JUNIOR COLLEGE ACHIEVEMENT OF GIRLS' CATHOLIC HIGH SCHOOL Graduates in California

by Mary Frances Golding

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CURRICULUM STUDIORUM

Mary F. Golding was born January 28, 1904 in San Francisco, California. She received the Bachelor of Arts degree from the University of California in 1924 and the Master of Arts degree in History from the University of California in 1929. The title of her thesis was: The History of Party Platforms in California, 1873-1887: A Study of Party Promises and Accomplishments.

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INTRODUCTION

In 1947, the United States President's Commission on Higher Education charged American society with the failure of providing a reasonable equality of educational opportunity for its youth. It emphasized that the Nation needed all the human resources it could develop and recommended that education through the fourteenth grade be made available to all in the same way that high school education was then available.[1]

California, more than any other state,[2] accepted the fact that "all students who show promise of success should have opportunity of at least one or two semesters to demonstrate their ability and earnestness of purpose"[3] by

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[1]President's Commission on Higher Education, Higher Education for American Democracy, a report, Washington, D.C., Government Printing Office, 1947, Vol. I, p. 36-37.

[2]Appendix and Hugh Price (Ed.), Full Time and Part Time Enrollments in California Districts Maintaining Public Junior Colleges 1955-1956, mimeographed report of the California State Department of Education, Sacramento, California, July, 1956, p. 2-3, which states that 48,700 of the 106,700 full time students in publicly controlled higher education institutions in the state were enrolled in junior colleges in 1955-1956.

[3]T. R. McConnell (Chief Consultant), Draft of a Restudy of the Needs of California in Higher Education, a report to the liaison committee of the Regents of the University of California and the State Board of Education, Sacramento, California, February, 1956, Chap. II, p. 40-41.

providing junior colleges with two years of both terminal and transfer higher education without direct cost to high school graduates in practically every area of the state.[4]

The purposes of these California junior colleges as stated in the Draft of a Restudy of the Needs of California in Higher Education, popularly known as the McConnell Report of 1955, are:[5]

> 1) To help students achieve occupational competence and to give opportunities for civic competence and personal adequacy for living.
>
> 2) To prepare a student to function effectively as a member of his family, a citizen of his community, his state, his nation, and his world.
>
> 3) To provide lower division training for those planning to transfer to a four-year college or university after completing two years of junior college.
>
> 4) To help a student to help himself in the choice of an occupation adjusted to his interest, aptitudes, and abilities and to provide a program of training and guidance so that every student may discover his aptitudes, choose a life work, and prepare for the successful pursuit of such work.
>
> 5) To cooperate with other public educational institutions to meet the educational and occupational needs of the people living in the community.

Because the President's Commission on Higher Education and the investigators of higher education in California feel that colleges with the above objectives have great value

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[4]By California law, junior colleges must accept every high school graduate who applies.

[5]McConnell Report, Op. Cit., Chap. III, p. 3.

for a large number of college-bound students, the examination of any factor that makes for success in junior college seems valuable.

Such examination was suggested by the California Junior College Association at its 1954 meeting when it asked that

> information be regularly secured concerning student characteristics, age, general and specific aptitudes, educational achievement, physical capacities, and mastery of the tools of learning.[6]

The present paper will compare the performance of one group of freshmen students in a California urban junior college: graduates of girls' Catholic high schools, with the performance of another junior college group: girl graduates of public high schools. In appraising the junior college achievement of these women students, this report will partially evaluate their secondary school training, since early college performance reflects that training.[7]

A report on the junior college performance of the graduates of girls' Catholic high schools is particularly timely because twice within a decade the question of tax

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[6]McConnell Report, Op. Cit., Chap. III, p. 10.

[7]James T. O'Dowd, Standardization and Its Influence on Secondary Education in the United States, Washington, D.C. Catholic University of America, 1935, p. III.

exemption of church-sponsored schools has been made a statewide issue in California,[8] one of the largest states in the Union. Private school educational leaders are interested in all information that will help them assess the adequacy of education in their schools. This investigation will provide some measured evidence of the performance of Catholic high school women graduates at the time of entrance to the junior college and after one semester of residence. Since "college success" is a partial index of the efficiency of the high school and a partial measure of the product of the school,[9] this evidence should be of value to secondary school leaders in evaluating their schools. Equal or superior performance by the products of church-aided schools would be one argument for tax exemption.

To determine whether the achievement of Catholic high school women in California urban junior colleges is different from the achievement of public high school women, this thesis will study paired groups of freshmen women in a large, metropolitan junior college (City College of San Francisco). The relative achievement of the Catholic high

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[8] H. Bloom, "California Church School War", Nation, Vol. 174, May 31, 1952, p. 521-2.

[9] James T. O'Dowd, Op. Cit., p. III.

school trained women is the matter of chief interest.

As a basis for determining whether there is a difference in the achievement of the two groups of high school graduates, the following hypotheses will be tested:

1. Women graduates of Catholic and public high schools of comparable scholastic aptitude do not differ in entrance achievement test results in basic mathematics, reading, and mechanics of English.

2. Women students who compare in scholastic aptitude when entering junior college achieve similar academic success in their first semester of junior college education, regardless of whether their secondary education was provided in a Catholic or in a public high school.

This investigation will attempt to test these hypotheses, analyse any differences which may be found to exist, and explain, in so far as possible, the reasons for these differences.

In order to understand how this report fits into the pattern of comparative studies of the college performance of public and private high school graduates, a survey of related literature will be made. This survey will be followed by a description of the high school background and junior college setting of the subjects of this paper. In subsequent chapters the design of the study, the criteria for pairing the subjects of the sample, and the representative

character of that sample will be discussed. A statistical analysis of the performance of the paired groups in the sample - as measured by entrance test scores and end-of-the-semester averages - will be made. Conclusions and findings from this analysis will be reported and summarized. Finally, implications and recommendations for action based on these findings will be noted as well as suggestions for further research of a similar nature.

CHAPTER I

REVIEW OF RELATED LITERATURE

In 1935 J. Leonard Sherman remarked that,

> Since comparative studies of private and public secondary education are so limited, no one can state with assurance that the private school is or is not performing in a superior manner in those areas also served by the public school.[1]

Comparative studies are still few in number.

Leonard V. Koos, in a study made in 1931 of the academic success of secondary public and private school graduates after one quarter in the University of Minnesota, seems to be the first to place Catholic secondary graduates in a special category of "private" schools. He noted that women graduates of Catholic schools were "of reasonable homogeneity from the standpoint of social status, position in the economic order, and intellectual outlook."[2] He felt that women from urban Catholic high schools were superior in aptitude to women graduates of urban public schools. But in both his random sampling and in his matched groups, he found that women graduates of public high schools were superior in

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[1] J. Leonard Sherman, "Can the Private School Justify Its Existence?", School and Society, Vol. 41, April, 1935, p. 463.

[2] Leonard V. Koos, Private and Public Secondary Education, Chicago, Illinois, University of Chicago Press, 1931, p. 23.

scholarship to those of Catholic high schools.[3] He demonstrated that the reason for this superiority was that students from public schools had the advantage of being more familiar with the coeducational university environment and had to make less adjustment.[4]

In 1941[5] Elvira J. Gillenthien made a study of the comparative success of public and private secondary school graduates at the University of Chicago. She classified the students who entered the college in the years 1931-35 according to the type of school where secondary training was received; namely, three sizes of public schools, University High School, independent schools, Catholic schools and other denominational schools, and compared the entrants from the seven types of schools on the basis of: (1) scores on the American Council on Education Psychological Examination for College Freshmen; (2) rating on the Thurstone Personality Schedule; (3) socio-economic status; (4) age at entrance to the college; and (5) academic success. In addition, she matched 473 public school students with a similar number of private school students proportionate to types of high school

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[3]Leonard V. Koos, Op. Cit., p. 136.

[4]Ibid., p. 139.

[5]Elvira J. Gillenthien, Comparative Success of Public and Private Secondary School Graduates in the University of Chicago, Unpublished Doctor of Philosophy dissertation, University of Chicago, August, 1941, 230 p.

graduates represented in the university in respect to (1) age, (2) American Council on Education Psychological Examination for College Freshmen score, and (3) Thurstone Personality Schedule rating and compared their high school background, length of residence in the university, rate of academic progress, scholastic achievement as measured by scores on the comprehensive examinations, and their fields of specialization.

The results of her study seem to indicate that:

1. Women Catholic school graduates received the lowest scores on the Psychological Examination.[6]

2. The socio-economic status of students from Catholic schools and from public schools was similar.

3. Graduates of Catholic high schools were one year older at entrance than graduates of other types of schools.

4. Public school students persisted in college to a greater extent than private school students.

5. Catholic school women graduates were the least successful in persisting in college.

6. By and large, the scholastic achievement of the students who persisted in college, whether from public or private schools (including Catholic), was similar.

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[6]Only 44 of the 192 private school women were graduates of Catholic high schools.

7. Differences in scholastic ability of the students from various types of schools were probably more responsible for the proportions of students completing their college work than were the types of public and private schools where the secondary training was received since scores in the psychological examination were definitely related to the quality of college work.[7]

Audrey Shuey, in March, 1956, reported on a study she had made of freshmen public and private school students in Randolph Macon Women's College. She matched students on the basis of intelligence test scores, size and location of home community, age, college load, education of parents, size of family. She did not include graduates of Catholic high schools in her private school group. Her study indicated that "contrary to popular opinion, graduates of private schools tend to have less academic success in their first year of college than do graduates of public schools."[8]

Reverend Paul Siegfried, S.J., made a study of male graduates of public, Jesuit, and non-Jesuit Catholic high schools who entered four midwestern Jesuit colleges in September of 1952 and 1953 on the bases of college entrance

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[7]Elvira J. Gillenthien, Op. Cit., p. 199.

[8]Audrey M. Shuey, "Academic Success of Public and Private School Students in Randolph Macon Women's College, The Freshman Year," Journal of Educational Research, Vol. 49, March, 1956, p. 481-492.

scholastic aptitude scores (American Council on Education Psychological Examination for College Freshmen), college achievement marks for the freshman year, and achievement measures adjusted to a scholastic aptitude score. He found that graduates of Jesuit high schools were significantly superior in scholastic aptitude to graduates of public and non-Jesuit Catholic high schools, but that between the latter two groups, there was no significant difference.[9] In scholastic achievement, the Jesuit-trained group was significantly superior, but the public school graduates received significantly higher marks than did the non-Jesuit Catholic high school graduates. When the high school groups were made equal in college entrance ability, the Jesuit and public school groups appeared equal in college achievement but both were significantly superior to the non-Jesuit Catholic group.

Particularly relevant to the current study were Father Siegfried's 1955 findings in the public school and non-Jesuit Catholic high school comparisons. He found the graduates of the two types of schools approximately equal in scholastic aptitude at the time of college entrance. The public school graduates earned higher achievement marks for the freshman year, especially in the natural science programs of

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[9]Paul V. Siegfried, The College Achievement of Jesuit High School Graduates, unpublished Doctor of Philosophy dissertation, New Haven, Conn., Yale University, June, 1955, p. 97.

the Liberal Arts College and in the Business Administration Curriculum.[10] Since the two groups had followed similar high school curricula, the difference, he believed, could not be attributed to a difference in the type of preparation afforded by the schools. It seemed to be attributable primarily to the relative weakness of the non-Jesuit Catholic group in mathematics and science. However, Father Siegfried stated that this indicated weakness was not solidly established by his study; that a finer breakdown of curricula divisions into college subjects of study would be necessary to establish fully this conclusion.

1. Summary of Research Studies.

Of the four studies reviewed, three examined the performance of Catholic high school graduates as special private school graduates. The one study, especially examining the academic success of the Catholic high school trained student, limited its sample to men students in private men's colleges. The two studies which included women graduates of Catholic high schools were pre-World War II. All of the studies were of university-level students in schools with selective admission policies.

The present study will examine the performance of recent women graduates of Catholic high schools in a public

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[10]Siegfried, Op. Cit., p. 99.

junior college in three curricula: university-college, terminal, and general college. The numbers enrolled in the junior college are larger than those of the prewar studies and are representative of the more general student bodies of their high schools. The present investigation is an attempt to evaluate the scholastic performance of California urban junior college women students trained in Catholic high schools in comparison with junior college women trained in public high schools.

CHAPTER II

SETTING OF THE PROBLEM

Because the relative achievement of the Catholic high school trained women in California urban junior colleges is the matter of chief interest in this piece of research, a description of the high school background and junior college setting of the population sampled should be submitted.

1. San Francisco Girls' Catholic High Schools.

A. Student Background.

Of the 25,706[1] girls enrolled in Catholic high schools of California, 3,785 attend the twelve San Francisco Catholic girls' high schools from which the subjects of this study are drawn. As in most areas in California, these schools draw from an urban population and vary in size.[2] Like the Catholic high schools standardized by secular agencies,

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[1]Thomas B. Kennedy (Editor), The Official Catholic Directory, 1957, New York, P.J. Kennedy and Son, various pages.

[2]The Superintendent of Catholic Schools, Archdiocese of San Francisco in June, 1957 reported that these schools vary in size from 111 to 800. Two of the twelve are strictly college preparatory.

described by Bishop James O'Dowd[3], California Catholic high schools[4] have been fairly well standardized by the powerful influence of the California State Department of Education and the accrediting committee of the University of California as to requirements for the training of teachers, curricula, graduation requirements, minimum library and laboratory equipment, length of recitation periods, and length of school year.[5] As in the public high schools of California, Catholic high school graduates do not have to pass state or regional examinations for graduation.

Girls' Catholic high schools differ from public high schools, however, in being smaller and limited to one sex. All of the public high schools are coeducational. Then the Catholic high schools are more selective in admission and retention policies. Because of the demand for Catholic high school training for girls and limited staff and facilities,[6]

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[3]James T. O'Dowd, Standardization and Its Influence on Catholic Secondary Education in the United States, Washington, D.C., Catholic University of America, 1935, p. 151p.

[4]Sister Mary Michael Doherty, History of Catholic Secondary Education in California, Unpublished Ph.D. dissertation, University of California, Berkeley, 1940, p. 173.

[5]Association of Secondary School Principals, Handbook for Catholic Secondary Schools, Archdiocese of Los Angeles, California, 1952, p. 8.

[6]Superintendent of Catholic Schools, Archdiocese of San Francisco, Interview Report, June, 1957.

all of the San Francisco Catholic high schools give entrance examinations. This screening makes for a student body more homogeneous in scholastic aptitude, even in the ten comprehensive high schools and more so in the two strictly college-preparatory high schools. Since the opportunity for non-Catholic girl applicants to be accepted in these schools is very limited, the student body is also homogeneous in religious background. The exclusion code set up by the San Francisco Catholic Board of Education which permits the dismissal of problem students under certain conditions,[7] exerts a disciplinary control which the public schools lack. Public schools are required by law to admit and compel the attendance of students of all ability levels for the compulsory school age years.

Tuition and textbook costs may also indicate selectivity of social background, or at least of background in which families are willing to make financial sacrifices for a Catholic education.

