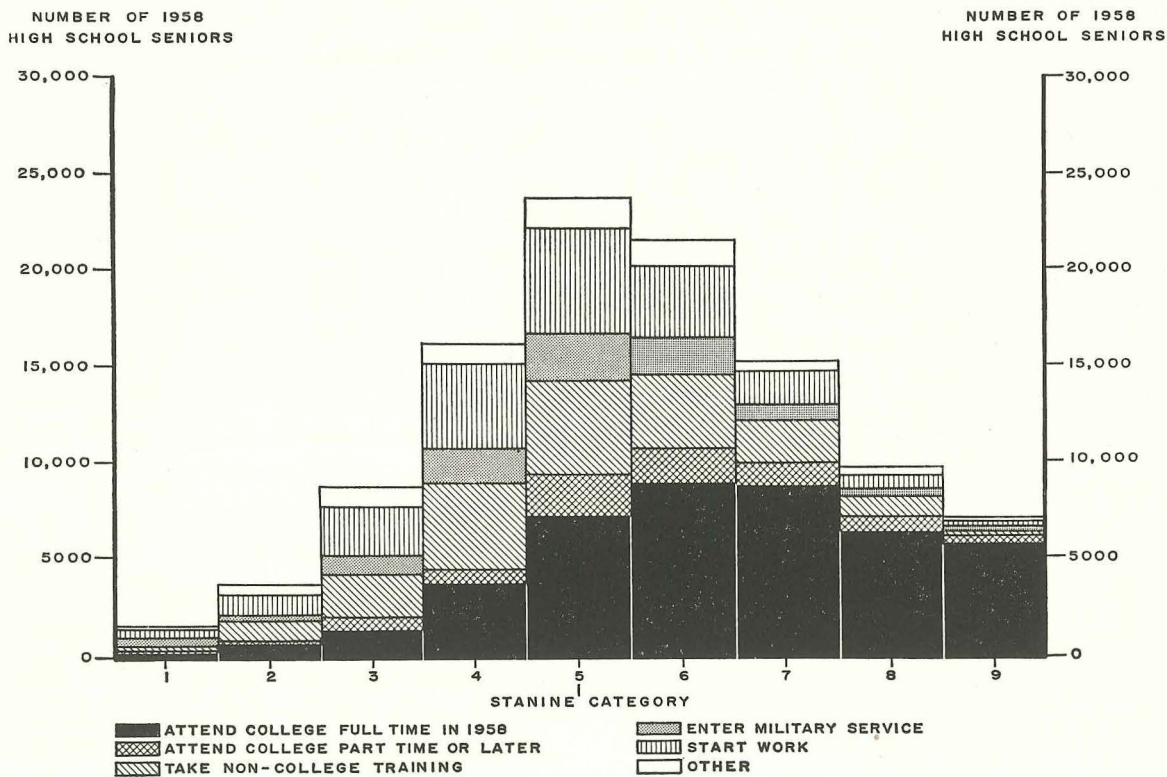
Prior to graduation, Pennsylvania high school seniors expressed a variety of preferences regarding the activities in which they wished to engage after graduation. Some indicated that they wanted to go to work, some expressed a preference for the armed services, others indicated an interest in

going to college, and some looked forward to post-high school training other than college.

The total number of students (men and women combined) classified according to mental ability and according to preference are shown in Chart I. The chart facilitates an over-all view of the distribution of preferences in terms of numbers.

Chart I

**ESTIMATED DISTRIBUTION OF PENNSYLVANIA HIGH SCHOOL SENIORS BY STANINE LEVEL, BY POST-HIGH SCHOOL ASPIRATION, MALE AND FEMALE STUDENTS COMBINED SENIOR CLASSES OF 1958**



SOURCE: Joint State Government Commission survey of 1958 high school seniors.

However, there were marked variations in preferences between men and women. Both differences and similarities in preferences of men and women are shown in Chart II, which presents, for men and women separately, the percentages in each stanine who, in the spring of 1958, indicated various post-high school aspirations.

The percentages of both men and women expressing a preference for college increased with stanine level, but at all stanine levels larger proportions of men than women expressed an interest in college. For example, in the case of men, the percentages expressing a desire to attend college full time in the fall of 1958 increased from about 17 percent in stanine one to 85 percent in stanine nine; in the case of women, the comparable percentages increased from 7 to 75 percent. Similarly, the percentage of both men and women expressing a preference to start work or to take further non-college training tended to decrease as stanine level increased, but at all stanine levels the percentages for men were less than for women. For example, the proportion of men expressing a desire to start work decreased from about 34 percent in the first stanine to 1 percent in the ninth stanine; in the case of women, between 31 and 37 percent expressed a desire to start work in each of the stanines one through five, and the percentage reached a low of 8 percent in the ninth stanine.

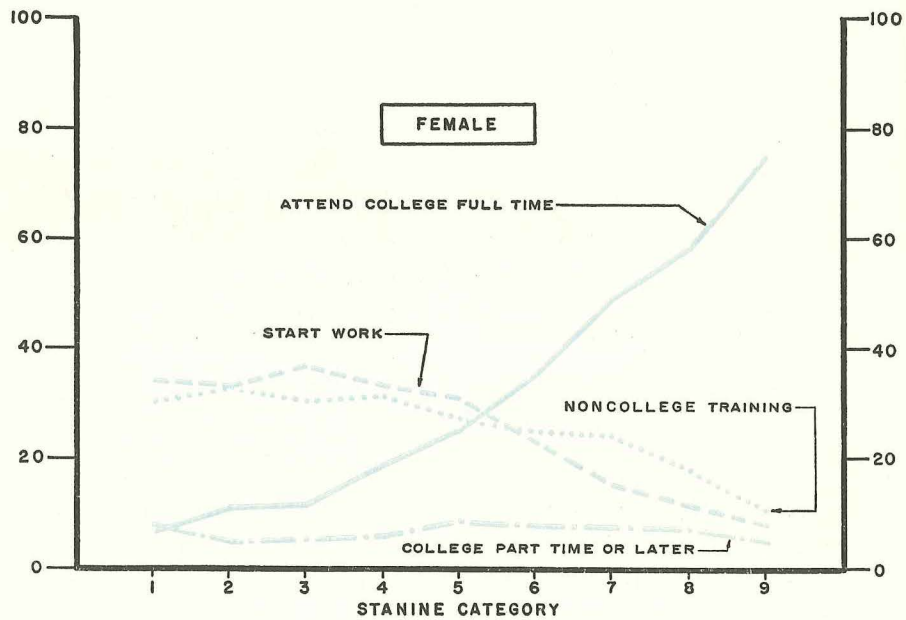
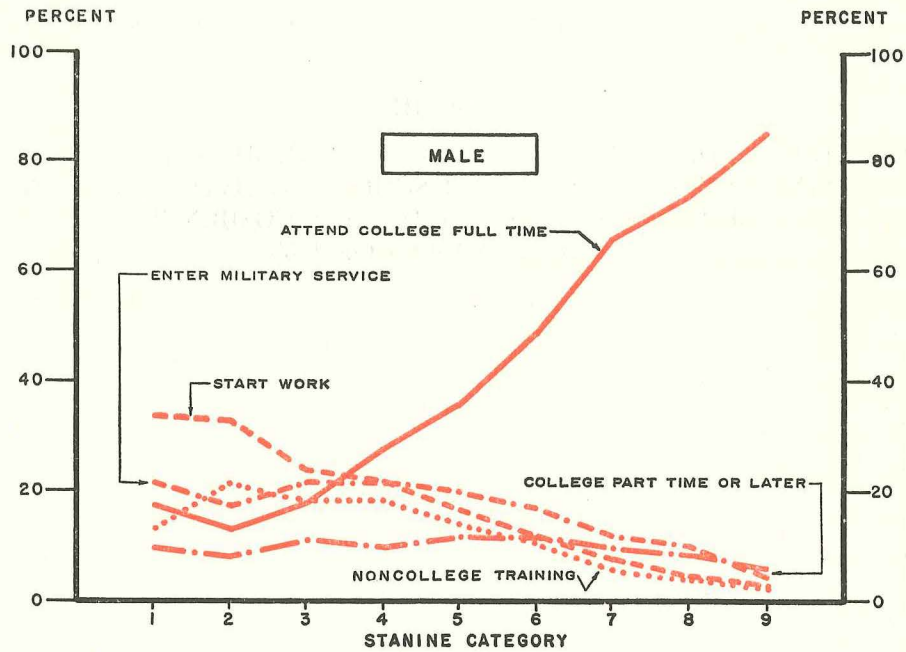
With respect to aspirations for noncollege post-high school training, the percentage of men decreased from about 20 in stanine two to 1 in stanine nine, whereas the percentage of women remained above 30 percent in stanines one through four and decreased to about 10 percent in stanine nine. However, the evidence suggests that some of the men who expressed a preference for military service were primarily interested in technical training courses offered by the armed forces. The percentage of men indicating an interest in military service approximated 20 percent in stanines one through five and decreased to approximately 4 percent in stanine nine.

