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A COMPARISON OF SCHOLASTIC ACHIEVEMENTS OF  
MARRIED AND UNMARRIED HIGH SCHOOL STUDENTS

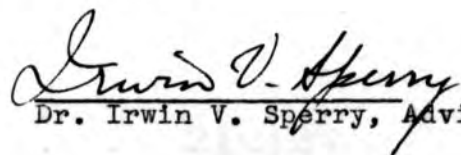
by

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A Thesis Submitted to  
the Faculty of  
the Consolidated University of North Carolina  
in Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Home Economics

Greensboro  
1959

Approved by

  
Dr. Irwin V. Sperry, Adviser

## ACKNOWLEDGEMENTS

The writer is deeply grateful to Dr. Irwin V. Sperry, chairman of the thesis committee, for his guidance and encouragement throughout this study and for the assistance of other members of that committee who were Miss Helen Canaday, Dr. Lyda Gordon Shivers, and Mrs. Madeleine Street.

Grateful appreciation is also expressed to Mr. A. P. Routh, Principal, and other staff members of Greensboro Senior High School for their assistance with school records used in securing data for this study.

K. B. G.

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## CHAPTER I

### THE PROBLEM AND DEFINITIONS OF TERMS USED

Following World War II, American colleges and universities coped with a new problem as married veterans enrolled in large numbers. That enrollment is now an expected trend. One college recently reported a rise in the past ten years from five to almost 25 per cent of its students married. At the present time 20 per cent who graduate from that college marry during their enrollment.<sup>1</sup> Havemann reported that University of California administrators expect the proportion of married students to rise by 50 to 75 per cent in the next ten years.<sup>2</sup> A report from the Bureau of the Census stated that one fourth, or 24 per cent, of the college students in the United States in October, 1956, were married and living with their spouses.<sup>3</sup> Those students and families have become such an accepted part of most larger campuses that planning for the future has included their peculiar needs.

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<sup>1</sup> Everett M. Rogers, "The Effect of Campus Marriages on Participation in College Life," College and University, 33, no. 2:193, Winter, 1958.

<sup>2</sup> Ernest Havemann, "To Love, Honor, Obey...and Study," Life, 38:153, May 23, 1955.

<sup>3</sup> Bureau of the Census, "School Enrollment: October, 1956," Current Population Reports, Series P-20, 74:1, April 30, 1957.



The decrease in the age of marriage<sup>4</sup> has resulted in increased numbers of high school aged persons who are married. At the same time, social and economic pressure is exerted on young people to graduate; consequently, many married students are now enrolled in high schools, and sociologists are predicting that a trend toward increased enrollment can be expected. Joel Moss and Ruby Gingles disclosed at the 1958 convention of the National Council on Family Relations that an investigation of the trend to earlier marriages in Nebraska showed 10 per cent of girls in twelve selected counties were eighteen years or younger when married in 1940 as compared to 21 per cent under eighteen years when married in 1950. Comparable figures for men indicated an increase from .5 per cent to 3 per cent during the same period.<sup>5</sup> In 1954, .4 per cent of boys and 4.8 per cent of girls ages fourteen to seventeen years of age in the United States were married.<sup>6</sup>

Lester Kirkendall described this situation in the following statement:

A nationwide survey showed about 3 per cent of the students in grades ten through twelve were married

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<sup>4</sup> Bureau of the Census, "Marital Status and Family Status, March, 1956," Current Population Reports, Series P-20, 72:3, December 21, 1956.

<sup>5</sup> Joel Moss and Ruby Gingles, "A Preliminary Report on a Longitudinal Study of Early Marriage in Nebraska" (Lincoln: University of Nebraska College of Agriculture, 1958) p. 1. (Mimeographed.)

<sup>6</sup> Bureau of the Census, "Marital Status and Family Status, April, 1954," Current Population Reports, Series P-20, 56:6, March 18, 1955.

while still in school. This is no new problem; only the circumstances are different. Formerly they married and left school or married immediately after graduation.<sup>7</sup>

A few superintendents and principals have expressed to the investigator a belief that the addition of the twelfth grade as a requirement for graduation in North Carolina schools has had an effect on the married student population in the secondary schools of that state. Previously, many young persons were married immediately following graduation from the eleventh grade whereas now, at the same age, they marry and return to the senior year of high school.