In addition, Catholic schools differ from the public schools to some extent in the variety of curricular offerings and definitely in the core curriculum approach, which

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[7]This code permits the dismissal of problem students under certain conditions: those incapable of benefiting by the curricula, those refusing to benefit by the curricula, and those consistently refusing to attend Sunday Mass. Administrative Handbook for Elementary and Secondary Schools, Archdiocese of San Francisco, 1956, p. 10.

the Presentation Sisters of San Francisco introduced to California. The larger San Francisco Catholic schools are as comprehensive in their offerings as the public schools, but in addition embrace as a core subject area, Christian Family Living.[8] These schools demand at least one course in this area each year as well as a course in religion. Smaller high schools also offer certain aspects of the Family Living program.[9]

Finally, since the teaching personnel is, except for classes in physical education, almost exclusively drawn from religious orders of sisters, the Catholic schools differ in the quality of the dedication of the greater part of their high school faculty to teaching duties. Distractions of social or family life are minimal.[10] These faculties, too, subscribe to a Catholic rather than a pragmatic philosophy

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[8]Sister Mary Janet, in the report of her 1947 survey, describes this program, as an outstanding example of an "attempt to integrate educational experience through unifying the objectives of all courses around the fundamental social principle of the beauty of family life and to develop in students those common attitudes, ideals, and habits directed toward a common citizenship in a democratic society." Sister Mary Janet, Catholic Secondary Education, Washington, D.C., National Catholic Welfare Conference, 1947, p. 91.

[9]Sister Annette McFeely, Teacher Education for Christian Family Living, New York, W.H. Sadlier, Inc., 1954, 310 p.

[10]Superintendent of Catholic Schools, Archdiocese of San Francisco, Interview Report, April, 1958.

of education.[11]

B. Student Plans for Higher Education.

Two or three months before high school graduation, students file applications for various colleges and take entrance tests. Just before graduation, the Student Division of the California Department of Employment and the Board of Education, Archdiocese of San Francisco, make a survey of plans for higher education as well as for employment. Since college applications are already being processed, this report lists plans that are fairly definite. Table I summarizes these higher education plans for 1955 and 1956. It shows that about 24 per cent planning to continue their studies had applied for City College of San Francisco. The Registrar's Office at City College states that the number enrolling in these years was actually closer to 30 per cent.[12]

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[11]A succinct statement of this philosophy as followed in California Catholic high schools appears in Association of Secondary School Principals, Handbook for Secondary Schools, Archdiocese of Los Angeles, California, 1952, p. VII, p. XI.

[12]City College of San Francisco, Registrar's Office, Statistical Records.

Table I.- Colleges selected for attendance by all San Francisco Catholic high school women graduates.[a]

College Selected	Year of Graduation			
	1955		1956	
	No.	%	No.	%
San Francisco City College[b]	69	26	79	23
Catholic Colleges	97	36	129	37
San Francisco State College	67	25	82	24
University of California	16	6	31	8
Other Colleges	17	7	28	8
Total	266		349	

[a]From the Report of After-Graduation Plans, San Francisco Catholic High School Seniors, compiled by Department of Education, Archdiocese of San Francisco, and Student Division, California Department of Employment, San Francisco, 1955-1957.

[b]Percentage electing City College of San Francisco in 1957 increased to 38%.

These women, like women in all public junior colleges, chose the two-year college for:

a. terminal vocational training;
b. university parallel training in a personalized atmosphere at a minimum of expense;
c. remedial work in areas of weakness in their secondary school experience;
d. exploratory and general culture courses;
e. personal adjustment - social, emotional, intellectual;
f. the experience of studying in a coeducational, state-supported school.[13]

Examination of high school transcripts of both groups of entering students as summarized in Appendix 4 indicates a definite leaning toward the college-preparatory program regardless of socio-economic background or scholastic aptitude. The chief difference of the Catholic and public high school women in transcript offerings is found in the less-academic students' transcripts. The less-academic public high school girl moved to a business or general college program earlier in high school than did the less-academic Catholic high school girl. In spite of the fact that all high school subjects are accepted by junior colleges in California, large numbers of both Catholic and public high school girls took the pattern of subjects required for entrance to liberal arts colleges.

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[13]Ordway Tead, "A Junior College for Your Daughter?", Junior College Journal, V. 24, October, 1954, p. 68.

2. City College of San Francisco.

A. Status as a Junior College.

City College of San Francisco, the site of the present study, fulfills the functions of a junior college as prescribed both in the report of the President's Commission and in the California McConnell report.[14] Its total enrollment has grown from 1,470 in its opening year of 1935 to 5,280 in 1956. For the past two decades the most stable population of City College has been the full-time women students, numbering about 1,200.[15] The number of private school women graduates has shown a sharp increase in recent years.

City College is among the top 14 per cent nationally in size. A college of such size is able to offer practically every type of junior college curricula.

Since City College of San Francisco is a member of and accredited by the Western College Association, which is listed by the United States Commissioner of Education as a nationally recognized accrediting association, it is suitable as a locale for junior college investigations.

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[14] Circular of Information and Announcement of Courses, City College of San Francisco, 1955-1956, 1956-1957, p. 21.

[15] Appendix 3.

Because its grading practices have been validated by the annual reports of the follow-up committee on the academic achievement of junior college transfers made by the Office of Relations with Schools, University of California, grade reports used in this study can be accepted as sound.

One of these validating reports on grading practices of junior colleges, as summarized by Dr. Louis Batmale,[16] follows:

> The 1952 report reveals that the students eligible to enter the university, whether they completed their lower division work at the junior college or at the University of California, did equally well in their first semester of upper division studies. The ineligible students performed on a lower level. This evidence argues for the soundness of grading procedures at the junior college and demonstrates that an eligible student should be able to attend junior college, transfer to the University of California and achieve on the same level as those who enter immediately upon graduation from high school. It appears that the ineligible student has a chance to attend junior college and make up his deficiencies and then go to the University of California and achieve satisfactorily.
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> The grade point average made by 664 transfers to the University of California from San Francisco City College during the years of the report was 2.45 for the students eligible to enter the University of California from high school and 2.14 for students ineligible at graduation. Grades of City

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[16] Louis F. Batmale, Achievement in College of Students Graduated from High School on the Basis of Performance in the General Educational Tests, Unpublished Doctor of Education Dissertation, University of California, Berkeley, California, 1954, p. 66-70.

College transfers approximate those of native students at the University of California and of other junior college transfers.

B. Curricular Offerings at City College of San Francisco.

Three levels of curricula are offered at City College of San Francisco: the university and college curriculum for students planning to transfer to a four-year college; the terminal or semiprofessional curriculum for students planning to develop occupational competence in two years; the so-called "general college" program for the less-academically able students who wish to gain some knowledge of the humanities, social science, physical and biological science.[17]

Enrollees in the university and college curriculum have higher scholastic aptitude than enrollees in other curricula.[18] Women in this curriculum are, for the most part

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[17]The title of the third category is rather misleading. Many university parallel courses of the survey type are popularly described as "general college"; courses of university level, but not offered at the University of California are catalogue numbered "G" - general college; courses of a refresher type slightly below university level are also numbered "general college"; courses designed for the group less able academically have a special general college number series; "G" 11".

[18]Thomas Nesbit, Compilation of Findings, mimeographed report of the City College of San Francisco, Testing Office, February 20, 1957, p. 1.

preparing for teaching or for positions in fields of physical or biological science. Courses in this area are identical with the University of California courses in content and standards. Many of these courses have prerequisites, usually based on entrance test scores and high school achievement records. English classification, made on the basis of Cooperative English Test scores plus the Linguistic score on the American Council on Education Psychological Examination for College Freshmen, acts as a screening device for many university parallel courses as well as for courses in the English department. Students in this area often include "upper level" general college courses in their program for purposes of strengthening themselves in any area of weakness or of following areas of special interests, such as music or art. The University of California accepts these courses for elective credit.[19]

The terminal or semiprofessional curriculum is the one selected by the largest group of Catholic High School enrollees. Women in this curriculum are preparing for careers in a variety of business fields, merchandising, dental assisting, nursing, air line hostessing, and hotel and restaurant administration.

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[19]City College of San Francisco, Circular of Information, Op. Cit., p. 21.

Since the exclusive province of the junior college is the terminal or semiprofessional area and since leaders of various industries serve in advisory committees and take an active interest in the planning and development of the courses and recruitment of the trained employees, this program appeals to women with short term realistic goals. Some of the programs in this area include in-service training in local business firms.

Those in the "general college" program are still exploring, trying to find themselves and a field in which they may succeed. These are the women who can make much use of the counseling services of the college. Some of these women have programs partly university parallel; some have programs with some business or other terminal courses; some have programs entirely "general college" of the special number series "G 11". Because these special "G 11" courses are relatively new and in the developmental state, carefully selected teachers are continually experimenting with methods and materials to make college education meaningful and valuable to the less academic student[20] enrolled in them.

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[20]City College of San Francisco, Application for Accreditation by the Western College Association, October, 1956, p. 47.

3. Summary.

In spite of the fact that standardizing agencies in California have had a great influence on Catholic as well as public high schools of the state, the girls' Catholic high schools of San Francisco from which the subjects of this study come appear to differ from the public high schools in that they are:

1. More selective in admission and retention policies.

2. Of smaller enrollment.

3. Non-coeducational.

4. More homogeneous in scholastic aptitude and social-religious background.

5. Active in subscribing to curricula integrated by the course in Christian Family Living.

6. Influenced by the quality of dedication of instructors, all of whom are members of religious orders of sisters.

7. Catholic in the philosophy subscribed to by the faculty.

Some 24 to 30 per cent of these graduates of the girls' Catholic high schools in San Francisco who planned to continue their formal education, chose to do so in the large local accredited state-supported junior college, which

offered them three levels of curricula. The largest number of these women students selected the terminal or semi-professional curriculum.

The following chapter will describe instruments, techniques, and procedures used to compare the junior college performance of women from the background just described with the junior college performance of women with a public high school background.

CHAPTER III

DESIGN OF THE STUDY

Since the testing of the hypotheses set up in the introduction forms the basis for the design of this study, the investigator has devoted this chapter to the instruments and techniques involved in the testing of these hypotheses and in the preparation for this testing. Because the subjects of this study are paired on the basis of the American Council on Education Psychological Examination for College Freshmen, this instrument will be described. Since the paired groups will be compared on performance in basic areas at entrance to the junior college, entrance achievement tests used at the junior college of the sample will also be described. The method of securing the data necessary for conducting this experiment will be discussed: the high school origin of women students, their high school transcripts and higher education plans, their socio-economic background and other personal factors, their entrance test performance, their end of semester grades, their reaction to college problems in the Mooney Problem Check List. Reasons for the choice of the first semester as the semester for the experiment will be noted. The statistical formulae used to interpret the meaning of the scores on entrance tests and first semester records will be listed.

The methods of procedure to be followed in analyzing the data of the experiment will be summarized.

1. Instruments.

Tests used in this study are tests administered to all the City College entrants of 1955 and 1956 by professional personnel under the Director of Testing for purposes of placement and counseling.

A. American Council on Education Psychological Examination for College Freshmen, 1949 and 1952 editions.[1]

This examination,[2] hereafter referred to as the American Council Examination, or merely as the A.C.E., is a widely used test of academic ability at the college level. In 1955 and 1956, all but three of the 67 per cent of the junior colleges in California replying to a California Junior College Association questionnaire,[3] used this test as one of their placement tests for entering students.

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[1]Since the national percentile norms for the 1949 and 1952 editions differ very slightly, the Testing Office of City College of San Francisco accepts the scores on both forms of the tests as equal.

[2]Cooperative Test Division, Educational Testing Service, American Council on Education Psychological Examination for College Freshmen, 1949 and 1952 editions, Princeton, New Jersey, 1950 and 1953, 14 p.

[3]Thomas Nesbit, A Study of Testing Practices in California Junior Colleges, an unpublished report prepared for the California Junior College Association, San Francisco, 1956, p. 1.

This examination consists of six highly timed tests arranged in alternate linguistic and quantitative tests. The Quantitative tests, which yield the Q score, are those of Arithmetical Reasoning, Number Series, and Figure Analogies; the Linguistic tests, yielding the L score, are the Same-Opposite, Completion, and Verbal Analogies.

The tests yield three raw scores: a Q score, an L score,[4] and a total score. These may be converted into percentile ranks by use of the tables provided by the Educational Testing Service. The tests have gained wide acceptance nationally. The 1952 edition of the Tables of Tentative Percentile Ranks for College Freshmen states that the norm group for the 1949 edition consisted of 43,348 students in 229 colleges.

This psychological examination is intended to appraise what is often referred to as scholastic aptitude or aspects of intelligence which have special reference to the requirements of different college curricula.[5]

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[4]Following experimentation, the Testing Office at City College felt that the L score of the A.C.E. treated the same skills as the Effectiveness of Expression section of the Cooperative English Test, Thomas Nesbit, Interview Report, May, 1957.

[5]Cooperative Test Division, Norms Bulletin, Educational Testing Service, American Council on Education Psychological Examination for College Freshmen, 1949 edition, Princeton, New Jersey, 1950. Foreword.

The scores are roughly indicative of the level of the mental alertness of the student.[6]

Cronbach, in his analysis of the test, states that he believes it predicts college success as well as any other mental test. Its greater difficulty makes it superior to general purpose tests with college groups.[7]

B. Cooperative English Test[8]

Test A: Mechanics of Expression, Forms X and Y.

This examination also consists of timed tests in grammatical usage, punctuation, capitalization, and spelling. In the section on usage, the subject is asked to judge the correctness of four underlined parts of each sentence and to designate which, if any, of the four parts is an incorrect or unsuitable usage. In the punctuation section, the subject is asked to select from specified alternatives the appropriate punctuation to be inserted into a designated section of an incompletely punctuated passage. The

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[6]Cooperative Test Division, Education Testing Service, Manual of Instructions, American Council on Education Psychological Examination for College Freshmen, 1949 edition, p. 2.

[7]Lee J. Cronbach, Essentials of Psychological Testing, New York, Harper & Brothers, 1949, p. 145.

[8]Cooperative English Test, Higher Level, Test A, Mechanics of Expression, Forms X, Y; Test C, Reading Comprehension, Forms S.T. (all forms used at C.C.S.F.), Princeton, New Jersey, 7 and 15 p.

Educational Testing Service claims that the mechanics test provides a reasonably accurate measure of many of the factors involved in skill in written expression.[9]

Robert Pooley said that "it is one of the best tests available in the field of English skills; the mechanics are tested functionally rather than in isolation from English expression".[10]

Test C^2, Reading Comprehension (Higher Level), Forms S and T

The reading test, also a timed test, measures vocabulary, speed and level of comprehension. In 1949, J.B. Stroud of the University of Iowa[11] claimed that Cooperative Tests were among the best for measuring the reading comprehension of the usual type of college subject matter. Frederick Davis of the Educational Testing Service reported that a survey of literature in the field of reading regarded by authorities as most important elements in reading comprehension had been made to establish the

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[9]The quotation referred to is in Chester N. Harris, reviewing "Cooperative English Test", in Oscar Buros (ed.), The Fourth Mental Measurements Yearbook, Highland Park, New Jersey, The Gryphon Press, 1953, p. 301.

[10]Robert C. Pooley, reviewing "Cooperative English Test", in Oscar Buros (ed.), The Third Mental Measurements Yearbook, New Brunswick, New Jersey, Rutgers University Press, 1949, p. 223.

[11]J.B. Stroud, reviewing "Reading Comprehension, Cooperative English Test", in ibid., p. 526.

validity of these tests.[12] These elements include:

1. Knowledge of word meaning.

2. Ability to select appropriate meaning for a word or phrase in light of its particular contextual setting.

3. Ability to follow organization of a passage and to identify antecedents and reference to it.

4. Ability to select main thought of passages.

5. Ability to answer questions that are directly answered in the passage.

6. Ability to answer questions that are answered in the passage but not in the words in which the question is asked.

7. Ability to draw inference from a passage about its contents.

8. Ability to recognize the literary devices used in a passage and to get its tone and mood.

9. Ability to determine writer's purpose, mood, and point of view.

The proportion of these elements incorporated in these tests was based on the judgment of authorities in the field of reading regarding the importance of each element.