#### **Activities, Fall 1958**

Post-high school activities do not necessarily conform to aspirations expressed prior to graduation. Generally speaking, the differences, if any, between activities and aspirations result from changes in the preferences of individuals or inability of individuals to realize aspirations. Inability to realize aspirations may be attributable to changes in circumstances or failure, in the first place, to make realistic appraisals. Some individuals aspiring, prior to graduation, to go to college failed to realize their aspirations, but other individuals who did not express an interest in college actually entered college in the fall of 1958.

Chart II

ESTIMATED PERCENTAGES OF PENNSYLVANIA HIGH SCHOOL SENIORS IN EACH STANINE WITH SPECIFIED POST-HIGH SCHOOL ASPIRATIONS SENIOR CLASSES OF 1958



SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Chart III shows the total number of students (men and women combined) classified according to mental ability and according to post-high school activity.

Comparison of Charts I and III shows:

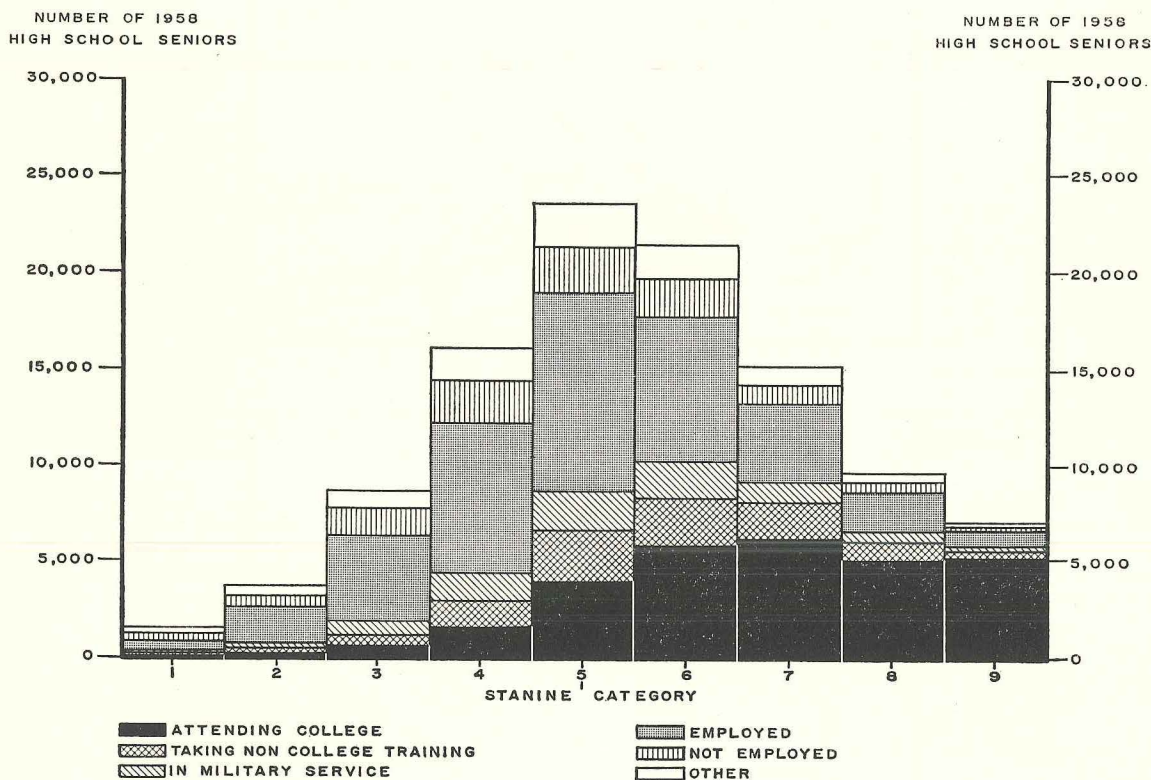
(1) The number of seniors attending college

or taking noncollege training was smaller than the number who had expressed an interest in these post-high school activities.

(2) The number of men and women employed was greater than the number contemplating employment prior to graduation.

Chart III

ESTIMATED DISTRIBUTION OF PENNSYLVANIA HIGH SCHOOL SENIORS BY STANINE LEVEL, BY POST-HIGH SCHOOL ACTIVITY, FALL 1958, MALE AND FEMALE STUDENTS COMBINED SENIOR CLASSES OF 1958

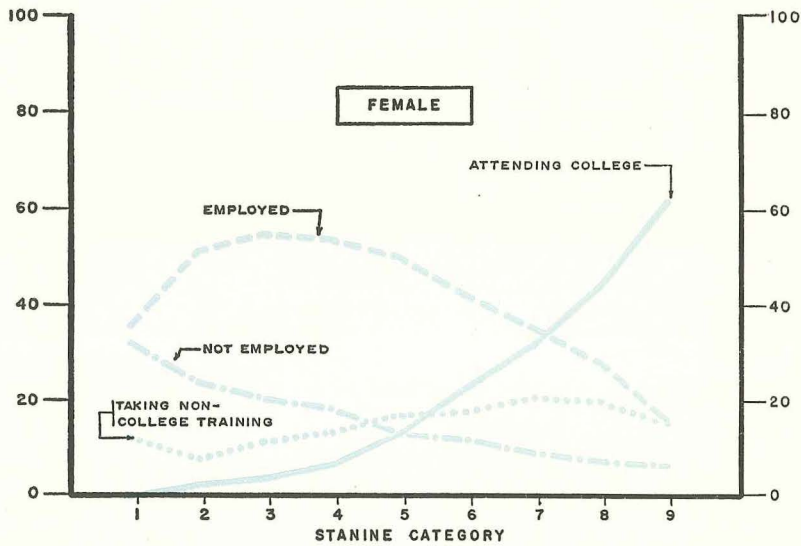
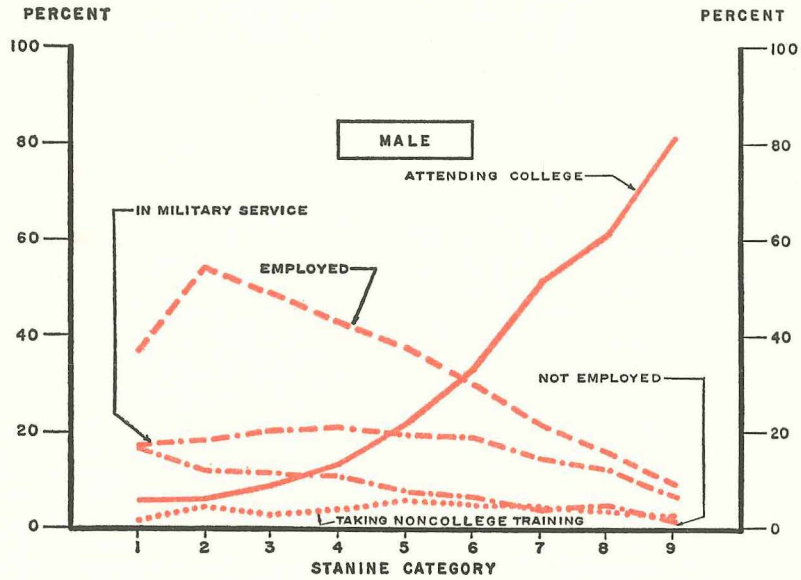


SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Chart IV shows, for men and women separately, the estimated percentages by stanine who, in the fall of 1958, were engaged in specified activities. As in the case of aspirations (Chart II), the chart shows both similarities and differences between men and women. For both men and women, the percentages attending college increased as stanine

level increased, but at each stanine level the percentages for men were greater than for women. Similarly, for stanines four through nine, the percentages of both men and women who were working in the fall of 1958 decreased as stanine level increased; in general, the percentages for women were larger than for men.