Very little is known about the characteristics of these students who marry and remain in high school. Ernest Havemann stated the problem as "... this whole phenomenon is so new that few reliable statistics are yet available..."<sup>8</sup>

#### I. THE PROBLEM

Statement of the problem. It was the purpose of this study to compare the high school achievement records of students who married while in high school with the achievement records of a matched group of students who remained unmarried as to: (1) attendance, (2) subject grades, (3) achievement test scores, (4) conduct grades, and (5) choices of major

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<sup>7</sup> Lester A. Kirkendall, "School Bells and Wedding Chimes," National Parent Teacher, 49:8, March, 1955.

<sup>8</sup> Ernest Havemann, "To Love, Honor, Obey... and Study," Life, 38:153, May 23, 1955.

and minor subjects.

Importance of the study. Probably because the problem is still new to school personnel and because so little research has been available to show evidence of the need for changes, many out-dated opinions, methods, and policies are still in existence. In 1956 a nationwide sampling of opinions of administrators revealed that 78 per cent believed both husband and wife students should be allowed to attend classes; 15.5 per cent believed married persons definitely should not be allowed to attend school; and the remainder would permit attendance with limitations.<sup>9</sup> In a more specific study in New Mexico secondary schools<sup>10</sup> the typical reaction of principals was to hold a conference after the married student returned to school with a variety of actions following the conference. A great number of principals discouraged continuance and others allowed continuance with restrictions. Other studies have provided similar policies and are reviewed in Chapter II.

Many teachers and administrators have indicated that married persons should not be allowed to continue in school

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<sup>9</sup> Opinion Poll, "If Students Marry, They Should Be Permitted to Stay in Public High Schools, Believes Majority of Administrators," Nation's Schools, 58:86, November, 1956.

<sup>10</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) pp. 26-30.

because of negative influences on fellow students. Among the criticisms of married students are lack of interest, poor attendance, substandard school work, low conduct and moral behavior, and a general conclusion that the students who marry while in high school are the weaker students whose drives and ambitions are below the average level for their age group.

Most of these criticisms have been based primarily on opinions and individual or isolated experiences. Are these criticisms justified? Other researchers have sought opinions relating to negative influences. Very little research has been conducted with married high school students to determine real problems, and none has been found by this writer that is related to achievements in school. In this study, an effort was made to get a more accurate comparison of the scholastic achievements of married students with scholastic achievements of unmarried students. The results, more than supporting or failing to support criticisms, should indicate areas where additional research is needed if schools are to function at their best in understanding and meeting the changed needs of students who marry and remain in school.

## II. DEFINITIONS OF TERMS USED

To facilitate a better understanding of this investigation, certain terms will be defined according to their usage

in this study.

Married student. A married student was any student who admitted or was known to be married and continuing in school.

Unmarried student. An unmarried student was any student whose name did not appear in the list of married students.

High school. In this study, high school refers only to grades ten, eleven and twelve which are considered senior high school in the Greensboro school system.

Class. Class refers to the year in high school as sophomore, junior or senior.

Academic achievement. This term refers to school performance records in attendance, subject grades, achievement test scores, conduct grades and subject choices.

Achievement test scores. The Iowa Tests of Educational Development were administered to all Greensboro Senior High School students and all incoming sophomores then enrolled in junior high schools in the city in the spring of 1957. Only the composite scores from those tests were used.

Attendance. The percentage of attendance was used and was based on the exact number of days attended in senior high school divided by the total number of days enrolled.

Subject grades. Subject grades were the recorded letter evaluations of the quality of work in school subjects.