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[12] Frederick Davis, "Two New Measures of Reading Ability", Journal of Educational Psychology, Vol. 33, May, 1942, p. 365-372.

The test has the added merit of being a better measure of the power of comprehension than is obtained in other timed tests. The correlation of .87 between speed and comprehension suggests a considerable influence of comprehension on its speed score.[13]

J. Paul Leonard in his appraisal stated that "every statistical device was used to make the complete English battery accurate; that the Cooperative English Tests are superior to most in the statistical procedures used in building them".[14]

Certainly, the tests are still widely used[15] by American colleges. Particularly appealing to counselors is the advantage that raw scores may be converted to scaled scores permitting the comparison of relative proficiency in various sections of the tests.

Accuracy of norms has been established and checked by the administration of tests to 10,000 students in 100 colleges. Percentile ranks used for counseling purposes at

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[13]Robert Bear, reviewing "Reading Comprehension, Cooperative English Test", in Oscar Buros (ed.), The Third Mental Measurements Yearbook, New Brunswick, New Jersey, Rutgers University Press, 1949, p. 525.

[14]J. Paul Leonard, reviewing "Cooperative English Test", in ibid., p. 221.

[15]Forty-six per cent of California junior colleges replying to the questionnaire administer this test. T. Fesbit, A Study of Testing Practices in California Junior Colleges, p. 1.

City College of San Francisco are those of Type II, entering freshmen of typical liberal arts colleges. These norms are based on 50,000 students in ninety colleges.[16]

C. Basic Mathematics Test.

The basic mathematics test administered until 1958 was a highly timed test of twenty basic mathematics questions designed by the City College mathematics department. The score on this test plus the score on the mathematics reasoning problems of the A.C.E. test yielded total scores on which test norms were established at City College in 1950.

The subjects on which norms were established were 2,212 men and women.[17] The "cutoff" score or average score was required to pass the test. Students falling below this cutoff score were required to pass, with at least a "C" grade, a refresher course in mathematics to qualify for junior college graduation.

D. The Mooney Problem Check List.[18]

To assess the feelings of women graduates of Catholic high schools and of women graduates of public high

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[16]Educational Testing Service, Percentile Ranks for High School and College Students, Cooperative English Test, Los Angeles, California, p. 9-11, n.d.

[17]City College of San Francisco, Testing Office data.

[18]Ross L. Mooney, Mooney Problem Check List, New York, The Psychological Corporation, 1950, 4 p.

schools, a random sampling[19] of fifty graduates from each type of school was asked to check those college adjustment problems of the Mooney Problem Check List that were troubling them at the end of their first semester of junior college. This supplementary study was made to learn whether college-adjustment problems would explain any difference in first semester performance between the two groups.

2. Nature of the Data.

Before testing the hypotheses of this study, it was necessary to identify women students representative of the two types of school graduates and to examine their personal and scholastic records.

These data were collected from the files of the Registrar, the Counselors, and the Testing Office, City College of San Francisco; and from records in the offices of the California State Department of Employment, Junior Division, and the Superintendent of Schools, Catholic Board of Education, Archdiocese of San Francisco.

The first step in the collection of data was to seek those San Francisco Catholic high school graduates who

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[19]These women were enrolled in classes in health and physical education required of all freshmen women.

had been full-time students in the fall semesters of 1955 and 1956. The Registrar's office secured for the writer, from the International Business Machines office, a list of the women entering the junior college from all San Francisco high schools in the fall of 1955 and 1956 with the code of their stated major, the number of units attempted, the number of units passed, and the number of grade points earned. The writer then examined the residence cards in the Registrar's office for the high school background source of each of these students. One hundred and thirty cases of San Francisco Catholic high school graduates were found who had completed their first semester as full-time students in the fall of 1955 and 1956. The next step was to locate the records of their performance on the A.C.E. test and the other entrance tests which are administered to every entering student. Since scores had been recorded on International Business Machines (I.B.M.) cards, lists were prepared from these cards in the testing office. Cards of the Catholic girls' high school graduates were secured; then cards for all the girls graduated from public high schools were secured. Test score cards of public school girl graduates were examined to find students who had exactly the same A.C.E. patterns - gross score, quantitative score, and linguistic scores - as those of Catholic high school graduates. Registrar's files and counselors'

folders were inspected for age, father's occupation, the exact college program followed,[20] and the high school transcript of both Catholic and public high school women graduates. A public high school woman graduate with the same curriculum and A.C.E. pattern was paired with each Catholic high school graduate. Raw scores on the mathematics test and scaled scores of the Reading Comprehension and Mechanics of Expression Tests of the Cooperative English Test[21] were secured from I.B.M. test-record cards in addition to A.C.E. scores. All the test data from the I.B.M. cards and the data secured from the Registrar's office were recorded for each student on large tabulating sheets by the investigator. These recordings were checked and rechecked. A copy of all this tabulated data appears in the Appendix. The data were recorded exactly as found in the files of the Testing and Registrar's offices.

Grade point averages were determined by dividing the number of grade points earned by the number of units attempted by each student of every paired group in the study, and recorded on the data sheet.

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[20]The writer had to rely on her experience as a counselor and administrator to differentiate the college curriculum of each student whose record she examined.

[21]Scaled scores on these tests are equated.

Background data on Catholic high school graduates were secured at three interviews with the Superintendent and Assistant Superintendent of Catholic High Schools, Archdiocese of San Francisco.

3. Procedures Followed.

The data collected to check the hypotheses listed in the introduction will be treated by the formulae presented by Garrett.[22] Statistical formulae used to interpret the meaning of the scores will be those which yield the range, the mean, the standard deviation, the difference between the means, the critical ratio, and the Pearson Product-Moment coefficient of correlation.

The critical ratios determined will be interpreted in the light of Garrett's table 29,[23] which indicates the values for determining the statistical significance of critical ratios. The null hypothesis, which asserts that no true difference exists between two groups sampled, will be rejected only when the critical ratio is such as to indicate that differences are significant at the 1 per cent level of probability.

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[22]Henry E. Garrett, Statistics in Psychology and Education, 3rd edition, New York, Longmans Green and Company, 1948, p. 181-240.

[23]Ibid., p. 190.

The question arises as to the relative merit of a comparison of graduates on the basis of one semester's achievement or of one quarter's achievement as in the Koos study referred to in Chapter I. Here Koos states,

> unquestionably there are individual students who achieve a higher grade point average during the second quarter or semester after they have learned to adjust to the new institution. However, the unusually high correlation of the first and second quarter's records justify the comparison.[24]

A positive correlation of .63 for the first and second semester 1955-1956 grades of 233 San Francisco high school women graduates justifies the comparison of the academic achievement of the two groups of women students in this study after one semester. Their mean grade point average for the first semester was 2.30. The mean for the second semester was 2.22. This close relationship of semester grade point averages, indicates that junior college students also perform in a similar manner in both semesters.[25]

The policy of the University of California of accrediting high schools on the basis of the performance of their graduates in their first semester and of granting merit awards to high schools on the basis of first semester

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[24]Koos, Op. Cit., p. 116.

[25]City College of San Francisco, Testing Office Data.

performance of their graduates - the fall group plus the spring group - is another justification.[26] The academic achievement in the first semester is a partial index of the efficiency of the high school; achievement in the second semester is more likely to be an index of the efficiency of the college - its instructional program and its student personnel services.

In analysing the accumulated data, the writer will endeavour:

1. To find whether there are significant differences in the achievement test performance of the Catholic high school and San Francisco public high school women graduates who are of similar scholastic aptitude.

2. To find whether there are significant differences in the over-all grade point averages at the end of the first semester of the San Francisco Catholic school women graduates and San Francisco public school women graduates paired on scholastic aptitude.

3. To find whether there are significant differences in the first semester performance of the paired groups in the three divisions of the curricula in which they are enrolled.

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[26]University of California, California Notes, Berkeley, May, 1955, p. 16.

4. To confirm the findings of the first semester by checking them against the grade point averages of the graduates of both types of school in the sample who carried twelve or more units in the second semester.

5. To discover any differences between the two groups in feeling about college problems that were troubling them at the end of the semester as revealed in their checking of the college adjustment problems of the Mooney Problem Check List.

CHAPTER IV

THE SAMPLE.

As has already been indicated, the sample on whom data has been gathered for the testing of the hypotheses of this investigation, is a group of women from San Francisco Catholic and public high schools who completed the first semester at City College of San Francisco as full-time[1] students in Fall, 1955 or Fall, 1956.[2] This chapter will present reasons for pairing the women of this sample, the procedure and criteria by which they were paired, and tests of the representativeness of the paired groups.

1. Reasons for Pairing Women of the Sample Group.

The writer has elected to make use of the method of equivalent groups for her experiment. The matched pairs are compared as to their scores on entrance achievement tests and term grade-point averages, criteria of the experiment, when scores on the A.C.E. tests and curricula of

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[1] City College of San Francisco, Circular of Information and Announcement of Courses, 1956-1957, p. 27 describes the full-time student as one carrying twelve or more units.

[2] Women students taking leaves of absence in the first semester were left out of the study, since their number was small and their reasons for leaving non-scholastic. (City College of San Francisco, Counseling Office, Personal Data Folders.)

enrollment are held constant.

> The fact that for each individual member of the experimental group there will be a mate in the control group makes it possible to claim a greater degree of equivalence so far as the groups are concerned than would otherwise be possible. The most precise equivalence will usually be attained when the groups consist of matched pairs.[3]

It is evident that the groups selected should be as nearly equivalent at the start of the experiment as possible.

Following a discussion of the pairing procedure, and a description of the sample, the writer will show that the groups paired were equivalent in scholastic aptitude.

2. The Procedure for Pairing on the A.C.E. Performance.

The writer followed the pairing procedure on the A.C.E. set up by Dr. Louis Batmale[4] in his doctoral study made of a similar population in City College (graduates of San Francisco high schools and veterans graduated from high school on the basis of General Educational Development tests) under the direction of Dr. Clifford O. Froehlich and Dr. Edward S. Ghiselli of the University of California.

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[3]Walter L. Monroe and Max D. Engelhardt, The Scientific Study of Education, New York, Macmillan Co., 1936, p. 297.

[4]Louis Batmale, Op. Cit., p. 77-79.

> In pairing it was felt that a margin of three points of raw score on both Q and L scores would be safe difference for equivalent groups. If the authors of the tests had published a standard error of measurement or even a coefficient of reliability, the writer would have felt that he had a sound basis for his pairing. To compensate for this Garrett's formula for a minimum estimate of reliability was used.[5]
>
> Using the information found in the Tables of Tentative Percentile Ranks for College Freshmen, published by the authors of the A.C.E., a reliability coefficient of .881 for the Q portion of the test and a reliability coefficient of .937 for the L portion of the test were calculated.
>
> With these coefficients available it was possible to determine a standard error of measurement by using Garrett's formula 83.[6]
>
> The standard deviation used was that of the combined cases: C.E.D. and regular graduates. The standard deviation for the Q scores was 11.52; for the L scores 17.12. Using the previously determined coefficient of reliability, the standard error of measurement for the Q scores was 3.97, for the L scores, 4.30. In the light of these data it would appear that the pairing procedure was sound.[7]

The writer, on the basis of the above study, felt justified in pairing 122 cases on the A.C.E. within a margin of four points.

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[5]The formula referred to is in Henry E. Garrett, Statistics in Psychology and Education, 3rd edition, New York, Longmans Green & Company, p. 385.

[6]Ibid., p. 392.

[7]Louis Batmale, Op. Cit., p. 77-79.

3. The Subjects in the Two Groups.

One hundred and twenty-two junior college freshmen from girls' Catholic high schools in San Francisco were thus paired individually with women graduates of San Francisco public high schools on the basis of the following criteria:

1. Gross or total score, (G) A.C.E.
2. Quantitative score, (Q) A.C.E.
3. Linguistic score, (L) A.C.E.
4. Curriculum of enrollment in the junior college - university and college or pre-professional (U.C.), terminal or semi-professional (T), or general college (G.C.).

All of the full-time women students of Catholic high schools who could be paired with public school women on these criteria were included except two Oriental students who could not be paired with public Oriental students, overage students, and students in the cooperative nursing program. This number is therefore somewhat smaller than the total number of private school[8] entrants shown in Table II, which includes part-time students, especially those in the co-operative nursing program, transfers from private colleges, and graduates of independent private schools.

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[8]The two small independent private schools send only two or three students each year to City College.

Table II.- High school origin of all new Fall Semester women students.[a]

	High School	1955	1956
San Francisco Public High Schools			
1	Balboa	44	49
2	Commerce	10	3
3	Continuation	2	-
4	Galileo	34	22
5	Girls	3	1
6	Lincoln	58	68
7	Lowell	41	37
8	Mission	38	24
9	Polytechnic	31	24
10	George Washington	83	65
Other High Schools			
	San Francisco Private	107	105
	East Bay	23	31
	Other California	173	151
	Other U.S.	99	119
	Foreign	37	43
Non High School Graduates and Unknown		23	22
	Total	806	764

[a]City College of San Francisco, Registrar's Office, Statistical Records.

In the years 1951-1956, the total number of private school graduates enrolled at City College jumped from 367 to 709.[9] This increase may be explained, in part, by increased costs in private colleges and by the desire for short-term premarital vocational training by today's young woman.[10]

While the personal data folders in the counseling office showed the two total groups were alike in being full-time students of the normal junior college entrance age,[11] they also showed that the socio-economic background as determined by the father's occupation of the two groups was similar. Table III shows that fathers of these junior college students were, for the most part, engaged in clerical, skilled, or semi-skilled labor occupations. In most cases, these women would not have been continuing their higher education if the free public junior college had not been available.

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[9]City College of San Francisco, Registrar's Office, Statistical Records.

[10]Audrey K. Wilder, "Something of Value", Journal of the American Association of University Women, Vol. 52, No. 1, October, 1958, p. 15-17.

[11]Mean Age of Catholic high school women: 17.49; mean unit semester load: 13.94; mean age of public high school women: 17.35; mean unit load: 14.0.

Table III.- Socio-economic status[a] of the subjects of this study as indicated by the occupational level of the father.[b]

Occupational Level of Father	Percentage of High School Graduates	
	Catholic	Public
Professional	5	5
Proprietors - managers	13	12
Clerks - commercial	32	26
Skilled workers - foremen	32	35
Semi or unskilled workers	18	22

[a]City College of San Francisco, Personal Data Folders, Counselors' Files.

[b]The occupational division for the socio-economic status groups is that used by Gillenthien in her study at the University of Chicago, Op. Cit., p. 37.

4. Tests of the Equivalency of the Groups.

The data presented in Table IV serve as evidence of the similarity in the A.C.E. performance of the paired groups. This table shows that there were small numerical differences in the "G," "Q," and "L" means and standard deviations of the two groups. These differences, however, were found to be not statistically significant. On the basis of the evidence submitted, it may be said that for each Catholic high school graduate a public high school graduate of approximately the same scholastic aptitude was found. If differences in achievement test performance and scholastic achievement are found between the two groups, they will not be due to scholastic aptitude since it has been demonstrated that the two groups are comparable.

5. Limitations of the Study.

The two types of graduates are compared only on the basis of their secondary preparation for junior college. The effectiveness of preparation here is measured only by the entrance achievement tests and by final grades in the first semester of junior college. No other criteria of junior college success are included. Nor is any account taken of the teacher variable; it will be supposed that the two groups are equally affected by the high and low marking

Table IV.- Comparison of the G.Q.L. performance of the Catholic school group and the paired public school group in the A.C.E. Psychological Examination for College Freshmen.[a]

Scores on A.C.E.	Catholic High School	Public High School	Critical Ratio of Difference
Gross			
Mean	82.64	82.94	.12[1]
Standard Deviation	19.90	19.84	.03[1]
Quantitative			
Mean	31.54	31.88	.26[1]
Standard Deviation	10.33	9.40	1.04[1]
Linguistic			
Mean	51.10	51.22	.07[1]
Standard Deviation	12.44	12.61	.14[1]

[a]City College of San Francisco, Testing Office Data.