Chart IV  
 ESTIMATED PERCENTAGES OF PENNSYLVANIA HIGH SCHOOL  
 SENIORS IN EACH STANINE ENGAGED IN SPECIFIED  
 POST-HIGH SCHOOL ACTIVITIES  
 SENIOR CLASSES OF 1958



SOURCE: Joint State Government Commission survey of 1958 high school seniors.

When college and noncollege training are combined, the percentages are approximately the same for men and women. However, at each stanine level, larger percentages of women than of men were taking noncollege training. It should be remembered that a larger percentage of men in each stanine category are in military service and that military service may be a partial substitute for post-high school training.

Generally speaking, the proportion of students—both men and women—not working decreased as stanine level increased. However, at all stanine levels, the proportion of men not working was less than that for women. The proportion of men not working decreased from about 16 percent in stanine one to less than 1 percent in stanine nine; in the case of women, percentages decreased from 31 in stanine one to 6 in stanine nine.

Comparing Chart II, relating to aspirations, with Chart IV, relating to activities, it should be noted

that the differences between aspirations and activities are more pronounced in the low stanines, and vary markedly by sex. For example, although 17 percent of men and 7 percent of women in stanine one aspired to college, but 6 percent of the men and apparently none of the women were actually in attendance; on the other hand, 85 percent of men and 75 percent of women in the ninth stanine expressed a preference for college, and 81 percent of men and 61 percent of the women actually attended. Similarly, although 31 percent of the women and 13 percent of the men in stanine one were interested in noncollege training, the percentages taking such training were 12 and 1, respectively; on the other hand, 10 percent of the women and 1 percent of the men in stanine nine were interested in noncollege training, and 15 percent of the women and 1 percent of the men were taking such training.

## Section III

### POST-HIGH SCHOOL TRAINING: COLLEGE AND NONCOLLEGE

The preceding sections have shown that many students fail, after graduation from high school, to realize the aspirations which they expressed prior to graduation. Moreover, the extent to which aspirations are realized varies with both mental ability and sex. This section presents a more detailed analysis of the aspirations and activities of

high school graduates in the area of post-high school training. An attempt will be made throughout to relate both aspirations and activities to personal and family characteristics. Data relating to college and noncollege aspirations and activities are presented separately.

#### COLLEGE

##### Aspirations and Activities: A Comparison

Of the 42,000 high school seniors who, prior to graduation, expressed the desire to attend college full time in the fall of 1958, 26,200 were in full-time attendance and about 15,800 did not realize their aspirations. However, an additional 2,100 high school graduates who had not expressed an interest in attending college full time were, in fact, in full-time attendance.

Chart V shows, by stanine level, the number of graduating seniors attending college full time and the number who had full-time college aspirations but were not in attendance in the fall of 1958. In addition, the chart shows, for both groups by stanine level, the number who can be expected to graduate, based upon national experience.<sup>1</sup>

The chances of graduation vary with stanine level, increasing sharply as stanine level increases. For example, of the 5,100 ninth stanine students attending college, 4,700, or 92 percent, can be expected to graduate. As regards the 4,000 stanine five students, 1,500, or 38 percent, can be expected to graduate. In passing, it should be noted that the percentage expected to graduate decreases to less than 3 percent for students in stanine one.

As regards the 28,300 students in college, about

18,000 can be expected to graduate. If the 15,800 students desiring college full time but not attending had had an opportunity to attend, about 7,900 could have been expected to graduate. In other words, whereas 64 percent of the group in college can be expected to graduate, of the group not in attendance, but 50 percent, if afforded an opportunity to attend, could be expected to graduate.

It should be noted that the marked variations in likelihood of graduation associated with students of different mental abilities have far-reaching cost implications. It is estimated that the cost of maintaining a student in a Pennsylvania institution of learning for one year, exclusive of room and board, approximates \$1,300.<sup>2</sup> This cost is financed by tuition fees (averaging \$550 in Pennsylvania institutions in 1957) and by private benefactions, and, in the case of State-aided and State-owned institutions, by Commonwealth appropriations. On the basis of dropout rates estimated from national data,<sup>3</sup> it is estimated that it costs approximately \$5,500 to produce a graduate of ninth stanine caliber. Similarly, it is estimated that it costs \$9,900 to produce a graduate of fifth stanine caliber, and \$22,200 to produce a graduate of third stanine caliber.

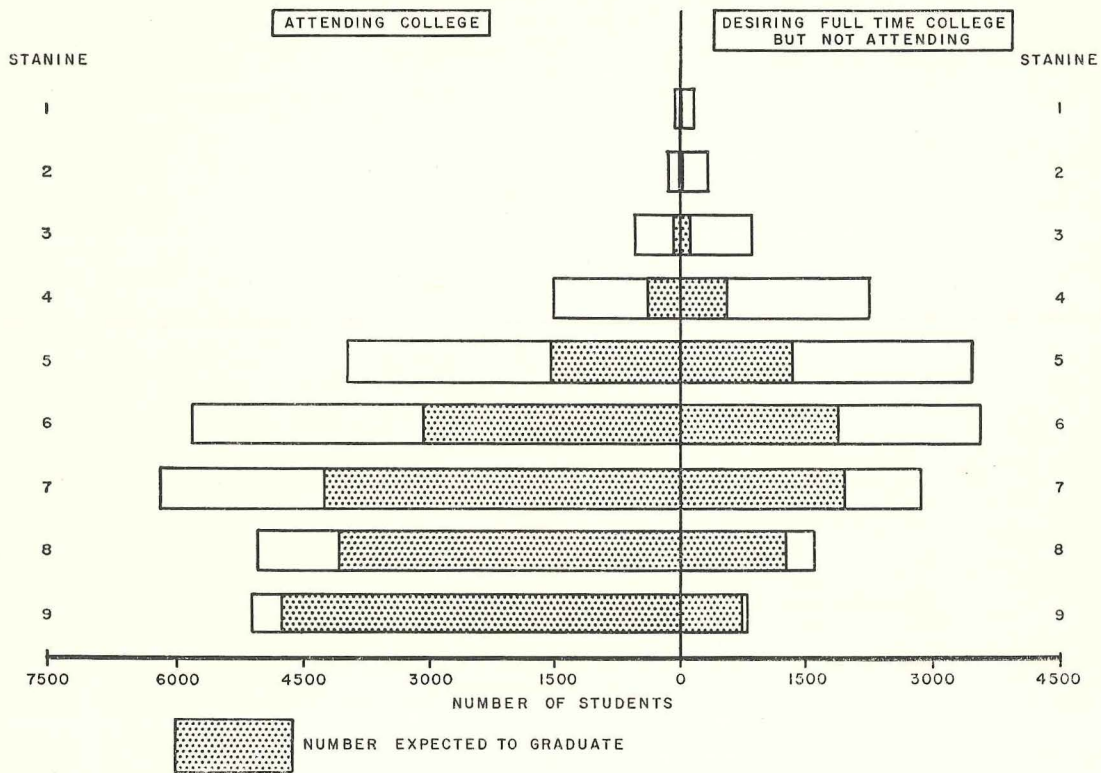
<sup>1</sup> The percentages expected to graduate are based upon national data presented in Wolfe, *America's Resources*. Data obtained from a study of dropout rates in Pennsylvania colleges and universities, although not complete, indicate that over-all Pennsylvania experience was somewhat better than the national experience. In connection with these rates, it should be remembered that they are averages and that they should be applied only to institutions or types of institutions whose standards approximate the average.

<sup>2</sup> The cost has been approximated by dividing expenditures on current account of Pennsylvania institutions of higher learning by the estimated number of students (full-time equivalent). However, there are marked variations in cost among institutions and among programs in a given institution.

<sup>3</sup> Wolfe, *America's Resources*.

Chart V

ESTIMATED DISTRIBUTIONS OF PENNSYLVANIA HIGH SCHOOL GRADUATES  
IN COLLEGE AND OF SENIORS ASPIRING TO FULL-TIME COLLEGE  
BUT NOT IN ATTENDANCE, BY STANINE LEVEL, AND BY  
LIKELIHOOD OF GRADUATION FROM COLLEGE,  
MALE AND FEMALE STUDENTS COMBINED, FALL 1958  
SENIOR CLASSES OF 1958



SOURCES: Joint State Government Commission survey of 1958 high school seniors; and Dael Wolfe *America's Resources of Specialized Talent* (1954).