Recordings were made at the end of each six-weeks period, and a semester average was taken from 3 six-weeks grades and a final examination on the subject. The semester averages were the grades used in this study. The same numerical values employed by the high school in securing honor roll averages were used for the following:

| <u>Letter Grade</u>  | <u>Numerical Equivalent</u> |
|----------------------|-----------------------------|
| A .....              | 97.5                        |
| A-.....              | 95.0                        |
| B .....              | 92.5                        |
| B-.....              | 90.0                        |
| C <sup>+</sup> ..... | 87.5                        |
| C .....              | 85.0                        |
| C-.....              | 82.5                        |
| D <sup>+</sup> ..... | 77.5                        |
| D .....              | 75.0                        |
| D-.....              | 72.5                        |

In this study, F. was assigned the fixed value of 60.0 although in all probability it was either higher or lower. Greensboro Senior High School did not use A<sup>+</sup>'s and B<sup>+</sup>'s in its grading system.

Conduct grades. Conduct grades were teachers' letter grade evaluations of behavior. The lowest conduct grade given by any teacher at the end of each six-weeks grading period was the grade recorded on permanent records and used in this

study. No semester averages were computed; therefore, all grades were used. For simplification of comparisons, each grade was given the same numerical evaluation as subject grades.

Major subjects. These were the subjects which required homework, such as English, history, and mathematics. All subjects required for graduation except one, health and physical education, are major subjects.

Minor subjects. These were the subjects which did not require homework. The minor subjects were art, physical education, band, orchestra, one-hour shop, choir, and glee club.

Intelligence quotient. In this study the intelligence quotient was the one most recently recorded in a student's cumulative folder. Further details of the tests used are given in Chapter III.

Age. Age refers to the chronological age of a student based on the birth date given in the cumulative folder.

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

The remainder of the thesis is organized into chapters which present (1) a review of the literature concerning married high school students which provides background information for this study, (2) a full discussion of the methods and procedures used in the study, (3) a description of the findings using a controlled matched sample of twenty-seven





## CHAPTER II

### REVIEW OF THE LITERATURE

Because students who married have continued in school only in very recent years, relatively little research has been conducted in this area. Interest in research has been directed toward married college students rather than high school students, probably because that field has had greater numbers and because those numbers were present a few years earlier and thereby creating interest earlier. Although information pertaining to married college students is of some value to any investigator interested in married students, the difference in the maturity of college and high school students makes college studies less applicable in this study; therefore, only the literature pertaining more directly to married high school students will be reviewed here.

Ivins stated that, although he found evidence of interest through secondary courses offered in marriage and family life education, in textbooks, college instruction of high school teachers in the field, and certain journals as Marriage and Family Living,

...the search for direct objective studies in the field has been disappointing. Apparently the development of the field has, until the present time, rested more upon analysis of sociological data of more general

import than that which might be obtained by this report.<sup>1</sup>

Here he referred to his specific study concerning married students in secondary schools.

The investigator found no literature which provides a statistical comparison of scholastic achievements of married and unmarried students. It is believed, however, that the results of studies reviewed herein have certain applications to the general understanding of married high school students.

Literature on the incidence of marriage in high school.

The earliest located reference to high school married students was an article in a professional magazine in 1951.<sup>2</sup> Perhaps there is an indication from the lack of previous literature that the condition was being observed either as fairly new or in increasing numbers about that time. In correspondence to the investigator, Kirkendall referred to that article as a "casual survey". Based on discussions and correspondence with teachers and administrators in twenty-seven schools in Oregon, he reported that probably three fourths of that state's high schools had married students. One school had thirty-eight married students in a total enrollment of twelve hundred.

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<sup>1</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) p. 14.

<sup>2</sup> Lester A. Kirkendall, "Now It's Marriage in The High Schools," Oregon Education Journal, 26:8, 30, September, 1951.

Many of these marriages involved high school girls and older, out-of-school men. There were very few high school couples. Kirkendall believed that these marriages were reflections of personal difficulties for some of the students, but he did not elaborate on what those difficulties were.