[1]Not statistically significant.

practices of the junior college faculty.

This study includes no data concerning the native ability of the students before they entered their two types of high schools. Lacking this information, it will be impossible to determine to what degree scores on the A.C.E. are due to native ability and to what degree they are due to the influence of the high school, since both these factors contribute to the student's score on the examination.

6. Major Areas of Enrollment of Women in the Sample Groups.

As mentioned earlier, the final variable for pairing the subjects of this study was curriculum. The three areas of curricula have already been described as university-college, terminal, or general college. With each woman from a Catholic girls' high school, a public school woman in the same curriculum with comparable scholastic aptitude was paired.

Students select their curriculum at a counseling interview in which entrance test scores, high school records, personal and parental aspirations, work opportunities, and prerequisites are considered. This method of curriculum selection results in a curriculum group, rather homogeneous in scholastic aptitude and motivation in each of the three areas.

Thirty-one per cent of the Catholic high schools' graduates in this study were enrolled in the university-college curriculum; 43 per cent were enrolled in the terminal or semiprofessional curriculum; and 26 per cent in the "general college" program. This selection of curricula approximates that of the 489 freshmen women in the report made by the Testing Office of City College in February, 1957. Twenty-eight per cent were listed as in the university-college curriculum; 41 per cent were in the terminal curriculum; and 31 per cent were in the "general college" program.[12] It seems then that girls' Catholic high school graduates enroll in the three junior college curricula in about the same percentage as do other junior college women.

Table V shows the curriculum of enrollment of the Catholic and public high school groups and the scholastic aptitude of these groups. This table also serves as additional evidence of the similarity in scholastic aptitude of the paired groups to be studied.

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[12]Thomas Nesbit, Compilation of Findings, Op. Cit., p. 1.

Table V.- Junior college curricula selected by Catholic and paired public high school graduates with the mean A.C.E. scores and standard deviation of each curriculum group.[a]

Curriculum	Number	Mean		Standard Deviation	
		Catholic High	Public High	Catholic High	Public High
University and College	38	94.81	94.81	14.71	15.09
Terminal	52	84.26	84.38	19.62	19.84
"General College"	32	65.56	66.50	12.24	12.20

[a]Computed from City College of San Francisco Testing Office data.

7. Test of Representative Character of the Sample.

In order to learn whether the women students from Catholic high schools in the sample were similar in scholastic aptitude to other urban junior college women from Catholic and public high schools, the investigator compared (Table VI) the mean A.C.E. gross scores of this group with:

1. The mean gross A.C.E. scores of a sampling[13] of women graduates of Los Angeles girls' Catholic high schools who entered Los Angeles City College, a comparable urban junior college, in September, 1956.

2. The mean gross A.C.E. scores of Fall, 1955 full-time women students from the comprehensive public high school which sends the largest number of students to City College.[14]

3. The mean gross A.C.E. scores of the 233 other public high school women entrants of San Francisco who completed the Fall, 1955 semester as full-time students at City College.

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[13]Scores secured from the Director of Testing, City College of Los Angeles.

[14]George Washington High School, women not in the sample group (Table II, p. 41).

Table VI.- A comparison of the performance of the Catholic high school group and other groups of junior college freshmen in the A.C.E. Psychological Examination for College Freshmen.[a]

1955-1956 San Francisco Catholic High Women N = 122	1956 Los Angeles Catholic High Women N = 48	San Francisco Public Comprehensive Women (1955) N = 55	Fall, 1955 City College Women Entrants N = 233
Mean 62.54	78.18	83.42	80.03
Standard Deviation 19.90	21.95	21.90	26.91
Critical Ratio of Difference between San Francisco Catholic High and other groups in:			
Means	1.21*	.23*	1.03*
Standard Deviations	.79*	.82*	3.94

[a]City College of San Francisco and City College of Los Angeles, Testing Office data.

*Differences are not statistically significant at the 1 per cent level. However, 3.94 is significant at the 1% level.

From Table VI, the results seem to indicate that the Catholic high school group in the sample is comparable in scholastic aptitude to other groups of Catholic and public high school women attending urban junior colleges in California. Since the public high school paired group - paired one for one with the Catholic high school graduates in the sample - appears to be equivalent to the Catholic high school group as shown in Table IV; it, too, would be comparable in scholastic aptitude to other groups of Catholic and public school graduates attending public urban junior colleges in California.

Since the Educational Testing Service has published norms for females based on the results of administration of the American Council on Education Psychological Examination in junior colleges throughout the United States, it is felt that a comparison of the mean scores of the Catholic high school group and the national junior college norm[15] group would lead to a better understanding of the Catholic high school group. Table VII presents this comparison.

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[15]Cooperative Test Division, Education Testing Service, American Council on Education Psychological Examination for College Freshmen: Norms Bulletin, 1952 edition, Princeton, N.J., 1953, p. 12-15.

Table VII.- A comparison of the A.C.E. "Q" and "L" performance of the Catholic high school graduate with that of the national junior college female norm group of 1952.

San Francisco Catholic High School Graduates (122 women)[a]		Junior College Norms (2,925 women) (National)[b]	Critical Ratio of Difference
Q Scores			
Mean	31.54	34.50	3.09*
Standard Deviation	10.33	10.66	.48
L Scores			
Mean	51.10	58.53	6.36*
Standard Deviation	12.44	16.49	4.95*

*Significant at the 1 per cent level.

[a]City College of San Francisco, Testing Office Data.

[b]Cooperative Test Division, Op. Cit., p. 12-15.

It appears from Table VII that the Catholic women in the sample group have lower mean scholastic aptitude scores than do the women in the national norm group of junior college women. The difference in the mean linguistic scores was greater than in the mean quantitative scores. In explanation, it might be argued that the junior college norms[16] were established on schools with emphasis on the liberal arts curriculum.[17] When the Catholic high school group was divided by curricula, the thirty-eight women enrolled in the university-college program (the liberal arts curriculum) had a mean score of 58.52 on the linguistic division of the American Council on Education Psychological Examination for College Freshmen. From observation, it can be said that the L aptitude of the Catholic high school graduates in the university-college curriculum is similar to the L aptitude of the national junior college woman of the norm group.

Additional information on entrance test performance by junior college women is found in the 1952-1953 report of the California Junior College Association Committee on

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[16] Norms Bulletin, Op. Cit., p. 21-26.

[17] The junior colleges listed are so described in Jesse P. Bogue, American Junior Colleges, Washington, D.C., American Council on Education, 1956, various pages.

Evaluation and Testing.[18] Data for this report were furnished by thirteen medium sized California junior colleges. Reports of norms by curriculum[19] of enrollment were made in round numbers; no standard deviations were given. While the entrance test data of this project are insufficient for a statistical comparison of the performance of the women in this norms project with the women in the sample group, Table VIII lists the norms of the sample group and of large junior college women's groups for purposes of observation.

Examination of Table VIII seems to point out that both the Catholic and public high school groups of two curricula in the sample are rather similar to other California junior college women of the same curricula in scholastic aptitude and basic English skills.

To test further the representative character of the Catholic high school group - the performance of whom is the matter of chief interest in this study - the total

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[18] J.W. McDaniel, chairman, Committee on Testing and Evaluation, California Junior College Association, California Junior College Norms Project, 1952-1953, Educational Testing Service, Cooperative Test Division, Los Angeles, California, (no date), 8 p.

[19] Two divisions of curricula listed in the Norms Project were similar to the curricula divisions of City College; the third, a technical division, is handled by trade schools of San Francisco.

Table VIII.- Norms of entrance test scores of the Catholic high school group, the paired public high school group and women in the California Junior College Norms Project, 1952-1953, in two curricula.

Catholic High School Graduates		Paired Public High School Graduates	Junior College Women of the Norms Project[a]
University and College (N. 38)			
A.C.E. Gross Mean	94	94	97 (N. 968)
Cooperative English Reading Mean	53	54	53 (N. 322)
Mechanics of Expression Mean	55	54	51 (N. 322)
Terminal (N. 52)			
A.C.E. Gross Mean	84	84	85 (N. 648)
Cooperative English Reading Mean	49	49	47 (N. 223)
Mechanics of Expression Mean	49	50	47 (N. 223)

[a]California Junior College Norms Project, 1952-1953, Op. Cit., p. 6, 8, 10.

grade point average[20] of this group at the end of the first semester was compared with the first semester total grade point average of 233 full-time public high school women, who were not members of the paired group. The grade point averages of these 233 public high school women were also compared with the grade point averages of the paired public high school women of the sample group.

From Table IX it appears that neither the Catholic high school women nor the public high school women of the sample performed differently from another large group of public school women entrants to City College in Fall, 1955. It seems safe to say that the sample group achieved in the first semester of the junior college as did other women in their first semester in a large urban junior college.

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[20]Grade point averages are computed by dividing the total number of grade points by the number of units carried. Grade point values used in California public colleges follow:

A four points per unit.
B three points per unit.
C two points per unit.
D one point per unit.
F 0 points per unit.

Table IX.- A comparison of the first semester grade point average of the Catholic and paired public school groups of this study with the grade point average of Fall, 1955 public school women entrants to City College.[a]

Unselected Fall, 1955 Women Entrants to City College N = 233		San Francisco Catholic High School Women N = 122	Paired Public High School Women N = 122
Mean	2.30	2.24	2.35
Standard Deviation	.66	.63	.53
Critical Ratio of Difference between Fall, 1955 and other groups in:			
Means		.85[1]	.85[1]

[a]City College of San Francisco, Registrar's Office.

[1]Not statistically significant.

8. Chapter Summary.

This chapter listed the criteria on which graduates of the girls' Catholic high schools and the girl graduates of the public high schools who are the subjects of this study were paired: Gross, Linguistic and Quantitative scores on the American Council of Education Psychological Examination for College Freshmen and curriculum of enrollment at San Francisco City College. It noted that the subjects of this study appeared to be similar to other urban junior college enrollees in scholastic aptitude as measured by Gross A.C.E. scores; and in achievement as evidenced by semester grade point averages; and in selection of junior college curricula.

It gave reasons for pairing as the procedure for securing a more exact equivalency of groups and explained the pairing procedure used to equate the groups to be studied. It also showed that the paired groups appeared to be comparable in scholastic aptitude.

It likewise noted that the total groups were matched as to normal junior college age level, unit load, and socio-economic background.

CHAPTER V

ANALYSIS OF THE DATA.

The sources of the data treated in this chapter have already been described.[1] A complete summary of these data gathered on the performance of graduates of girls' Catholic high schools and the paired public high school women graduates appears in Appendix 1. This chapter presents an analysis of these data which were obtained to answer the questions: "How does the achievement of graduates of girls' Catholic high schools in California urban junior colleges compare with the junior college achievement of public high school women graduates of comparable scholastic aptitude? Was that achievement significantly different?". It was felt that if these questions were answered, a contribution might be made towards evaluating the secondary education of Catholic high school trained women in California urban junior colleges.

1. Comparison of Performance on Entrance Achievement Tests.

The first hypothesis of the study: that women graduates of Catholic and public high schools of comparable scholastic aptitude do not differ in their performance on junior

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[1]Chapter III, p. 30-33.

college entrance achievement tests in basic mathematics, reading comprehension, and mechanics of English expression will be examined in Table X. The Basic Mathematics Test was administered at City College of San Francisco from 1935-1958; the Cooperative English Tests: Reading Comprehension and Mechanics of Expression are still being administered at City College as part of the entrance test battery.

From Table X it appears that in the California urban junior college the Catholic high school woman graduate performs in approximately the same manner as the public high school woman graduate of comparable scholastic aptitude in the entrance achievement tests in mathematics and English. The mean scores for Basic Mathematics and the Cooperative English Test: Reading Comprehension were slightly higher for the public school graduate, but on the Cooperative English Test: Mechanics of Expression the Catholic school graduate had slightly higher mean scores. When differences were tested, no significant differences were found in either the means or the standard deviations of the tests. The results as shown by this table seem to support the hypothesis that women graduates of similar scholastic aptitude from both types of schools perform in approximately the same manner on entrance achievement tests.

Table X.- Comparison of entrance test performance in Basic Mathematics, Reading, and Mechanics of Expression of the Catholic high school group and the public high school group.[a]

Tests		Catholic High School	Public High School	Critical Ratio of Differences
Basic Mathematics	Mean	16.96	17.13	.24[1]
	S.D.	5.96	4.98	1.95[1]
Reading Comprehension	Mean	49.83	50.07	.24[1]
	S.D.	7.51	7.28	.33[1]
Mechanics of Expression	Mean	47.72	47.18	1.46[1]
	S.D.	9.13	9.48	.42

[1]Not statistically significant.

[a]Computed from City College of San Francisco, Testing Office Data.

In the Basic Mathematics Test both Catholic and public high school trained women fell below the "cut-off" or mean score established in Fall, 1950[2] by the City College Testing Office on 2,212 men and women. The Catholic high school trained women also seemed to perform on this test in much the same way as 678 unselected women students entering City College in Fall, 1954. The difference in their respective mean scores of 16.96 and 16.12, as shown in Appendix 5, were not found to be statistically significant. These falling below the "cut-off" score of 20 were compelled to enroll in remedial mathematics.

It is interesting to note, too, the mean scores of the Catholic high school women and those of an unselected group of 1,138 entering women students at City College in Fall, 1956 and Spring, 1957 on the Cooperative English Test as reported in Appendix 5. The difference in the respective norms of the two groups on Reading Comprehension of 49.83 and 49.50 were found not to be statistically significant, but the difference in the respective norms on Mechanics of Expression of 49.72 and 46.28

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[2]Chapter IV, p. 29.

were found to be statistically significant.[3]

2. Comparison of First Semester Performance.

While the offerings of City College are broad, women students in the sample studied selected similar courses within their curriculum of enrollment to prepare for the traditional careers of women in the world of economics. Since the students were paired on the basis of curriculum of enrollment, as well as on scholastic aptitude, it seems safe to say that neither group had an advantage in the selection of courses or teachers. All were aware that a 2.00 grade-point average must be maintained for graduation. Both groups lived with their families in homes of approximately the same socio-economic level and came to college largely by public transportation. There is

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[3]This report of lower mean scores of this unselected group of entering women on the Mechanics of Expression test conforms with the findings of J.M. McDaniel in his Junior College Norms Project of 1952-1954. After comparing the norms of all the junior college students in the project - men and women - with the national norms on these tests for men's and women's groups of approximately the same linguistic aptitude, he states: "The weakest area among California Junior college students is Mechanics of Expression."

J.M. McDaniel, Chairman, Committee on Testing and Evaluation of the California Junior College Association, California Junior College Norms Project, 1952-1954, Cooperative Test Division, Educational Testing Service, Los Angeles, California, n.d., p. 4.

no reason to believe that either group had any advantage in earning its grade-point average.

A series of tables follow for the examination of the second hypothesis of this study that women students who are comparable in scholastic aptitude when entering junior college achieve similar academic success in their first semester of junior college education, regardless of whether their secondary work was provided in a Catholic high school or in a public high school.

The first step in the comparison of the academic performance of the paired groups - as measured by their first semester grade-point averages- was the calculation of the total grade-point average of each of the groups. The second step was the statistical treatment of these grade-point averages and the comparison of the mean and standard deviation of each so as to determine the significance of any differences found.