Chart VI shows, for men and women separately, the number who indicated a preference for college as well as the number actually in college, classified by stanine. Comparison of Chart VI and Chart V indicates that, generally speaking, the distributions of all students, of women students and of men students are similar. Examination of Chart VI shows:

- (1) Stanine by stanine, a larger number of men than women attended college full time in the fall of 1958.
- (2) More women than men in stanines seven, eight and nine had college aspirations but

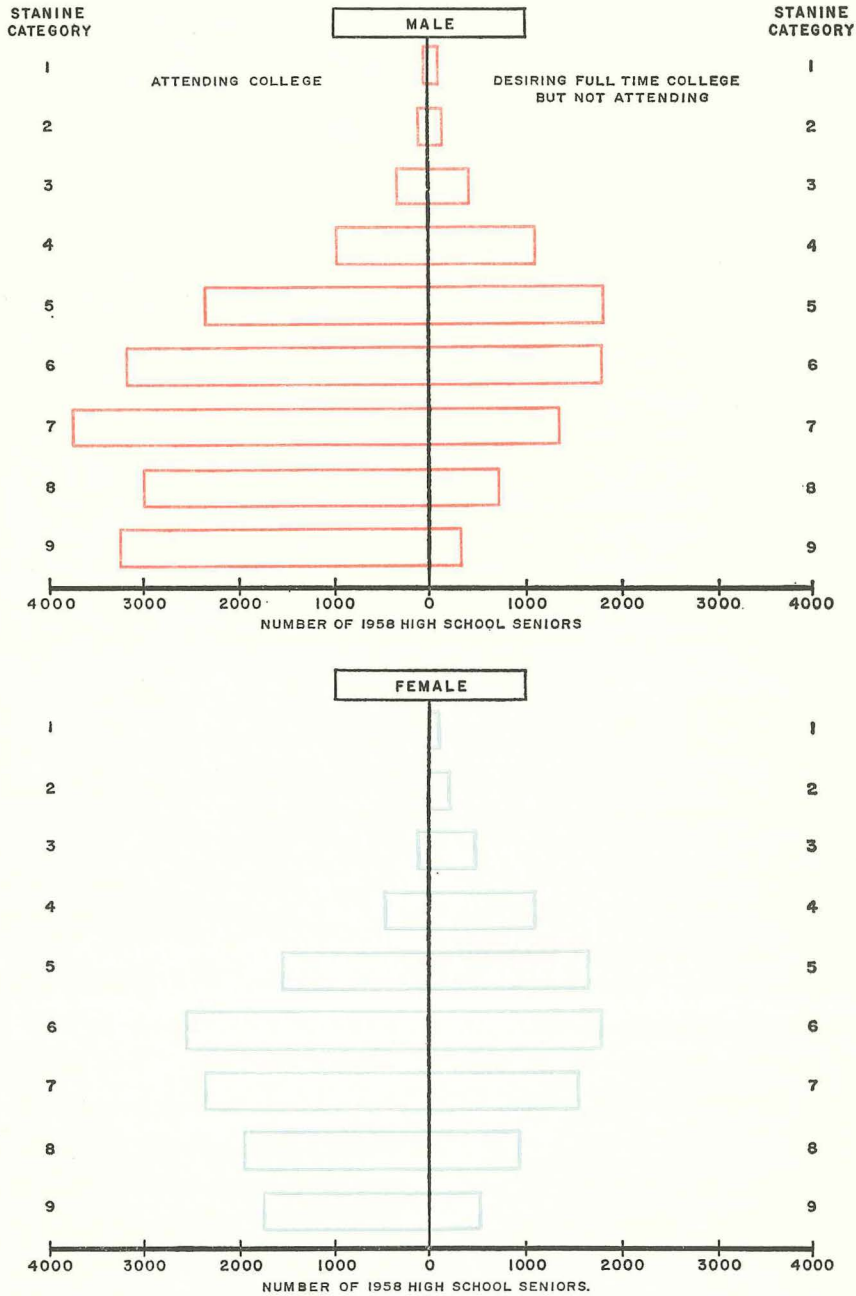
were not in attendance; the reverse was true for students in stanines five and six.

In Section II it was observed that a smaller proportion of women than of men expressed an interest in college. This, in part, explains the difference in attendance rates. In addition, further analysis of the data relating to college aspirations and attendance indicated that, at all stanine levels, women were less successful than men in realizing their aspirations for college training and for both men and women, the degree of success increased as stanine level increased.



Chart VI

ESTIMATED DISTRIBUTIONS OF PENNSYLVANIA HIGH SCHOOL GRADUATES IN COLLEGE AND OF SENIORS ASPIRING TO FULL-TIME COLLEGE BUT NOT IN ATTENDANCE, BY STANINE LEVEL, FALL 1958 SENIOR CLASSES OF 1958



SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Table 3  
ESTIMATED PERCENTAGES OF MEN AND WOMEN STUDENTS DESIRING  
TO ATTEND COLLEGE FULL TIME IN THE FALL OF 1958  
WHO WERE NOT IN ATTENDANCE, BY MAJOR REASON ANTICIPATED  
FOR NOT ATTENDING, BY STANINE GROUP

<i>Major Reason Anticipated for Not Attending College</i>					
<i>Stanine Group</i>	<i>Financial</i>	<i>Academic<sup>1</sup></i>	<i>Other</i>	<i>No Response</i>	<i>Total</i>
(1)	(2)	(3)	(4)	(5)	(6)
<i>Men</i>					
1-5 .....	41.3%	43.1%	8.3%	7.3%	100.0%
6-7 .....	50.9	30.9	12.2	6.0	100.0
8-9 .....	57.5	22.0	14.1	6.4	100.0
All Stanines .....	47.3	35.4	10.6	6.7	100.0
<i>Women</i>					
1-5 .....	49.0	30.7	10.3	10.0	100.0
6-7 .....	60.3	16.2	16.8	6.7	100.0
8-9 .....	67.4	4.5	24.9	3.2	100.0
All Stanines .....	56.6	20.5	15.4	7.5	100.0

<sup>1</sup> Includes choice of course not qualifying students for admission to college as well as poor student performance in courses leading to college.

SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Table 3 presents, for men and women aspiring to college but not attending, their anticipated reasons for nonattendance. The table indicates that 47 percent of the men, as compared to 57 percent of the women, listed financial difficulties as the major reason for not attending college; on the other hand, 35 percent of the men, as compared to 21 percent of the women, listed academic deficiencies as the major reason. The importance of these reasons for not attending college varied markedly by stanine. For example, in the case of men students, the proportion listing financial reasons increased from 41.3 percent in stanines one through five to 57.5 percent in stanines eight and nine, whereas the proportion listing academic reasons decreased from 43.1 percent to 22.0 percent. In the case of women students, the percentage citing financial reasons increased from

49.0 percent for stanines one through five to 67.4 percent in stanines eight and nine, whereas the percentage listing academic reasons decreased from 30.7 percent to 4.5 percent, respectively.

### Effect of Family Characteristics upon Aspirations and Activities

This subsection relates such personal characteristics as mental ability and sex, and such family characteristics as level of education of parents,<sup>4</sup> size of family and occupation of father, to level of interest in college and to college attendance.

It should be noted that family characteristics are quite often interrelated. For example, there appears to be a close relationship between education

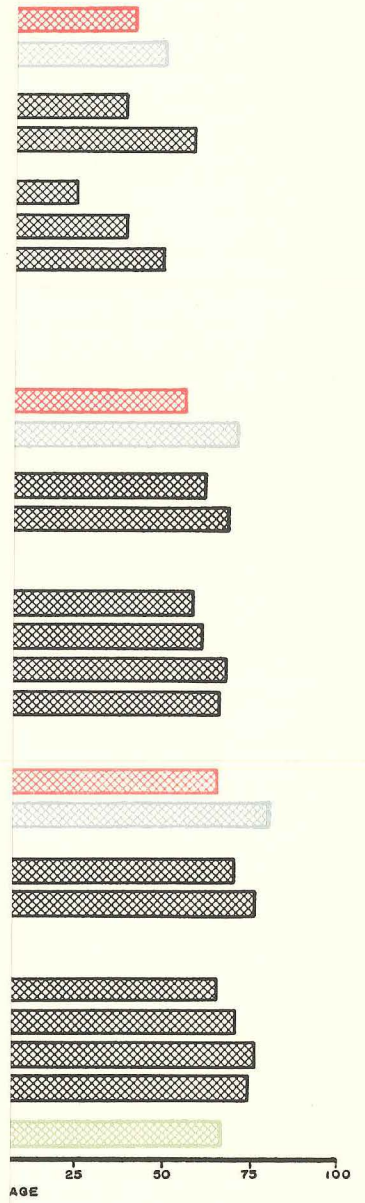
<sup>4</sup> Level of education of parents is defined in terms of the highest educational level attained by either parent.