Table XI presents the results of the treatment of the data collected on the overall performance of the paired groups in their first semester of junior college.

Table XI shows that the mean performance of the paired groups was above 2.00 (C average), the average grade required for graduation from junior college. The

Table XI.- Comparison of the total grade-point average of the Catholic high school graduate and the public high school graduate (122 paired cases), First Semester.[a]

Catholic High School		Public High School	Critical Ratio of Difference
Mean	2.24	2.35	1.47*
Standard Deviation	.63	.53	1.97*

*Not statistically significant.

[a]City College of San Francisco, Records Office Data.

range - plus or minus one sigma - of the Catholic high school group was from 1.61 to 2.87 and of the public high school group from 1.82 to 2.88 in the first semester. A further study of the actual distribution[4] shows that forty and thirty-seven of the respective groups fell below 2.00 (C average); and that sixteen of the Catholic high school group and twenty of the public high school group achieved a 3.00 (B average) or above. In a five-point scale such as the one used at City College, this would indicate a rather heavy concentration of both groups in the C area at the expense of the A and B areas in comparison with the normal distribution.[5]

Table XI also shows that the public high school group had a slightly higher mean score (2.35) than the Catholic high school group (2.24). This difference when tested produced a critical ratio of 1.47 which is not statistically significant at the 1% level. Variability in performance of the two groups also appeared to be similar.

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[4]Appendix 1.

[5]C.W. Oder, "Marks and Marking Systems", Encyclopedia of Educational Research, rev. ed., edited by Walter S. Monroe, New York, Macmillan, 1950, p. 712.

Reasons for the choice of the first semester records as the basis for the comparison of grade-point average performance have already been discussed.[6] However, to note whether a second semester of college adjustment changed the relationship of the two groups in mean grade-point performance, a comparison of the overall grade-point average and the total grade-point average by curricula of the 104 Catholic high school graduates and the 97 public high school graduates of the sample groups who returned for a full-time City College program the second semester was made. These groups were not paired; but the returning students were members of the original sample group.

Table XII presents the findings on overall academic achievement by the representatives of the two groups who returned to City College for a second semester.

The overall average of these unpaired groups was 2.15 for the Catholic high school group and 2.29 for the public high school group. These mean scores when tested did not differ significantly as Table XII shows.

As was mentioned previously, one of the criteria for pairing the members of the sample was curriculum of enrollment. To determine whether the paired groups of the sample differed one from the other in their scholastic

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[6]Chapter III, p. 34.

Table XII.- Comparison of the total grade-point average of the Catholic high school graduate (104 cases) and the public high school graduate (97 cases who remained in college a second semester).

Catholic High School		Public High School	Critical Ratio of Difference
Mean	2.15	2.29	1.66[1]
Standard Deviation of C.H.S. and P.H.S.	.63	.63	0.00

[1] Not statistically significant.

performance in their own curriculum, Table XIII was set up.

Again, as Table XIII seems to indicate, no significant differences were noted in the first semester performance of the Catholic and paired public high school groups within their own curriculum. In addition, it is interesting to observe that the mean average of the Catholic high school group in the university and college curriculum was 2.13 while that of the public high school group was 2.36. The differences in averages appears not to be statistically significant. However, the Catholic group as a whole did not meet the University of California transfer requirement of 2.30 at the end of the first semester.[7] In the second semester, while there is no significant difference in the mean grade-point averages of the Catholic and public high school students completing that semester, 2.17 and 2.21 respectively, neither group as a whole made the University of California transfer requirement of 2.30. Because a high percentage of the Catholic high school students enrolled in the terminal curriculum, the question arises whether terminal students

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[7]Great attention is paid by California junior colleges and their communities to the evaluation of their schools in the Annual Report to California Public Junior Colleges on the Academic Achievement of Junior College Transfers to the University of California.

Table XIII. - Comparison of the total grade-point average of the Catholic high school graduate and the public high school graduate in the curriculum of enrollment, first and second semester.

	First Semester			Second Semester		
	Catholic High School	Public High School	Critical Ratio of Difference	Catholic High School	Public High School	Critical Ratio of Difference
University[1] and College	(38 cases)	(38 cases)		(34 cases)	(31 cases)	
Mean	2.13	2.36	1.97	2.17	2.21	.26
S.D.	.46	.52		.66	.62	
Terminal[1] Semi-Professional	(52 cases)	(52 cases)		(44 cases)	(41 cases)	
Mean	2.39	2.52	1.00	2.24	2.51	2.00
S.D.	.68	.71		.61	.66	
General College	(32 cases)	(32 cases)		(26 cases)	(25 cases)	
Mean	2.11	2.06	.50	1.99	2.02	.21
S.D.	.47	.38		.57	.42	

[1]Critical ratio of difference in University and Terminal mean scores of graduates of Catholic High School: 2.15 and University and Terminal mean scores of graduates of public high schools, which was: 1.23; not statistically significant at the 1 per cent level.

from either group perform better than do the university and college enrollees in their first semester. The mean scores of Catholic high school women graduates enrolled in the university and college curriculum were compared with the mean scores of Catholic high school graduates enrolled in the terminal curriculum. The same comparison was made for the public high school graduates. In each case the scores of the terminal enrollees were higher, but when these differences were tested, they were found not to be statistically significant for either group.

One unique feature of the junior college is that enrollees are not limited to courses in their major curriculum. Almost always an enrollee will include in her total program some units from the other two curricula for purposes of exploration of other vocational fields in which she might succeed, for purposes of strengthening areas of weakness, or for personal enrichment. Since the four-year colleges to which she may transfer accept most of these supplementary courses for elective credit, and since they can be included in the total units required for junior college graduation, students are encouraged to include these supplementary courses in their programs. One of the purposes of the

Table XIV. - Comparison of the grade-point average of Catholic high school graduates and public high school graduates in courses selected from each of the three junior college curricula by enrollees in each curriculum in their first semester.

Curriculum of Enrollment		Courses Completed in: University and College	Semi-professional	General College*
University and College				
C.H.S.	Mean	2.02 (38 cases)	2.30 (23 cases)	2.61 (30 cases)
	S.D.	.59	.99	.71
	Units (Mean)	8.39	2.82	5.33
P.H.S.	Mean	2.21 (38 cases)	2.60 (13 cases)	2.54 (27 cases)
	S.D.	.70	.92	.68
	Units (Mean)	9.71	3.27	4.59
Terminal or Semi-professional				
C.H.S.	Mean	2.04 (36 cases)	2.40 (52 cases)	2.27 (27 cases)
	S.D.	.42	.83	.46
	Units (Mean)	2.33	9.73	4.37
P.H.S.	Mean	2.16 (43 cases)	2.57 (52 cases)	2.25 (24 cases)
	S.D.	.86	.74	.79
	Units (Mean)	2.93	9.32	4.79
General College				
C.H.S.	Mean	1.73 (32 cases)	1.90 (30 cases)	2.29 (32 cases)
	S.D.	.60	1.04	.53
	Units (Mean)	4.78	2.50	6.90
P.H.S.	Mean	1.70 (31 cases)	1.76 (22 cases)	2.34 (32 cases)
	S.D.	.54	.86	.67
	Units (Mean)	4.03	2.36	6.06

* Footnote 17, page 17 explains this term.

junior college, as was stated previously,[8] is "to provide a program of training and guidance so that every student may discover his aptitudes."

Table XIV illustrates how students in the sample include supplementary courses in their programs for the above purposes.

Even when the performance of the representatives from the two types of schools was refined by courses of enrollment, there appears to be no statistically significant difference in the grade point average of the women from Catholic and from public high schools. The terminal enrollees and the general college enrollees of both groups made their best records in courses in their own curriculum. The general college enrollees, whose college goals are somewhat vague, often insist on "trying" themselves in one or two university-level courses that do not have special prerequisites. The performance of both general college groups was below average in this university-level area. The two university-college groups also seemed to find the university-level courses more difficult than courses in other curricula.

Only in the case of university-college enrollees is a break-down into traditional university subject areas

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[8] McConnell Report, Op. Cit., Chapter III, p. 3.

Table XV.- Comparison of performance in traditional university subject areas by university-college enrollees from Catholic and public high schools.

	Catholic High School Group		Public High School Group	
English[a] (14 C.H.S.; 13 P.H.S.)	Mean	2.10	Mean	2.30
	S.D.	.50	S.D.	.63
Social Science (27 C.H.S.; 16 P.H.S.)	Mean	1.75	Mean	2.06
	S.D.	.47	S.D.	.74
Other Humanities (13 C.H.S.; 23 P.H.S.)	Mean	2.38	Mean	2.34
	S.D.	.75	S.D.	1.03
Science and Mathematics[b] (37 C.H.S.; 30 P.H.S.)	Mean	2.14	Mean	2.13
	S.D.	.54	S.D.	.87

[a]Only this small number elected university-college courses in English.

[b]Since only three students from the Catholic high schools and one student from the public high school elected university-college mathematics, the grade-point averages of these students were included in the science averages.

at all practical.[9] The numbers in these subject areas are small, but Table XV re-emphasizes the similarity in grade-point average of the two groups.

Since the samples in these groups are too small to be adequately descriptive of any population, no test has been made of the differences in mean scores or standard deviations. The lower scores of the Catholic high school group in social science may possibly be explained by the fact that these courses are for the most part purely lecture courses. Women students coming from Catholic high schools would seem to find the adjustment to a lecture method greater than to other types of college teaching.

After examining the overall performance of Catholic and public high school women at the end of their first semester of junior college and that performance when refined by curriculum of enrollment, it seems safe to state that the second hypothesis of this study must be accepted; that women students who are comparable in scholastic aptitude when entering the California urban junior college achieve similar academic success in their first semester of junior college education, regardless of whether that secondary education was provided in a Catholic or in a public high school.

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[9]Subject areas in the terminal curricula overlap. The general college program is still in a developmental stage.

3. Confirmatory Observation.

The relationship of academic achievement to performance on the entrance psychological examination was a major consideration in the related studies in Chapter II. This relationship will be examined in this study also.

Because the policy of the junior college is to help students to help themselves in the choice of a training program suited to their interests and abilities, counselors work with each counselee to develop a college program in which she will have a good chance for some degree of success. This policy makes for rather homogeneous grouping and a more effective instructional program. The result of this policy would, in effect, lower the coefficient of correlation between achievement as expressed in semester grade-point averages and scores on the American Council on Education Psychological Examination taken at the time of junior college entrance (A.C.E. scores).

The purpose of Table XVI is to show just what relationship between grade-point achievement and psychological test (A.C.E.) performance does exist in the junior college group studied.

The correlations of .48 for the terminal Catholic high school graduate and .49 for the terminal public high

Table XVI.- Relationship of the gross A.C.E. scores of the Girls' Catholic High School graduate and the Public High School graduate to the total grade-point average.

	American Council on Education Examination (Gross score)	Grade-point Average	Correlation
University and College			
1. Catholic High School	94.81	2.13	.28
2. Public High School	94.81	2.36	.25
Terminal			
1. Catholic High School	84.26	2.39	.48[1]
2. Public High School	84.38	2.52	.49[1]
General College			
1. Catholic High School	65.56	2.18	.37
2. Public High School	66.50	2.06	.15

[1] Statistically significant at the 1 per cent level.

school graduate approximate the .50 suggested by Cronbach[10] in a summary of studies of the correlation of the A.C.E. and the college grade-point average, and fall within the range of .39 to .60 mentioned by Super[11] in his treatment of the test. The short term goals and higher motivation of the terminal student plus the selection of training suited to her desires may explain this higher correlation. The low correlation of the A.C.E. gross scores and academic performance of the university-college students of both groups indicates that counselors are wise in supplementing the A.C.E. with other data in helping students plan careers.

It appears from the data presented in Table XVI that the gross A.C.E. scores could be used with greater confidence in predicting the academic adjustment of the terminal student than in predicting the academic adjustment of the university-college student regardless of her high school.

The general college group is the group, as was explained previously, that is still in the experimental stage in the junior college. The numerical difference of

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[10]Cronbach, Op. Cit., p. 135.

[11]Donald E. Super, Appraising Vocational Fitness by Means of Psychological Tests, New York, Harper and Brothers, 1949, p. 120.

an r of .37 for the Catholic high school group and an r of .15 for the public high school group was found not to be statistically significant. The critical ratio of difference of r was too small to attain statistical significance.

4. Evaluation of College Adjustment.

In order to assess the feeling of Catholic high school graduates and public high school graduates, a random sampling of fifty graduates of Catholic high schools and fifty graduates of public high schools was asked to check those college adjustment problems of the Mooney Problem Check List that were troubling them at the end of their first semester.

In Appendix 6 is the tally of their responses. The tally indicates that most of their troublesome problems are similar. Catholic high school graduates say they worry less about study habits and time spent on study than do public high school students. Catholic high school graduates also say they worry more about oral reports, speaking up in class, and passing examinations. They seem better satisfied with the program worked out with their counselors than do the public high school graduates.

On the whole, college adjustment problems of the two groups do not explain any difference in performance.

SUMMARY AND CONCLUSIONS

This study was made to compare the achievement of a selected group of urban junior college women in California at their entrance to junior college and at the end of their first semester. The women in this selected group were graduates of Catholic high schools and graduates of public high schools who could be paired with them on specified criteria. Both groups entered junior college in Fall, 1955 and Fall, 1956. The performance of the Catholic high school trained women students was the matter of chief interest. Basically this report was a partial evaluation of the secondary education of these students in so far as it could be measured by their performance in junior college.

The group from girls' Catholic schools was composed of 122 freshmen women students at the City College of San Francisco; the paired group was comprised of 122 freshmen women students who were graduated from San Francisco public high schools. The two groups were paired case for case on the following criteria: Gross, Quantitative, and Linguistic scores on the American Council on Education Psychological Examination for College Freshmen and major curriculum of enrollment in the junior college: university-

college; terminal-semi-professional, general college. The two groups were similar in average age level and unit load and in socio-economic background.

The groups were made up of matched pairs in order to attain as precise equivalence as possible. Data were presented on the performance of other groups of California freshmen junior college women on the American Council on Education Psychological Examination for College Freshmen and on end-of-semester grade-point averages to show that the groups in this study appeared rather comparable to other groups of California junior college women in scholastic aptitude and semester grade-performance. These other junior college women, whose aptitude and performance seemed to be similar to the subjects of this study, were samples from the entering group of girls' Catholic high school graduates in Los Angeles City College, a junior college similar to City College of San Francisco, from other groups of freshmen women in San Francisco City College, and from the thirteen junior colleges participating in the 1952-1953 norms project of the California Junior College Association.

In order to better understand why Catholic high school graduates might differ in junior college performance from public high school graduates of comparable scholastic

aptitude, research was done on how the Catholic high school background differed from the public school background of the women in the sample. San Francisco Catholic high schools were found to be different from the public high schools in that they were more selective in admission and retention policies, smaller, and all female in enrollment; more homogeneous in scholastic aptitude and social-religious background, somewhat less varied in curricula, integrated in curricula by the course in Christian family living, Catholic in the philosophy subscribed to by a faculty composed almost exclusively of members of religious orders of sisters.

A report was also made on City College of San Francisco, the site of this study, its purpose and its functions. These were stated to be the development of vocational competence, preparation for upper division university training, and the personal development of students as responsible and well-informed citizens. Offerings of the junior college were shown to be classified in three curricula: university-college, semi-professional-terminal, and general college. The terminal-semi-professional curriculum, the one selected by the largest group of women entering from the Catholic high schools, was pointed out as being the exclusive province of the public junior college in California higher education.

As a basis for determining the possibility of difference in the achievement of Catholic and public school women graduates paired for scholastic aptitude, the investigator set up two hypotheses which are:

1) That women students of comparable scholastic aptitude achieve similar academic success in their first semester of junior college education, regardless of whether their secondary education was provided in a Catholic high school or in a public high school.

2) That women graduates of Catholic and public high schools of comparable scholastic aptitude do not differ significantly in entrance achievement tests results in basic mathematics, reading comprehension, and mechanics of English expression.

In respect to the first hypothesis, the investigator found that there were no significant differences in mean score or variability:

1. in the total grade-point average of the paired groups of women students for the first semester;

2. in the total grade-point average of the returning second semester women from the Catholic and the public high schools. (This second semester performance of these women students confirms the first-semester findings on grade-point average);

3. in the total grade-point average of Catholic high school women and public high school women enrolled in each of the three junior college curricula in the first semester or of those following these curricula in the second semester;

4. in grade-point averages of Catholic high school graduates and public high school graduates in courses in each curriculum for the first semester.

In the light of the comparisons of grade-point averages the first hypothesis can be accepted. Women from the two types of schools of comparable scholastic aptitude appear, as the above analyses of their grade-point averages would seem to indicate, to achieve similar academic success in the junior college. Since the Catholic high school group and the public high school group were paired in scholastic aptitude as measured by the A.C.E. gross, Q, and L scores and their curriculum of enrollment; since the groups were of the same age level and of the same sex; since they were full-time students, and since they came from the same socio-economic level, their relative performance was not unduly influenced by any of these factors.

The relationship of first-semester academic achievement to performance on the A.C.E. was also examined. The correlation of these two factors was low for groups from

both types of school enrolled in the university-college level and in the "general college" curriculum, but higher for the two groups enrolled in the terminal-semi-professional curriculum.

Scores made by each of the paired groups on the entrance achievement tests of City College of San Francisco - a basic mathematics test with locally developed norms and the Cooperative English Test: Reading Comprehension and Mechanics of Expression - were the data used to check the second hypothesis. These data were also treated by statistical formulae, which were used to interpret the meaning of the scores.

Performance on the basic mathematics test of City College of San Francisco was examined first to determine the possibility of differences of the paired groups in this area at the time of college entrance. From the results of this mathematics test, it appears that these women from Catholic and public high schools, paired for scholastic aptitude, did comparatively poorly.

Only thirty-eight of the Catholic high school women and forty of the public high school women passed the entrance test. Eighty-four and eighty-two respectively of the two groups were required to include remedial mathematics in their first or second semester's program. The paired

groups made numerically better scores than did all City College entering women of 1954, whose test results were also examined, but the Catholic high school group was not significantly better. The mathematics weakness of both groups is responsible for the fact that only four of the 244 subjects enrolled in university parallel mathematics in their first semester.

Next, performance on Cooperative English Tests was analyzed. In a statistical analysis of the test scores in Reading Comprehension, no significant differences appeared in the mean performance or the variability of the Catholic high school graduate and the paired public high school graduate. Women of comparable scholastic aptitude from Catholic and public high schools read at about the same level in the junior college. This level was comparable to the reading level of an unselected group entering City College in Fall, 1956 and Spring, 1957, whose norms were compared with those of the Catholic high school group. As was noted in the test of the representative character of the sample,[1] women of the junior college norms project in the university-college and terminal curricula made slightly higher average scores on Reading Comprehension than did the subjects of this study

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[1]Chapter IV, p. 55.

in those curricula. It was not possible, however, to test the significance of that difference.

In the Cooperative English Test on Mechanics of Expression the Catholic high school group made numerically higher mean scores than did the paired public school group, but when this difference was tested, it was found to be not statistically significant. The Catholic high school group made significantly higher scores than the women entering as freshmen at City College in 1956 and 1957, whose norms were also analyzed, and higher scaled scores than did the junior college women of the norms project in similar curricula whose scores were listed but which could not be analyzed for statistical differences because of insufficient data.

From the examination of data used to check the second hypothesis of this study, it may then be said that graduates of Catholic and public high schools of comparable scholastic aptitude in a large urban junior college do not appear to differ in their performance in the junior college entrance test battery in basic mathematics, or in the Cooperative English Tests: Reading Comprehension and Mechanics of Expression.

The results of the testing of these hypotheses provide measured evidence that graduates of church-supported

(Catholic) high schools perform approximately as well as do the graduates of public high schools of comparable scholastic aptitude in this urban junior college. In so far as their secondary education can be measured by performance in the junior college, graduates of girls' Catholic high schools and graduates of public high schools, comparable in scholastic aptitude, are equally prepared for junior college.

This study provides measured evidence of the similarity of the performance of Catholic and public high school women graduates of comparable aptitude, to those who ask, "Can the church-supported schools justify their existence in those areas of instruction also served by the public schools?" These questioners will be able to note that the women graduates of church-supported (in this study, Catholic) high schools achieve at least equally as well as graduates of public high schools of comparable ability in the junior college.

In testing the hypotheses of this thesis, several implications were suggested. These implications are relative to the characteristics of the type of woman attracted to the junior college from Catholic high schools, curriculum of greatest appeal and success, and strength and weakness in preparation.

In light of data shown in Appendix 1 it would seem that few women of the highest scholastic aptitude from Catholic high schools were attracted to the junior college in 1955 and 1956; presumably those women were in the one-third to one-half of college-bound students electing a Catholic college or the University of California. Those high school graduates who did enroll in the junior college and who qualified for the university-college curriculum took about half their program in university-level courses. This balancing of their programs with supplementary courses reflects the junior college policy of encouraging students to explore their aptitudes and interests and to strengthen areas of weakness. It also explains why the junior college appeals to certain university-bound Catholic high school women graduates.

The junior college curriculum in which the largest number of Catholic high school women enrolled was the terminal-semi-professional curriculum. Here the correlation of scholastic aptitude and course performance, as measured by the A.C.E. and end-of-semester grade-point averages was higher than in other curricula. Short-term goals, high motivation, plus the selection of training suited to the pressure of immediate needs undoubtedly explain the higher correlation in performance and the absence

of tendencies to explore other areas. Two-thirds of the units carried by these women were in their major field: business, dental assisting, commercial art, merchandising, or recreational leadership. Since the junior college offers an opportunity to broaden one's background by taking some courses in areas of the humanities or science, perhaps some counseling should be done in either the Catholic high school or junior college to encourage these terminal enrollees to add more courses for personal enrichment to their vocational program.

As has been mentioned earlier, the general college enrollee in the Catholic as well as the public high school group with a fairly low A.C.E. gross score was not too realistic about her goals. She succeeded in making a "C" average only in the courses at her level. She persisted[2] in her second semester about as well as the enrollees in the other two curricula which indicates that she felt enough success to remain in college. There is some implication that courses designed especially for this level might give the student a false degree of success; on the other hand, these courses might draw out hidden potentialities.

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[2]Table XIV, p. 72.

Results in presented tables[3] seem to point to a need for more intensive preparation of both the Catholic and public high school women graduates in basic mathematics. In all girls' schools, like the Catholic high schools in this study, perhaps some experiments could be made with texts and curricula in mathematics that are particularly slanted to women's mathematical needs and interests. With the current emphasis on the importance of mathematical skills, programs for their strengthening are probably already under way. One other implied need for the Catholic high school graduate is more training in the taking of lecture notes and techniques of studying those notes. This kind of preparation would include training in listening, in recognising what is important, and in developing good habits of independent study.

Since basically this study is an evaluation of California secondary education in girls' Catholic high schools in so far as it can be measured by performance at the urban junior college level, other avenues of evaluation of this secondary education might be made. Performance of these women graduates might be observed in the Catholic colleges or secular universities as Siegfried[4] in his 1955

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[3]Tables X and XIX.

[4]Paul Siegfried, Op. Cit., p. 5.

Yale study observed the performance in Jesuit colleges of male graduates of Catholic high schools, especially of Jesuit high schools. Other studies might be made of girls' Catholic secondary education with regard to other criteria such as success in the world of work.

BIBLIOGRAPHY

Archdiocese of San Francisco, Department of Education, Administrative Handbook for Elementary and Secondary Schools, San Francisco, 1956, 77 p.

"Bible" of rules for the conduct of Catholic Schools in San Francisco.

Archdiocese of San Francisco, Department of Education; and Student Division, California Department of Employment, San Francisco, Report of After Graduation Plans of San Francisco Catholic High School Seniors, 1954-1957, San Francisco, 4 p.

A survey of after graduation plans of high school seniors. Shows sharp growth of numbers planning to attend the junior college, City College of San Francisco.

Association of Secondary School Principals, Handbook for Catholic Secondary Schools Archdiocese of Los Angeles, California, 1952, 81 p.

A handbook to which administrators of the San Francisco Catholic schools refer for a statement of their philosophy, standards, and policies. Particularly valuable for the statement of Catholic philosophy.

Batmale, Louis F., Achievement in College of Students Graduated from High School on the Basis of Performance in the General Educational Development Tests. Unpublished Doctor of Education Dissertation, University of California, Berkeley, California, 1954, 182 p.

A paired study of two groups of college men from a population similar to that of the present study. Special value for techniques of pairing on the basis of the G.E.D.

City College of San Francisco, Application for Accreditation by the Western College Association, San Francisco, October, 1956, 150 p.

A complete description of every phase of the operation of the City College of San Francisco.

City College of San Francisco, Circular of Information and Announcement of Courses, San Francisco, 1955-1956, 1956-1957, 158 p.

Official statement of College regulations and course descriptions.

Cooperative Test Division, Educational Testing Service, Manual of Instructions, American Council on Education Psychological Examination for College Freshmen, 1949 edition, Princeton, New Jersey, 7 p.
Valuable for statement of A.C.E. objectives.

Cooperative Test Division, Educational Testing Service, Norms Bulletin, American Council on Education Psychological Examination for College Freshmen, 1949 and 1952 ed., Princeton, New Jersey, 1950 and 1953, 23 p. and 26 p.
Source of data on norms for national junior college women.

Gillenthien, Elvira J., Comparative Success of Public and Private Secondary School Graduates in the University of Chicago, Unpublished Doctor of Philosophy dissertation, University of Chicago, August, 1941, 230 p.
A rather ponderous and not too well organized study of public and private school graduates of twenty years ago. Definitely slanted toward the public schools. Has some data on Catholic school graduates of that era.

Koos, Leonard V., Private and Public Secondary Education, A Comparative Study, Chicago, Illinois, University of Chicago Press, 1931, 228 p.
Particularly relevant to this study for appraising the performance of Catholic high school women of thirty years ago in a four year college.

Leonard, J. Paul; Pooley, Robert C.; Stroud, J.B., "Review of the Cooperative English Test", in Oscar Buros (ed.), The Third Mental Measurements Yearbook, New Brunswick, New Jersey, Rutgers' University Press, 1949, p. 221-223; p. 525-526.
Appraisals by leaders in the field of English teaching. Essential for information on these tests, not otherwise available.

McConnell, T.R., (Chief Consultant), Draft of a Restudy of the Needs of California in Higher Education, Sacramento, California. California State Department of Education, February, 1955, 472 p.
An exhaustive report to the liaison committee of the Regents of the University of California and the State Board of Education surveying present status of all branches of state-supported higher education and predicting future trends.

McDaniel, J.W.,(Chairman), Committee on Testing and Evaluation, California Junior College Association, California Junior College Norms Project, 1952-1953, Educational Testing Service, Cooperative Test Division, Los Angeles, California, n.d., 8 p.

Data compiled from test scores of students in 13 California Junior Colleges on the A.C.E. and Cooperative English Test. Norms are reported by sex and curriculum. Conclusions drawn by the committee after a study of these norms is particularly valuable.

Monroe, Walter L. and Engelhardt, Max D., The Scientific Study of Education, New York, Macmillan Co., 1936, 504 p.

An excellent reference explaining the pairing procedure for precise equivalence.

O'Dowd, James T., Standardization and Its Influence on Catholic Secondary Education in the United States, Washington, D.C., Catholic University of America, 1935, 151 p.

Shows how secular standardizing agencies have shaped the standards and policies of the Catholic schools.

Siegfried, Paul V., The College Achievement of Jesuit High School Graduates, unpublished Doctor of Philosophy dissertation, Yale University, New Haven, Conn., June, 1955, 117 p.

Most valuable for recent findings on the performance of male Catholic and public high school graduates in the first year of college.

University of California, Annual Report to California Public Junior Colleges on Academic Achievement of Junior College Transfers to the University of California, Berkeley, Office of Relations with Schools, January 14, 1952, 10 p.

Practically an evaluation of the lower division program of junior colleges that send transfers to the University of California.

APPENDIX 1

DATA COLLECTED ON WOMEN GRADUATES OF CATHOLIC AND PUBLIC HIGH SCHOOLS

Appendix 1 contains the data collected on graduates of girls' Catholic high schools and public high schools. The paired cases are numbered one through one hundred and twenty-two. The Catholic high school graduates' data are recorded first; directly under those data are the data for the paired public high school graduates.

The data in columns one through fifteen are as follows:

Column 1. Pair
2. Age
3. Socio-economic status (Soc.Econ.Stat.)
4. High School Curriculum (H.S.Cur.)
   Code Number
   1. University preparatory
   2. General course
   3. Business course
5. College Curriculum (Col.Cur.)
   Code Number
   1. University Parallel
   2. Terminal or Semi-professional
   3. General College
6. American Council on Education Psychological Examination. A.C.E. Gross (G.R.)
7. Quantitative (Quan.)
8. Linguistic (Ling.)
9. Basic Mathematics (Basic Math)
10. Cooperative English Tests, Reading Comprehension (Read.)
11. Cooperative English Tests, Mechanics of Expression (Engl.Mech.)