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COLLEGE

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- 5



and occupation. Again, there seems to be a relationship between size of family and resources available for college training. In turn, resources available for college training vary by occupation.

Chart VII shows the effect of family characteristics (level of education of parents, size of family and occupation of father) and of personal characteristics (mental ability and sex) upon level of interest in college and college attendance. Specifically, the chart shows for students with given characteristics in stanines eight and nine combined (Graph 1), six and seven combined (Graph 2), and one through five combined (Graph 3), percentages who were attending college in the fall of 1958, who were interested in college but were not attending,<sup>5</sup> and who were not interested in college. Each of the bars in the chart includes all students with the specific characteristics listed to the left of Graph 1.

The first bar in Graph 1 shows that 96 percent of the men (stanines eight and nine combined), one or both of whose parents had graduated from college, expressed an interest in attending college; 85 percent (96 percent minus 11 percent on the horizontal scale) were actually in attendance in the fall of 1958; and 4 percent expressed no interest in attending college. Similarly, the second bar in Graph 1 shows that 88 percent of the women (stanines eight and nine combined), one or both of whose parents graduated from college, expressed an interest in attending college; 77 percent were in attendance and 12 percent expressed no interest in college.

Examination of Graph 1 permits the following generalizations with respect to high school seniors in stanines eight and nine:

Differences in college interest and attendance by sex:

- (1) Regardless of educational level of parents, larger proportions of men

<sup>5</sup> Includes students interested in attending college in the fall of 1958 on a part-time or full-time basis and students interested in attending college at some future date.

than of women were interested in college.

- (2) Similarly, larger percentages of men than of women actually attended college.
- (3) In the case of both men and women, the percentage not realizing their aspirations for college increased as educational level of parents decreased. However, the percentage was identical for men and women in the case of seniors one or both of whose parents had graduated from college, but was markedly dissimilar in the case of men and women neither of whose parents had graduated from college.

Differences in college interest and attendance by size of family:

- (1) A larger proportion of students from small families than from large families expressed an interest in college regardless of educational level of parents.
- (2) Similarly, larger proportions of students from small than from large families were in attendance at college.
- (3) The proportion not realizing their college aspirations increased as level of education of parents decreased, but at all levels this proportion was greater for students from large families than for students from small families.

Differences in college interest and attendance by occupation of father:

- (1) As regards students one or both of whose parents graduated from college, occupation of father had but little effect upon college aspirations. However, the proportion not realiz-

ing their aspirations showed marked variations.

- (2) As level of education of parents decreased, the effect of the father's occupation upon both college aspirations and extent to which aspirations were realized became more pronounced.

Comparison of Graphs 1, 2 and 3 permits the following generalizations with respect to the effect of stanine level upon both college aspirations and the extent to which these aspirations were realized:

- (1) In general, the percentage of students expressing an interest in college as well as the percentage actually in attendance decreased as stanine level decreased.
- (2) The pattern of differences in aspirations and in degree of realization associated with personal and family characteristics, which was observed in connection with students in stanines eight and nine (Graph 1), also characterizes students in stanines six and seven (Graph 2) and one through five (Graph 3). However, these differences generally become more pronounced as stanine level decreases.
- (3) Although stanine level was an important characteristic affecting aspirations and de-

gree of realization, the expected effect of stanine level was in some instances offset by educational level of parents and occupation of father. For example, 75 percent of the students in stanines one through five with specified family characteristics—father's occupation, professional; educational level, college—had college aspirations, and 53 percent were in actual attendance. On the other hand, about 62 percent of students in stanines eight and nine with different family characteristics—father's occupation, craftsman; educational level, grade school—expressed an interest in college, and but 36 percent of these students were in actual attendance.

The over-all effect of stanine level is illustrated by the bar at the bottom of each graph. About 80 percent of the students in stanines eight and nine expressed an interest in college as compared to 57 percent of the students in stanines six and seven and 33 percent of the students in stanines one through five. Sixty-one percent of the students in stanines eight and nine, 33 percent of the students in stanines six and seven, and 12 percent of the students in stanines one through five were attending college in the fall of 1958.

## NONCOLLEGE

No generally-accepted standards have been developed by reference to which the probable performance of students taking post-high school noncollege training can be evaluated. Again, an analysis of the data relating to personal and family characteristics and level of motivation for post-high school training other than college did not indicate any clearly defined relationships.

Of the 19,900 high school seniors who, prior to graduation, expressed a desire to take further non-college training, about 5,800 were taking such

training, but nearly 14,100 failed to realize their aspirations.<sup>6</sup> On the other hand, an additional 4,900 who had not expressed an interest in non-college training were, in fact, taking such training.

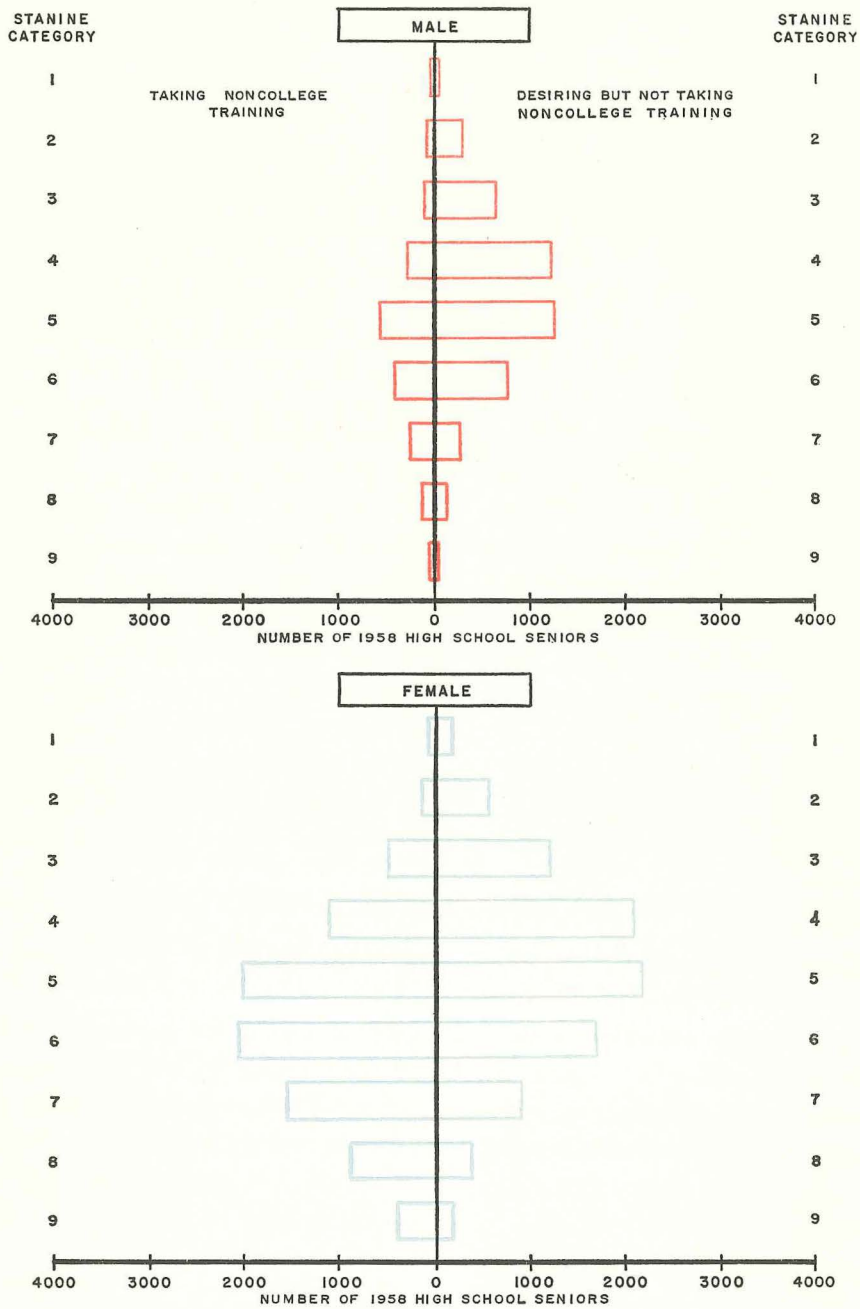
Chart VIII shows the number of men and women who were taking noncollege training in the fall of 1958 and the number who indicated an interest in such training but did not realize their aspirations.