Column 12. Grade Point Average First Semester (Gr.Pt.Av.1st Sem.)
13. Grade Point Average Second Semester (Gr.Pt.Av.2nd Sem.)
14. First Semester Average 1st Semester English (Engl.)
15. First Semester Average 1st Semester Basic Mathematics (Basic Math)

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
1.	17	4	1	1	140	57	83	33	61	62	3.48	2.78	-	-
	18	2	1	1	143	58	85	29	68	63	3.45	3.34	-	-
2.	17	3	1	1	135	55	80	35	66	69	1.78	3.07	4	-
	18	4	1	1	133	51	82	28	63	59	2.81	2.52	2	-
3.	17	2	3	2	120	47	73	22	60	52	2.57	2.32	3	-
	17	3	1	2	124	49	75	29	61	63	3.15	2.82	-	-
4.	19	4	2	2	120	37	83	15	55	59	2.81	3.00	3	-
	17	4	2	2	120	41	79	24	63	53	2.45	----	1	-
5.	17	3	1	2	115	50	65	26	54	52	2.24	2.03	3	-
	17	4	3	2	117	52	65	20	52	55	3.00	2.46	2	-
6.	17	3	3	1	113	42	71	14	23	56	2.06	2.30	2	3
	17	3	1	1	111	40	71	13	55	55	2.44	2.00	-	-
7.	17	4	3	1	113	43	70	27	65	55	2.18	2.17	1	-
	17	5	1	1	111	41	70	23	59	56	2.20	----	-	-
8.	19	3	1	2	112	41	71	25	57	65	3.00	2.65	-	-
	18	3	1	2	110	42	68	20	53	54	3.21	3.41	-	-
9.	18	3	1	2	111	42	69	26	52	58	3.18	----	4	-
	17	3	2	2	114	41	73	24	56	66	3.45	3.70	3	-
10.	17	4	1	2	110	40	70	16	61	62	2.51	3.21	3	2
	18	-	1	2	113	43	70	23	61	63	3.45	3.06	4	-
11.	18	4	1	2	110	45	65	25	58	66	3.51	3.27	4	-
	18	5	2	2	109	45	64	17	58	54	1.68	2.30	4	2
12.	18	4	3	1	109	48	61	21	47	51	1.70	2.52	2	-
	17	5	3	1	113	48	65	25	51	57	2.34	1.67	2	-
13.	17	5	3	2	109	50	59	27	53	54	2.06	2.36	2	-
	18	4	3	2	110	54	56	22	51	51	2.22	3.40	-	-
14.	18	1	1	2	109	48	61	21	53	61	3.67	3.61	3	-
	17	1	1	2	107	47	60	26	55	53	3.21	3.04	3	-

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
15.	18	4	3	1	108	40	68	15	54	61	1.92	----	3	2
	18	3	1	1	104	38	66	23	54	61	2.39	2.23	3	-
16.	17	3	3	1	107	40	67	22	58	55	2.04	2.08	2	-
	17	3	1	1	107	40	67	23	61	64	3.10	2.55	3	-
17.	17	3	3	1	105	45	60	20	77	66	3.19	3.27	-	-
	17	5	3	1	109	46	63	21	53	62	1.93	----	-	-
18.	17	4	1	1	105	45	60	29	60	57	2.44	1.88	3	-
	17	2	1	1	109	47	62	24	53	59	2.33	2.38	2	-
19.	18	5	1	2	104	42	62	25	53	62	3.32	----	3	-
	17	4	3	2	104	40	64	16	54	46	1.62	3.68	1	1
20.	17	4	3	2	104	43	61	25	64	63	3.16	3.00	3	-
	17	4	2	2	102	44	58	23	54	48	2.17	2.33	2	-
21.	17	-	1	2	102	36	66	16	52	51	2.52	1.57	3	2
	17	4	2	2	103	34	69	20	51	54	2.90	3.32	3	-
22.	18	3	1	2	102	29	73	19	56	65	3.88	2.97	4	4
	18	4	3	2	103	28	75	26	77	57	1.49	1.33	0	-
23.	17	3	2	1	101	40	61	22	52	46	1.39	1.56	0	-
	17	3	3	1	101	38	63	23	53	48	2.58	2.93	3	-
24.	18	3	1	1	99	35	64	19	61	64	1.87	1.00	-	-
	17	3	1	1	102	34	68	22	60	55	2.39	3.76	2	-
25.	17	3	3	1	98	36	62	25	53	57	2.34	3.20	-	-
	19	4	3	1	99	36	63	17	55	50	2.42	2.32	2	1
26.	18	2	3	2	98	44	54	20	60	42	1.17	2.15	2	-
	17	-	2	2	97	44	53	21	53	53	2.42	2.61	3	-
27.	18	4	3	1	98	38	60	17	49	64	2.90	----	3	-
	17	1	3	1	97	34	63	12	59	51	1.69	1.54	2	2
28.	17	4	1	1	97	37	60	20	54	41	2.00	2.37	2	-
	18	-	1	1	97	39	58	22	54	44	1.44	----	1	-

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
29.	18	3	1	2	97	29	68	19	54	56	2.89	2.91	2	3
	18	1	3	2	96	28	68	16	60	69	3.39	2.83	2	2
30.	18	3	1	2	97	35	62	19	57	55	2.86	2.18	3	4
	18	3	2	2	93	33	60	15	62	42	1.85	2.00	1	1
31.	18	4	3	2	96	37	59	22	54	55	1.45	2.17	-	-
	18	3	2	2	97	35	62	24	50	61	3.94	3.67	4	-
32.	17	3	1	1	95	37	58	16	50	58	2.20	1.63	4	2
	17	2	1	1	94	38	56	25	55	51	2.35	2.42	2	-
33.	17	4	1	1	95	43	52	15	65	57	2.16	2.73	2	2
	17	2	1	1	94	41	53	15	48	48	2.84	2.07	3	-
34.	18	3	3	1	94	39	55	18	47	58	3.04	1.70	4	-
	17	-	3	1	94	36	58	20	54	50	2.10	2.15	-	-
35.	17	-	3	1	93	44	49	17	45	55	1.74	2.03	2	-
	17	4	2	1	91	42	49	16	53	50	2.00	---->	3	2
36.	18	5	3	1	92	44	48	23	50	52	1.57	1.06	3	-
	18	1	1	1	94	47	47	20	55	60	2.51	1.16	4	-
37.	18	2	1	2	91	29	62	11	57	52	2.17	-----	2	4
	17	3	3	2	93	30	63	19	44	48	2.42	-----	2	-
38.	17	3	3	1	91	37	54	15	54	54	2.11	2.29	3	-
	18	4	2	1	91	38	53	9	57	47	2.90	1.28	3	2
39.	17	2	3	2	91	35	56	17	53	44	2.60	-----	2	-
	17	4	1	2	91	34	57	17	49	48	1.90	2.33	3	4
40.	18	3	2	1	91	35	56	15	53	52	2.21	2.89	2	3
	18	4	1	1	90	34	56	19	57	50	3.45	3.06	4	2
41.	17	1	1	1	91	33	58	13	58	58	1.68	0.59	2	2
	17	3	3	1	88	34	53	20	46	48	1.55	1.68	2	-
42.	17	4	1	2	90	36	54	26	51	59	3.81	2.81	4	-
	17	4	2	2	91	34	57	21	58	55	3.83	3.52	4	-

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
43.	17	5	1	2	90	36	54	20	51	63	2.70	----	4	
	18	4	3	2	90	36	54	17	49	51	2.84	2.16	3	3
44.	17	4	1	1	90	44	46	26	49	48	2.56	3.31	4	-
	17	2	1	1	87	41	46	14	50	42	2.09	1.93	3	3
45.	18	4	3	2	90	39	51	14	75	40	1.55	0.58	-	-
	17	4	2	2	87	35	52	16	52	36	1.70	1.58	2	1
46.	17	4	2	2	89	37	52	20	52	41	1.80	1.83	1	-
	18	-	2	2	88	37	51	22	53	53	2.00	2.58	2	-
47.	19	3	1	1	89	30	59	19	59	57	1.61	2.38	2	4
	17	3	1	1	87	26	61	13	59	58	2.52	2.81	2	2
48.	17	3	1	3	89	45	44	29	50	57	1.83	2.64	3	-
	17	3	1	3	86	43	43	22	39	35	1.92	2.88	-	-
49.	17	3	3	1	88	37	51	22	49	47	1.75	1.60	2	-
	17	3	1	1	89	37	52	18	47	45	2.06	2.17	2	3
50.	17	2	1	2	88	22	66	16	59	65	2.55	1.86	3	0
	17	1	1	2	87	23	64	17	55	61	2.13	----	2	2
51.	19	1	1	2	87	33	54	22	55	56	2.62	2.74	1	-
	17	5	2	2	87	30	57	18	57	51	2.06	2.70	2	3
52.	17	4	1	1	87	25	62	10	60	49	1.76	3.18	2	2
	18	4	1	1	87	28	59	17	51	50	1.68	1.84	2	3
53.	18	2	1	1	87	30	57	9	54	53	2.21	2.70	2	3
	18	2	1	1	86	33	53	13	53	60	2.06	2.00	2	1
54.	18	2	3	3	86	36	50	17	47	48	3.04	----	3	3
	17	3	1	3	89	36	53	19	51	45	2.21	2.00	2	3
55.	17	4	1	1	86	22	64	12	51	52	2.29	2.27	2	2
	17	4	2	1	87	24	63	18	55	56	2.14	1.73	2	-
56.	17	4	1	2	86	34	52	16	50	57	2.84	2.21	2	4
	17	3	2	2	85	34	51	17	49	53	3.33	2.91	3	3

Table XVII. - Raw data collected on the experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
57.	17	2	1	1	86	29	57	23	55	54	2.50	2.75	3	-
	17	4	3	1	84	28	56	13	45	36	1.62	0.72	1	1
58.	18	4	2	1	86	20	66	19	56	56	2.26	----	2	2
	19	1	3	1	83	17	66	15	56	44	3.04	2.67	2	1
59.	18	2	1	1	85	43	42	26	49	52	2.15	1.42	3	-
	17	3	1	1	89	43	46	27	53	65	2.42	----	3	-
60.	17	5	1	1	85	32	53	17	48	55	2.54	----	2	-
	18	3	1	1	88	32	56	11	57	46	3.44	2.74	3	2
61.	18	1	3	1	83	32	51	8	49	60	2.35	2.22	2	2
	17	5	3	1	86	31	55	20	52	36	2.24	2.64	3	-
62.	17	4	3	1	83	30	53	14	46	65	2.16	1.76	2	2
	17	2	3	1	80	29	51	14	45	56	1.92	----	0	-
63.	17	5	1	2	82	46	36	22	39	47	2.15	2.00	2	-
	17	3	2	2	86	46	40	22	45	53	2.61	2.52	2	-
64.	17	4	1	1	82	27	55	18	48	51	2.16	1.24	2	2
	17	4	1	1	84	30	54	18	53	59	2.52	1.88	3	4
65.	17	3	3	3	82	32	50	19	51	50	3.19	----	2	3
	18	5	3	3	83	31	52	9	52	35	1.78	1.80	2	3
66.	18	3	3	2	82	36	46	13	44	37	2.84	2.44	2	-
	18	-	3	2	81	37	44	12	45	47	2.59	2.42	3	-
67.	18	1	1	2	81	32	49	21	24	55	2.71	1.70	3	-
	17	4	3	2	83	34	49	14	54	52	2.25	----	1	1
68.	17	3	1	1	81	24	57	11	59	49	2.00	2.24	3	4
	17	3	1	1	82	28	54	17	54	55	2.55	2.55	3	-
69.	17	4	2	2	81	37	44	20	52	48	3.50	2.37	4	-
	18	4	3	2	79	39	40	22	47	42	2.38	----	3	-
70.	18	4	2	2	80	36	44	21	41	45	2.50	2.20	3	-
	18	5	3	2	83	36	47	19	48	45	1.44	----	-	-

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E GR	A.C.E QUAN	A.C.E LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
71.	18	2	1	3	79	31	48	14	45	52	2.53	2.23	3	3
	17	5	2	3	82	30	52	15	56	56	2.38	----	3	-
72.	17	4	1	3	79	24	55	10	55	46	2.21	2.37	1	1
	17	2	2	3	82	25	57	16	54	57	1.79	2.12	1	-
73.	17	1	1	2	79	29	50	19	43	51	3.00	2.83	4	3
	17	5	2	2	78	32	46	18	46	52	3.31	2.67	4	3
74.	18	5	1	3	79	30	49	9	45	41	2.38	2.97	2	3
	17	4	3	3	78	28	50	9	52	32	2.59	----	3	2
75.	18	4	1	1	79	30	49	18	52	64	1.20	2.30	1	2
	18	4	1	1	77	26	51	14	60	57	1.41	1.97	-	-
76.	17	5	2	2	78	27	51	20	53	53	2.40	2.60	2	-
	17	3	2	2	76	29	47	18	51	64	3.48	2.77	4	4
77.	17	3	2	2	76	33	43	16	47	40	2.10	1.85	1	3
	17	2	2	2	78	33	45	24	42	40	3.86	----	-	-
78.	18	5	1	3	76	39	37	23	48	35	1.93	1.76	4	-
	17	4	3	3	78	37	41	16	50	43	1.76	2.52	2	2
79.	17	4	2	3	76	29	47	10	47	33	2.51	----	2	3
	17	4	1	3	76	25	51	13	47	50	2.54	2.42	4	1
80.	17	4	3	2	74	23	51	8	53	52	1.82	1.78	3	-
	17	5	3	2	75	23	52	14	47	44	2.54	----	1	2
81.	17	3	2	2	74	37	37	18	47	43	1.20	----	1	2
	17	3	3	2	73	40	33	18	36	33	1.70	0.97	4	1
82.	18	5	1	3	74	32	42	18	48	46	2.34	3.03	1	2
	18	4	2	3	73	33	40	14	37	40	1.42	1.62	2	0
83.	17	5	3	2	73	32	41	15	47	39	2.20	2.50	3	2
	17	3	2	2	74	31	43	14	41	42	2.12	----	2	2
84.	19	2	3	3	73	27	46	16	46	35	2.08	----	3	3
	18	5	1	3	74	31	43	12	41	37	1.67	2.00	2	0

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
85.	18	-	1	3	73	33	40	12	42	42	1.98	2.00	2	2
	18	2	3	3	73	31	42	13	43	48	2.40	2.11	-	-
86.	18	4	3	2	73	25	48	16	48	43	1.18	2.36	0	1
	17	-	2	2	72	28	44	18	35	38	2.19	----	2	4
87.	17	5	3	3	73	39	34	13	43	54	1.51	1.69	2	2
	18	4	3	3	72	42	30	17	43	47	2.65	2.07	3	3
88.	17	5	2	2	73	23	50	9	49	38	1.43	1.78	2	1
	17	4	2	2	71	23	48	17	52	56	2.73	2.34	-	-
89.	18	4	2	2	72	29	43	17	48	49	2.37	1.77	2	1
	17	-	-	2	73	31	42	16	49	72	3.69	3.14	3	4
90.	17	4	3	3	71	27	44	15	42	47	1.60	1.00	3	3
	18	3	3	3	72	24	48	13	48	33	2.43	----	4	3
91.	18	-	3	3	67	24	43	12	48	46	1.9.	2.10	2	2
	18	4	2	3	70	26	44	10	52	33	1.85	----	2	0
92.	17	5	3	3	67	32	35	12	47	38	2.20	2.08	2	2
	17	2	3	3	68	29	39	13	50	43	2.35	2.70	2	0
93.	17	4	3	2	67	18	49	12	45	38	1.36	1.50	2	1
	18	5	1	2	66	18	48	15	44	43	2.84	2.06	-	-
94.	17	4	3	3	64	22	42	13	51	38	2.39	2.30	3	1
	17	4	3	3	67	24	43	14	49	41	2.55	1.94	2	2
95.	18	2	3	2	64	29	35	9	41	34	2.39	1.88	2	3
	17	5	3	2	65	28	37	6	49	52	2.11	1.93	2	2
96.	17	5	1	3	63	27	36	19	44	51	3.07	1.84	4	4
	17	4	3	3	66	27	39	17	41	34	1.90	1.59	-	-
97.	17	3	3	3	63	18	45	7	49	46	1.78	----	3	-
	17	5	3	3	64	22	42	20	55	33	1.90	1.65	2	-
98.	17	5	3	2	63	15	48	17	45	50	1.74	----	2	-
	18	3	3	2	63	16	47	22	45	34	2.07	2.04	3	-

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
99.	17	3	3	2	63	24	39	9	47	49	1.90	2.20	1	1
	18	4	3	2	62	25	37	11	43	40	1.56	1.00	3	-
100.	18	4	3	3	62	19	43	10	46	44	2.09	2.35	3	2
	17	-	-	3	62	16	46	7	45	40	1.23	----	1	0
101.	17	2	3	3	62	17	45	15	48	39	1.88	1.12	2	2
	17	3	3	3	61	20	41	10	42	34	2.26	1.09	2	2
102.	17	5	1	3	62	14	48	18	50	45	2.94	2.10	2	2
	17	2	3	3	60	16	44	20	48	45	2.09	----	1	0
103.	18	5	2	3	61	18	43	12	48	43	2.24	2.36	3	2
	17	3	3	3	64	17	47	13	40	37	2.13	1.72	2	2
104.	17	3	1	3	61	29	32	15	43	41	1.45	2.33	3	2
	17	5	3	3	60	26	34	21	43	40	1.68	2.00	2	-
105.	18	3	3	2	59	24	35	27	40	37	2.71	2.53	3	2
	17	5	2	2	61	28	33	19	37	40	1.74	2.06	2	3
106.	17	4	3	3	58	15	43	11	46	38	2.58	2.37	2	3
	17	5	3	3	61	19	42	12	49	39	2.76	2.85	-	-
107.	17	4	3	2	58	15	43	13	42	47	1.70	1.79	2	2
	17	5	3	2	58	18	40	11	48	52	2.04	1.91	2	2
108.	17	3	3	3	57	20	37	11	45	36	1.58	1.06	2	2
	18	4	3	3	56	21	35	18	40	44	1.90	2.40	3	2
109.	18	3	3	2	57	18	39	12	40	37	2.19	1.50	2	1
	18	3	2	2	56	19	37	11	43	39	1.68	2.58	2	1
110.	17	3	2	2	56	11	45	17	47	57	2.00	3.00	2	2
	17	4	3	2	60	15	45	14	43	44	2.80	2.00	-	-
111.	18	3	1	1	56	11	45	7	47	50	1.70	1.43	3	0
	17	5	2	1	55	13	42	13	53	48	2.78	----	-	-
112.	17	5	3	3	54	24	30	11	44	38	2.00	2.16	2	2
	18	-	3	3	56	25	31	13	40	40	1.97	1.74	3	2

Table XVII. - Raw data collected on the Experimental and the Control groups.