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<sup>6</sup> In this connection it should be remembered that many of the 8,400 men who entered the military service were interested in technical training courses offered by the armed forces.

Chart VIII

ESTIMATED DISTRIBUTIONS OF PENNSYLVANIA HIGH SCHOOL GRADUATES RECEIVING NONCOLLEGE TRAINING, AND OF SENIORS ASPIRING TO NONCOLLEGE TRAINING BUT NOT IN TRAINING, FALL 1958  
SENIOR CLASSES OF 1958



SOURCE: Joint State Government Commission survey of 1958 high school seniors.

Examination of the chart shows that the distributions for men and women are markedly different. Larger numbers of women than men in each stanine category were taking noncollege training and, in addition, larger numbers of women than of men expressed an interest in noncollege training but were not taking such training.

In Section II it was noted that a considerably higher proportion of women than of men expressed an interest in noncollege training. It is interesting to observe that, although more women than men did not realize their ambition for noncollege training, a larger relative number of women than of men interested in such training were actually in training. The realization rate tended to increase as stanine level increased. For example, the percentage realizing their ambition for noncollege training increased from 18 percent in stanine three to 46 percent in stanine nine, in the case of women; the percentages for men increased from 5 to 25 percent.

The differences in the distributions of men and women arise, in large part, by reason of the relatively large number of women—nearly 4,500—who entered nurses' training courses at hospitals. The intelligence distribution of the students who

entered nurses' training more closely resembles that of women entering college than that of women taking other types of noncollege training.

As regards differences in numbers, it should be noted that, in addition to the large numbers of women entering nurses' training, groups of comparable size aspire to and actually enter training for the secretarial and related fields. It is because of these well-established occupational objectives of women—the counterparts of which are not found at the noncollege level in the case of men—that the demand on the part of women for post-high school noncollege training is greater than the demand for such training on the part of men.

An analysis of the aspirations of students taking noncollege training indicates that this training was a substitute for college in the case of many high school seniors. Specifically, nearly 50 percent of the men and 30 percent of the women taking noncollege training had, prior to graduation, expressed an interest in college. The extent of substitution tended to vary by stanine, increasing in the case of men from 44 percent in stanines one, two and three to 65 percent in stanines eight and nine; the comparable percentages for women were 28 and 43 percent, respectively.



## Section IV

### ASPIRATIONS, POST-HIGH SCHOOL ACTIVITIES AND THE ORGANIZATION OF EDUCATION IN PENNSYLVANIA

In Sections II and III the aspirations of Pennsylvania high school seniors were presented. Aspirations prior to graduation and post-high school activities of graduates were compared. Finally, differences in rates of aspiration realization were related to personal and family characteristics.

It will be recalled that some 6,000 seniors who were in full-time college attendance in the fall of 1958 have less than a fifty-fifty chance of graduating.

It will also be remembered that of the 42,000 seniors who expressed an interest in full-time college attendance, 15,800 failed to enter college in the fall. Of the 15,800 seniors who were interested in college but did not realize their college aspirations, 8,800 had a better than fifty-fifty chance of graduating had they succeeded in entering college. As regards the 8,800 seniors, 3,700 indicated that they needed a degree to enter the profession of their choice, 1,000 felt that a college education would improve their earning power, and 1,100 indicated that they wished to go to college because they were interested in academic pursuits. Again, about 600 felt that college attendance would afford them an opportunity to make a more rational decision regarding their lifework and 600 gave social or prestige considerations as the major reason for their interest in college.

Again, of the 8,800 college-motivated seniors whose intelligence was such as to give them a better than fifty-fifty chance of graduating had they succeeded in entering college, about 58 percent cited finances as the major reason for nonattendance and 20 percent indicated that their academic deficiencies made college attendance unlikely.

A similar situation obtained with respect to high school seniors who were interested in post-high school training other than college. Of a total of 5,500 men who had indicated an interest in post-

high school training other than college, about 12 percent were actually in training in the fall of 1958. Of the 14,400 women who had indicated an interest in post-high school training other than college, 36 percent were actually in training in the fall of 1958.

In the remainder of this section, the organization of education in Pennsylvania will be outlined. It is the purpose of this outline to relate the organizational characteristics of the educational structure to both aspiration formulation on the part of students and failure of many students to realize their aspirations.

During the school year 1956-1957, 2,331,108 students were in full-time attendance in kindergarten, elementary and secondary schools—public and nonpublic. Of this total, 1,811,991 attended public schools and 519,117 were in nonpublic schools. As of November 1956, an estimated 132,390 students (full-time equivalent) were in attendance at institutions of higher learning. It is estimated that of this total, 15,155 attended Commonwealth-owned and Commonwealth-operated teachers' colleges, 49,415 were in attendance in the four State-aided private universities and 67,820 were in attendance at other private institutions of higher education.

As regards magnitude of State financial support of public schools, State-owned teachers' colleges and State-aided private institutions of higher learning, the General Assembly in 1957 appropriated, and the Governor approved, a total of \$808,898,631. Of this total, \$728,478,686 was appropriated for public school purposes,<sup>1</sup> \$17,352,125 was ap-

<sup>1</sup> Includes subsidies on instructional account and subsidies on capital account, subsidies on subsidiary accounts such as pupil transportation, appropriations to Public School Employees' Retirement Board and appropriations to the Department of Health for school health services and miscellaneous specialized programs such as education of the blind and education of veterans' orphans.

appropriated to teachers' colleges, and \$53,978,520 to State-aided institutions of higher learning. The remainder—\$9,089,300—was appropriated for other educational purposes.

Although, in connection with Commonwealth support of education, the dollar amounts are important, the conditions under which these amounts become available are of equal significance. It is the conditions under which subsidies become available which provide the basis for inferences concerning objectives of public policy.

The conditions under which Commonwealth subsidies have been made available to State-aided and State-owned institutions of higher learning, in contrast to the conditions under which State subsidies are made available to the public schools, have never been statutorily formalized. As regards Commonwealth subsidies to private institutions of higher learning, the General Assembly in the past has appropriated specified amounts for so-called "general maintenance." In addition, the General

Assembly has, from time to time, appropriated amounts for such specialized programs as the operation of specified schools, departments, or research projects in designated State-aided institutions.

Inasmuch as these appropriations represent an investment on the part of taxpayers, it is of interest to ascertain the mental ability of the students in whose future the investments were made, and to compare the mental ability of these students with that of students entering private institutions of learning not receiving State aid. Table 4 presents, for State-aided private universities, other private colleges and universities, and State teachers' colleges, the distribution of mental ability of Pennsylvanians who graduated from high school in 1958 and entered college in the fall of that year. Examination of the table shows:

- (1) The distribution of mental ability of students entering State-aided universities was similar to that of students entering other private colleges and universities. The pro-

Table 4  
ESTIMATED PERCENTAGE DISTRIBUTIONS, BY STANINE LEVEL, OF STUDENTS  
ENTERING STATE-AIDED UNIVERSITIES, OTHER PRIVATE COLLEGES  
AND UNIVERSITIES AND STATE TEACHERS' COLLEGES  
IN THE FALL OF 1958, BY SEX  
GRADUATING CLASSES OF 1958

(1)	<i>Stanine Level</i>			
	8 and 9	6 and 7	1-5	Total
	(2)	(3)	(4)	(5)
<b>State-aided Universities</b>				
Men .....	39.8%	41.4%	18.8%	100.0%
Women .....	45.4	40.7	13.9	100.0
Total .....	41.6	41.1	17.3	100.0
<b>Other Private Colleges and Universities</b>				
Men .....	39.3	43.2	17.5	100.0
Women .....	32.4	47.8	19.8	100.0
Total .....	36.8	44.9	18.3	100.0
<b>State Teachers' Colleges</b>				
Men .....	15.9	46.0	38.1	100.0
Women .....	22.1	48.1	29.8	100.0
Total .....	19.4	47.2	33.4	100.0

SOURCE: Joint State Government Commission survey of 1958 high school seniors.

portion of students in stanines one through five was 17.3 percent, in the case of State-aided institutions, and 18.3 percent in the case of other private institutions. At the other extreme, 41.6 percent of the students entering State-aided institutions were in stanines eight and nine, as compared to 36.8 percent for other private institutions.

- (2) In the case of teachers' colleges, 33.4 percent of the high school graduates entering as freshmen in 1958 were in stanines one through five and 19.4 percent were in stanines eight and nine. There were marked relative differences between the mental ability distributions of men and women entering State teachers' colleges. For example, 22.1 percent of the women and 15.9 percent of the men were in stanines eight and nine, as compared to 29.8 percent of the women and 38.1 percent of the men in stanines one through five.<sup>2</sup>

It would appear that the policy objectives which led to the practice of making legislative appropriations to private institutions in Pennsylvania represent an alternative to the so-called "open-door" policy that led to the establishment of state-owned and state-operated institutions in other states. Again, it would appear that the rationale of the policy under which legislative appropriations are made to private institutions of higher learning in Pennsylvania is to make it possible for these institutions to charge lower fees or lower tuition, with the result that, through lowering the price, higher education will be brought within the reach of more students.

The effect of this policy must be evaluated by reference to administrative practices of institutions of higher learning as well as the effect of lower

<sup>2</sup> A separate analysis of the occupational aspirations of high school seniors indicated that the proportion of women aspiring to the teaching profession increased as stanine level increased—from 2 percent in stanine one to 21 percent in stanine nine. On the other hand, the percentage of men aspiring to the teaching profession remained relatively constant—at about 6 percent throughout the entire stanine range.

fees or lower tuition upon the total cost of higher education to the student and his family. As regards administrative practices of institutions of learning, it may be noted that, although fees at one State-aided institution in Pennsylvania are less for resident students than for nonresident students, charges are not differentiated by reference to the financial status of the student. This means that lower fees or lower tuition are available to all students regardless of financial status and, for that matter, regardless of intellectual ability within the tolerances of the institution's administrative standards.<sup>3</sup>

In passing, it may be noted that, for the year 1956-1957, Commonwealth appropriations for "general maintenance" per full-time equivalent student for the four State-aided institutions of learning ranged from \$385 to \$1,750. Though this contribution may be presumed to have kept tuition at a lower level than it otherwise would have been, there is reason to believe that the extent to which students have been able to take advantage of the lowering of tuition cost depends, in large part, upon the distances between their homes and the institutions under review. The evidence suggests that the closer to a State-aided institution a student's residence, the greater the chances that he will be able to take advantage of these State subsidies.

This problem was recognized by the Governor's Commission on Higher Education which noted in its report that the percentages of college-age youth attending undergraduate school in Pennsylvania ranged from 4.3 percent for Luzerne County to 28.4 percent for Centre County. In connection with these variations, the commission observed, "The wide variation from county to county of the high school graduates going to college reflects problems of location of institutions and the financial status of the area concerned."<sup>4</sup>

<sup>3</sup> This effect is partially offset by senatorial scholarships and by university scholarships to exceptional students.

<sup>4</sup> *Higher Education in the Commonwealth*, Report of the Governor's Commission on Higher Education (February 1, 1957).

Map 1 facilitates evaluation of the relative importance of distance between student's residence and institutions of learning and levels of income. Specifically, the map divides the Commonwealth into seven regions and for each region it presents:

- (1) for men and women separately, the number of Pennsylvania freshmen enrolled in 1958 in the institutions of learning located in the region divided by the number of seniors who graduated in 1958 from high schools in the region;
- (2) the relationship of average regional wages to average wages in Pennsylvania;<sup>5</sup>
- (3) the location of degree-credit institutions of higher learning (including extension centers).

Examination of the map shows:

- (1) In Region I, which was characterized by above-average wage levels, the male freshman enrollment, consisting of Pennsylvania residents, was the equivalent of 59.8 percent of the number of male students graduating from public, parochial and private high schools within the region; the comparable percentage for women was 28.9 percent.
- (2) Comparable percentages for Region VII were 19.4 and 14.3 for men and women, respectively.
- (3) As regards Regions I and VII, it should be noted that Region I is characterized by a relatively heavy concentration of institutions of higher education and by a wage level above the state average, whereas Region VII is characterized by relatively few institutions of higher edu-

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<sup>5</sup> Based on total wages, first quarter 1957, of all employees covered by the Pennsylvania Unemployment Compensation Law and covered employment as of March 1957.

cation and average wages below the state average.

The effect of both proximity and the presence of a State-aided institution are brought into high relief by examination of Region IV. The enrollment percentages for Region IV excluding Centre County—the location of Pennsylvania State University—were 26.3 and 15.3 for men and women, respectively. However, the comparable percentages for Region IV including Centre County were 134.9 and 80.4 for men and women, respectively.<sup>6</sup>

Among the other determinants of college attendance, guidance ranks high. It will be recalled that, of the high school seniors whose mental ability was such as to give them a better than fifty-fifty chance of graduating had they entered college, 23,900 had no college aspirations. Of this group, about 1,500 came from families which, as a rule, provide children with a high level of motivation for going to college.<sup>7</sup> It is likely that the members of this group have strong alternative noncollege preferences. However, it may be presumed that many other members of the senior class of 1958, whose mental ability was such as to give them a better than fifty-fifty chance of college success had they entered college, might have developed college aspirations if they had had competent guidance in high school.

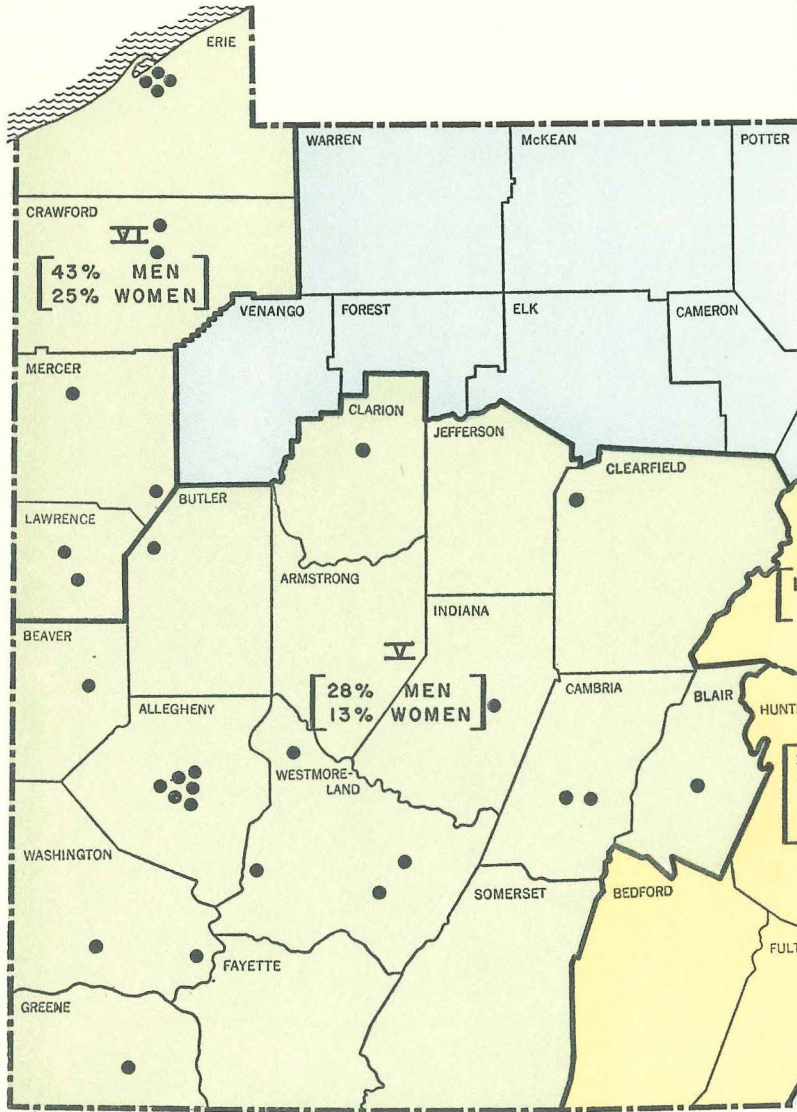
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<sup>6</sup> It has been contended that the problems presented by variations in income level and proximity to institutions of higher education cannot be solved satisfactorily by increases in State appropriations to selected institutions. The community college and the so-called "scholarship grants" have been urged as solutions to the problem. Scholarship grants are made available in amounts calculated to cover an institution's entire cost of educating a student and sometimes provide for the payment of all or part of the student's subsistence.