PAIR NO	AGE	SOC-ECON STAT	HS CUR	COL CUR	A.C.E. GR	A.C.E. QUAN	A.C.E. LING	BASIC MATH	COOP ENGL T READ	COOP ENGL T ENGL MECH	GR PT AV 1ST SEM	GR PT AV 2ND SEM	1ST SEM AV ENGL	1ST SEM AV BASIC MATH
113.	18	5	3	3	53	23	30	9	40	39	2.00	1.23	2	1
	18	5	3	3	56	23	33	8	44	32	2.60	2.00	2	-
114.	18	4	3	3	53	12	31	15	45	31	1.61	----	2	-
	18	-	-	3	55	15	40	9	47	31	1.52	2.32	2	2
115.	17	3	3	3	53	11	42	5	44	38	1.59	0.65	1	1
	17	2	3	3	55	12	43	17	39	48	2.06	----	3	-
116.	18	5	3	2	53	12	41	15	50	42	2.00	----	3	-
	17	4	2	2	51	14	37	6	40	40	1.81	2.00	2	0
117.	18	3	3	2	51	29	22	19	37	35	2.00	1.65	2	0
	18	3	3	2	53	28	25	18	43	48	1.71	----	2	2
118.	18	5	3	3	51	25	26	14	37	49	1.42	1.62	2	1
	19	5	3	3	51	26	25	18	38	34	2.26	1.54	3	4
119.	18	4	3	2	49	17	32	8	43	37	1.40	0.85	2	1
	17	4	2	2	51	21	30	13	44	37	3.85	2.64	4	4
120.	18	2	1	2	46	12	34	12	46	45	2.16	2.06	2	-
	17	5	3	2	42	10	32	14	41	34	2.32	2.38	2	2
121.	18	3	3	3	42	11	31	4	43	33	1.93	2.10	2	1
	17	5	3	3	43	14	29	9	38	32	1.56	1.61	-	-
122.	18	2	3	3	35	19	16	7	36	34	2.00	2.33	1	1
	17	4	3	3	35	15	20	14	34	34	1.83	1.84	1	2

APPENDIX 2

PUBLIC JUNIOR COLLEGES BY STATES[1]

States	Number of Colleges	Enrollment
Alabama	1	298
Arizona	2	5,655
Arkansas	2	837
California	65	381,283
Colorado	7	6,730
Florida	5	5,021
Georgia	9	10,820
Idaho	3	2,763
Illinois	14	24,788
Indiana	6	3,613
Iowa	16	9,699
Kansas	14	6,291
Kentucky	2	890
Louisiana	1	336
Maryland	7	2,533
Massachusetts	2	558
Michigan	15	25,861
Minnesota	9	8,572
Mississippi	15	8,993
Missouri	8	7,666
Montana	3	810
Nebraska	4	1,820
Nevada	1	576
New Jersey	2	1,023
New Mexico	2	288
New York	17	27,580
North Carolina	5	2,865
North Dakota	4	1,912
Ohio	1	405
Oklahoma	12	6,515
Oregon	2	1,599
Pennsylvania	12	14,413
Tennessee	1	723
Texas	34	60,352

States	Number of Colleges	Enrollment
Utah	4	6,579
Virginia	3	9,074
Washington	10	22,907
West Virginia	1	603
Wisconsin	31	3,968
Wyoming	4	3,162

[1] Jesse Bogue (ed.), 1957 Junior College Directory, American Association of Junior Colleges, Washington, D.C., p. 4.

APPENDIX 3

POPULATION TRENDS AT CITY COLLEGE OF SAN FRANCISCO[1]

Semester	All Students	All Women Students
Fall 1935 Opening of College	1,470	564
Fall 1940 Pre-War Peak	3,227	1,111
Fall 1943--Low Point World War II	835	537
Fall 1945 End World War II	2,285	1,176
Spring 1946 One year after	5,022	1,300
Spring 1948 Peak full time	5,384	1,210
Spring 1950 Prior to Korea	5,298	1,361
Spring 1952--Low Point Full Time Schedule During Korea	3,312	1,180
Spring 1953	3,514	1,264
Fall 1955	5,281	1,527
Fall 1956	5,280	1,542

[1] City College, Statistical Records, Registrar's Office.

APPENDIX 4

SUMMARY OF HIGH SCHOOL CURRICULA OF CATHOLIC AND PUBLIC HIGH SCHOOL GRADUATES

High School transcripts of the 244 subjects of this study were examined to see whether any great difference existed in the secondary curricula of the Catholic and public high school students. Because the socio-economic background of the two groups was found to be rather similar, the curriculum followed by each subject of the sample in high school was classified according to the occupational level of the father. This classification afforded an opportunity to see whether socio-economic background influenced the choice of the high school program by either Catholic or public high school students.

Table XVIII. - High School curriculum[a] followed by 122 Catholic and 122 public high school women graduates classified according to occupational level of the father.

	High School Curricula					
	College Preparatory		General		Business	
Socio-economic Status	Catholic	Public	Catholic	Public	Catholic	Public
Professional	5	4	1	3		
Proprietors - managers	3	3	7	3		6
Clerks - commercial	12	13	19	6	5	8
Skilled workers - foremen	14	12	21	24	7	9
Semi or unskilled workers	10	2	11	23	2	6

[a]City College of San Francisco, Personal data folders, Counselor's files.

APPENDIX 5

PERFORMANCE OF C.C.S.F. ENTERING WOMEN STUDENTS ON BASIC MATHEMATICS TEST AND COOPERATIVE ENGLISH TEST

Norms available for other entering groups of women students on the entrance achievement tests at City College of San Francisco are included here for a better understanding of the norms made by graduates of girls' Catholic high schools.

Table XIX.- Comparison of the Basic Mathematics performance of the Catholic High School women graduates with that of entering women students in Fall, 1954.

Catholic High School Women (122 cases)	C.C.S.F. Women (678 cases)	Critical Ratio of Differences in Means
Mean		
16.96	16.12	1.40*
S.D.		
5.96	6.70	

*Not statistically significant.

Table XX.- Comparison of the Cooperative English Test: Reading Comprehension and Mechanics of Expression performance of the Catholic High School women with C.C.S.F. entering women of Fall, 1956 and Spring, 1957.

Catholic High School Women (122 cases)	C.C.S.F. Women Students (1,138 cases)	Critical Ratio of Differences in Means
Reading Mean 49.83	49.50	.44
Standard Deviation 7.51	9.60	
Mechanics Mean 49.72	46.28	3.83*
Standard Deviation 9.31	11.92	

*Significant at the 1 per cent level.

APPENDIX 6

TALLY OF RESPONSES OF CATHOLIC AND PUBLIC HIGH SCHOOL GRADUATES MOONEY PROBLEM CHECK LIST

Table XXI.—College Adjustment Problems from Mooney Problem Check List.

Problem	C.H.S.	P.H.S.
41. Not knowing how to study effectively	8	23
42. Easily distracted from my work	21	22
43. Not planning my work ahead	15	16
44. Having a poor background for some subjects	6	12
45. Inadequate high school training	1	1
46. Restless at delay in starting life work	4	11
47. Doubting wisdom of my vocational choice	11	6
48. Family opposing my choice of vocation		5
49. Purpose in going to college not clear	2	5
50. Doubting the value of a college degree	2	4
51. Hard to study in living quarters	12	10
52. No suitable place to study on campus	3	
53. Teachers too hard to understand	1	
54. Textbooks too hard to understand	3	4
55. Difficulty in getting required books	2	
96. Forgetting things I've learned in school	15	18
97. Getting low grades	10	5
98. Weak in writing	11	6
99. Weak in spelling or grammar	6	11
100. Slow in reading	13	12
101. Unable to enter desired vocation	3	2
103. Wanting to change to another college	2	11
104. Wanting part-time experience in my field	10	11
105. Doubting college prepares me for work	1	

Table XXI. - College Adjustment Problems from Mooney Problem Check List.

Problem	C.H.S.	P.H.S.
106. College too indifferent to student needs	1	4
107. Dull classes	9	12
108. Too many poor teachers	1	4
109. Teachers lacking grasp of subject	2	6
110. Teachers lacking personality	7	6
151. Not spending enough time in study	14	26
152. Having too many outside interests	5	10
153. Trouble organizing term papers	7	4
154. Trouble in outlining or note-taking	4	6
155. Trouble with oral reports	19	5
156. Wondering if I'll be successful in life	15	21
157. Needing to plan ahead for the future	5	7
158. Not knowing what I really want	6	6
161. Not having a good college adviser	3	10
162. Not getting individual help from teachers	3	10
163. Not enough chances to talk to teachers	6	4
164. Teachers lacking interest in students	2	4
165. Teachers not considerate of students' feelings	2	2
206. Not getting studies done on time	3	15
207. Unable to concentrate well	8	15
208. Unable to express myself well in words	12	19
209. Vocabulary too limited	14	10
210. Afraid to speak up in class discussions	16	12
211. Wondering whether further education is worthwhile	2	4
212. Not knowing where I belong in the world	5	8
213. Needing to decide on an occupation	4	4
214. Needing information about occupations	4	5
215. Needing to know my vocational abilities	10	13

Table XXI. - College Adjustment Problems from Mooney Problem Check List.

Problem	C.H.S.	P.H.S.
216. Classes too large		2
217. Not enough class discussion	6	8
218. Classes run too much like high school	3	6
219. Too much work required in some courses	5	12
220. Teachers too theoretical	3	7
261. Worrying about examinations	30	21
262. Slow with theories and abstractions	4	14
263. Weak in logical reasoning		14
264. Not smart enough in scholastic ways	3	6
265. Fearing failure in college	9	4
266. Deciding whether to leave college for a job	8	14
267. Doubting I can get a job in my chosen vocation	3	4
268. Wanting advice on next steps after college	4	9
269. Choosing course to take next term	9	3
270. Choosing best courses to prepare for a job	6	3
271. Some courses poorly organized	4	8
272. Courses too unrelated to each other	1	4
273. Too many rules and regulations	4	4
274. Unable to take courses I want	3	5
275. Forced to take courses I don't like	6	14
316. Not having a well-planned college program	1	2
317. Not really interested in books	1	
318. Poor memory	4	4
319. Slow in mathematics	12	9
321. Afraid of unemployment after graduation	3	7
322. Not knowing how to look for a job	6	12
323. Lacking necessary experience for a job	7	7
324. Not reaching the goal I've set for myself	4	7
325. Wanting to quit college	4	4
326. Grades unfair as measures of ability	2	6
327. Unfair tests	1	4

APPENDIX 7

ABSTRACT OF

Junior College Achievement of Girls' Catholic High School Graduates. -

In so far as the secondary education of women graduates of California Catholic high schools can be measured by their early junior college performance, the present study is a partial evaluation of the efficacy of that secondary education. The performance of a sample group of Catholic high school women enrolled in City College of San Francisco was examined for this purpose.

While the Catholic high schools from which these graduates come to the junior college are similar to public high schools in many ways, characteristic differences exist.

The powerful influence of the California State Department of Education and the accrediting committee of the University of California in standardizing Catholic secondary schools is generally recognized. These same groups have similarly influenced California public high schools so that both types of schools are fairly well standardized as to requirements for curricula, graduation, minimum library

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[1] Ph.D. thesis presented by Mary F. Golding, in 1959, to the School of Psychology and Education of the University of Ottawa, 123 p.

and laboratory equipment, length of recitation periods, length of school year, and for the training of teachers.

Ways in which the secondary education of women graduates of Catholic high schools differ from that of public high school graduates were listed. This was done following a series of interviews with the superintendent of Catholic schools and his assistant in charge of secondary schools, Archdiocese of San Francisco, and a review of current handbooks for the Catholic schools of San Francisco and Los Angeles archdioceses.

From this list, it appears that the Catholic secondary schools which the subjects of this study represent, differ from the public schools in that they are:

1. More selective in admission and retention policies.
2. Of smaller enrollment.
3. Non-coeducational.
4. More homogeneous in scholastic aptitude and social-religious background.
5. Active in subscribing to a curriculum integrated by the course in "Family Living".
6. Catholic in the philosophy subscribed to by all instructors, who are almost all members of religious orders of sisters.

A group of junior college women paired individually on the basis of Gross, Quantitative, and Linguistic scores on

the American Council of Education Psychological Examination for College Freshmen and on curriculum of junior college enrollment were the subjects of this study. These women who entered City College in Fall, 1955 and Fall, 1956 from San Francisco Catholic and public high schools were also similar in average age level, average unit load, and socio-economic background.

The problem of the study was to determine whether the achievement in the junior college of the Catholic high school trained woman differed from that of the public school trained woman.

As a basis for determining whether there was a difference in achievement, two hypotheses were tested. The first of these stated that women graduates of Catholic and public high schools who are comparable in scholastic aptitude when entering junior college do not differ in academic success in their first semester of junior college education.

Analysis of the data gathered on the over-all grade-point average of the paired groups at the end of the first semester revealed no statistically significant difference in mean term performance between the groups paired for scholastic aptitude from Catholic and public high schools. When these groups were divided by junior college curriculum, again no statistically significant differences appeared between the

ability-paired groups. Even when the semester performance by the two groups in courses within each curriculum was analyzed, no statistically significant difference was discovered in that performance.

Since all the statistical analyses on end-of-semester performance as determined by grade-point averages showed no statistically significant differences in the first semester achievement of Catholic and public high school women in the junior college, the first hypothesis was accepted.

The second hypothesis stated that women graduates of Catholic and public high schools who are comparable in scholastic aptitude when entering junior college do not differ in performance on the junior college entrance achievement test battery in mathematics and English skills. From a statistical analysis of the data collected on the performance of these women in the City College basic mathematics test, it appears that Catholic and public school women of comparable scholastic aptitude perform in a similar manner on this mathematics achievement test, since no statistically significant difference was found. It would seem, then, that the mathematics preparation of women in the Catholic and public high schools was comparable.

Examination of the data on the Cooperative English Tests in the battery seems to show no statistically significant difference in performance in the test on Reading Comprehension or the test on Mechanics of Expression between Catholic and public high school graduates of comparable aptitude. Again it would seem safe to say that the women from Catholic high schools were as well prepared in handling the tools of English as were the women similar in aptitude from public high schools.

Results of the analysis of data on entrance achievement tests would indicate that the second hypothesis should be accepted.

From this study it would seem that the secondary education of the Catholic high school women in the junior college gave them preparation for junior college at least no different from that of the women of comparable scholastic aptitude trained in the public school.