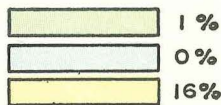
For a discussion of scholarship grants, see Arthur Bestor, *The Restoration of Learning* (1955), and for an evaluation of community colleges, see Liaison Committee of the Regents of the University of California and the California State Board of Education, *A Restudy of the Needs of California in Higher Education* (1955).

<sup>7</sup> See Section III for characteristics which lead to a high level of motivation.

LOCATION OF DEGREE-CREDIT INSTITUTIONS OF HIGHER EDUCATION  
 AVERAGE REGIONAL WAGES TO AVERAGE PENNSYLVANIA WAGES  
 FALL 1958, AS A PERCENTAGE OF



AVERAGE WAGES



Note: First time enrollment excludes students from other states or from the Pennsylvania Department of Public Instruction.

SOURCES: (1) Pennsylvania Department of Labor and Industry, *Employment Statistical Information Bulletin No. 123* (February 1958).

(2) The United States Department of Health, Education and Welfare, *Annual Report* (1958).

(3) Joint State Government Commission survey of 1958 high school seniors.



Table 5  
 DISTRIBUTION OF PUBLIC SECONDARY SCHOOLS BY RATIO  
 OF PUPILS TO CERTIFIED GUIDANCE COUNSELORS  
 BY COUNTY, 1957-1958

	<i>Number of Schools</i>					<i>Total Number of Schools</i>
	<i>With One Certified Guidance Counselor for</i>		<i>With Certified Guidance Counselors (Total)</i>	<i>For Which No Data Are Available</i>	<i>With No Certified Guidance Counselors</i>	
	<i>299 or Less Students</i>	<i>300 or More Students</i>				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
State .....	116	556	672	98	214	984
Adams .....	..	5	5	..	1	6
Allegheny .....	18	71	89	17	17	123
Armstrong .....	..	8	8	2	1	11
Beaver .....	..	12	12	2	3	17
Bedford .....	1	3	4	1	2	7
Berks .....	1	19	20	3	4	27
Blair .....	2	5	7	1	2	10
Bradford .....	..	3	3	1	4	8
Bucks .....	..	15	15	..	2	17
Butler .....	1	6	7	2	4	13
Cambria .....	4	12	16	3	7	26
Cameron .....	..	1	1	..	..	1
Carbon .....	..	4	4	4	2	10
Centre .....	..	6	6	..	..	6
Chester .....	1	12	13	..	..	13
Clarion .....	1	5	6	..	2	8
Clearfield .....	..	3	3	1	6	10
Clinton .....	..	3	3	..	2	5
Columbia .....	1	7	8	1	1	10
Crawford .....	1	6	7	2	3	12
Cumberland .....	2	11	13	..	..	13
Dauphin .....	4	8	12	..	7	19
Delaware .....	6	18	24	..	5	29
Elk .....	..	3	3	1	2	6
Erie .....	1	15	16	1	8	25
Fayette .....	2	10	12	1	7	20
Forest .....	2	..	2	..	..	2
Franklin .....	1	6	7	..	3	10
Fulton .....	..	1	1	1	2	4
Greene .....	..	2	2	2	2	6
Huntingdon .....	..	3	3	1	2	6
Indiana .....	1	5	6	2	1	9
Jefferson .....	1	3	4	..	1	5
Juniata .....	..	2	2	1	..	3
Lackawanna .....	5	9	14	4	7	25
Lancaster .....	..	11	11	1	9	21
Lawrence .....	2	6	8	..	4	12
Lebanon .....	..	8	8	..	3	11

Table 5—(Continued)

	Number of Schools					Total Number of Schools
	With One Certified Guidance Counselor for		With Certified Guidance Counselors (Total)	For Which No Data Are Available	With No Certified Guidance Counselors	
	299 or Less Students	300 or More Students				
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lehigh .....	4	9	13	..	..	13
Luzerne .....	15	19	34	7	11	52
Lycoming .....	2	8	10	..	1	11
McKean .....	..	6	6	..	1	7
Mercer .....	2	12	14	..	1	15
Mifflin .....	..	5	5	..	..	5
Monroe .....	4	2	6	1	2	9
Montgomery .....	3	29	32	3	4	39
Montour .....	..	2	2	..	..	2
Northampton .....	5	8	13	2	1	16
Northumberland .....	2	11	13	..	2	15
Perry .....	1	2	3	1	2	6
Philadelphia .....	2	44	46	..	1	47
Pike .....	..	1	1	..	..	1
Potter .....	1	2	3	2	..	5
Schuylkill .....	3	7	10	5	13	28
Snyder .....	..	3	3	..	..	3
Somerset .....	2	7	9	..	3	12
Sullivan .....	1	..	1	1	1	3
Susquehanna .....	..	1	1	1	4	6
Tioga .....	4	2	6	2	2	10
Union .....	1	1	2	..	..	2
Venango .....	1	4	5	1	1	7
Warren .....	..	4	4	..	2	6
Washington .....	2	9	11	5	12	28
Wayne .....	1	2	3	1	4	8
Westmoreland .....	..	16	16	10	13	39
Wyoming .....	1	1	2	..	1	3
York .....	1	12	13	1	6	20

SOURCE: Compiled by Joint State Government Commission from records of Pennsylvania Department of Public Instruction.



Table 5 portrays the extent of guidance services in the public secondary schools of the 67 counties of the Commonwealth. Examination of the table shows that 214 schools were without certified guidance counselors, 556 schools had 300 or more pupils per guidance counselor and 116 had less than 300 pupils per guidance counselor. In half of the schools employing one counselor for 300 or more pupils, counselors devoted all of their time to counseling. Again, in but 12 percent of the schools employing one counselor for 299 or less pupils, counselors devoted full time to guidance. In connection with these ratios, it may be noted that Dr. James Bryant Conant, formerly President of Harvard University and currently engaged in a comprehensive study of American high schools, concludes that there should be one full-time guidance counselor for every 250 to 300 pupils in the high schools.<sup>8</sup>

In addition to providing those likely to succeed in college with the guidance necessary to develop college aspirations, qualified counselors might well guide those not likely to succeed in college into other post-high school training programs. As regards both the importance of guidance and the contribution which secondary schools can make to vocational education, the National Manpower Council cited a number of major objectives which ". . . must be pursued if we are to strengthen the nation's resources of skilled workers and technicians. These are: to strengthen the contributions made by secondary education to the acquisition of skill; to develop a more effective program for vocational guidance; to provide more equal opportunities for all individuals to acquire skill. . . ." <sup>9</sup>

In this connection, it should be noted that traditionally the Commonwealth has been concerned with the furtherance of vocational education in

<sup>8</sup> James Bryant Conant, *The American High School Today* (1959).

<sup>9</sup> National Manpower Council, *A Policy for Skilled Manpower* (1954).

the high school. In addition to the basic educational subsidies to the public schools, the Commonwealth makes available supplemental payments ranging from \$20 to \$50 per student for students enrolled in vocational courses in agricultural, industrial, home economics and distributive education.

In order to facilitate adequate organization of vocational education in the more sparsely populated areas of the Commonwealth, the 1937 Session of the General Assembly provided for special reimbursement procedures to so-called "vocational school districts." However, although the enabling legislation provided for more favorable reimbursement rates, no vocational school districts were organized and the enabling legislation was repealed in 1957. Prior to the repeal of these provisions, the General Assembly in 1949 authorized the establishment of area technical schools for "the benefit of pupils and adults." As regards Commonwealth reimbursement, area technical schools received all of the basic educational subsidies plus the per pupil supplemental payments referred to above plus a maximum subsidy of \$800 per teaching unit. To date, but three area technical schools have been established under the enabling legislation of 1949. In addition, the School Code provides that "The board of school directors of any school district may and upon written application, signed by twenty or more residents of such district above the age of sixteen years who are not in attendance at any public or private day school, shall provide free extension education for said applicants in any curricular course of study so requested, . . ." <sup>10</sup>

The record shows that Pennsylvania statutes provide both organizational mechanisms and financial incentives for vocational and post-high school training. If there be lack of opportunities in these areas, the responsibility rests with local initiative.

<sup>10</sup> 1949, March 10, P.L. 30, § 1902, as amended 1953, August 19, P.L. 1207.