Wilson H. Ivins' study of student marriages in New Mexico secondary schools<sup>3</sup> in grades seven through twelve for the school year 1952-1953 showed the over-all marriage rate to be low except in the twelfth grade and most marriages were confined to girls in the upper three grades. It is significant, however, that sixty girls in grades seven, eight, and nine were married. From seventy-five returned questionnaires representing over half of the public secondary schools in the state and an even greater proportion of the secondary school population, 378 students were reported as married. The total enrollment represented by the returned questionnaires was approximately twenty-five thousand; thus, about 1.5 per cent of the students in the six grades surveyed were married. Approximately 3.3 per cent of the sophomores, 4.2 per cent of the juniors, and 8.1 per cent of the seniors enrolled in the schools were married. A total of thirty-seven student couples were reported. Marriages of students were not confined to those who were over-age for their grade in school nor was

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<sup>3</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) pp. 31-32.

pregnancy a primary cause. Married students were only very slightly less able to learn than the normal distribution of students and only very slightly less able achievers on standardized aptitude tests than unmarried students. The vast majority came from poor economic groups, poorer than the national average; however, each income category included in the questionnaire was represented, and all major occupational groups were represented. Slightly fewer than one third were members of established churches. Citizenship was rated about average with some being above and others below average. The typical married student came from a complete home. Those who married had not been as regular in attendance before marriage as other students; and, as a group, they were even less regular after marriage than before.

Judson T. Landis,<sup>4</sup> in a study of student marriages in high schools in California for the school year 1953-1954, compiled data from 286 questionnaires returned by principals. During that year, 95 per cent of the schools of that state had one or more marriages. By classes, 2.4 per cent of the sophomore girls, 4.0 per cent of the junior girls, and 5.7 per cent of the senior girls had married. A total of 2,044 girls and 220 boys had married. By sex distribution, 90.3 per cent of all married students were girls and 9.7 per cent

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<sup>4</sup> Judson T. Landis, "Attitudes and Policies Concerning Marriages Among High School Students," Marriage and Family Living, 18:128-136, May, 1956.

were boys. The reasons given by principals for the decrease in the age of marriage were lax parental care and supervision, glorification of marriage as a solution to problems, and availability of men with jobs. In only two cases was pre-marital pregnancy listed as a reason for early marriage. On the other hand, Landis stated that sociologists give as reasons for decrease in age of marriage the economic prosperity of the last fifteen years, threat of war and draft, imagined man shortage, spread of practice of birth control, increased emphasis among movie stars and magazines upon importance of marriage and having children, glorification of marriage as a solution to problems, and availability of men with jobs.

Lester Kirkendall,<sup>5</sup> writing in a semi-professional magazine in 1955, stated that a nationwide survey showed about 3 per cent of students in grades ten through twelve were married. All kinds of people, faiths, and occupations were represented by those who married, and achievements in school ranged from excellent to poor.

Ruth Shonle Cavan and Grace Beling<sup>6</sup> reported from a survey of high schools in Illinois cities of over ten thousand population on frequency of marriage and the policies and

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<sup>5</sup> Lester A. Kirkendall, "School Bells and Wedding Chimes," National Parent Teacher, 49:8-10, March, 1955.

<sup>6</sup> Ruth Shonle Cavan and Grace Beling, "A Study of High School Marriages," Marriage and Family Living, 20:293-295, August, 1958.

practices related to married students following the same plan used by Landis in California. Questionnaires were completed and returned by 58 per cent of the 145 schools contacted. The percentage of married high school students was small; girls outnumbered boys seven to one. Of the eighty-four questionnaires returned, sixty schools had one or more marriages during the school year 1956-1957. Among girls in those schools, 1.4 per cent of the sophomores, 1.8 per cent of the juniors, and 4.1 per cent of the seniors were married.

Literature on school policies concerning married students in high school. Available studies indicated mixed feelings about methods of dealing with marriages in high school. No uniformity was to be noted, nor were legal requirements clearly defined and adhered to.

One chapter of Ivins' study of high school marriages in New Mexico was devoted to the legal aspects and was the result of related research by an advanced law student. Conclusions by Ivins of the legal phase of school concern were that (1) marriage, as such did not constitute reasonable legal grounds for either suspension or expulsion from school; and, if such action had been taken, it would have been in violation of compulsory school attendance laws if the student was of compulsory school age; (2) the question of any action of the school board as reasonable would have been of great significance; and the conception of a child out of wedlock, much

less the more likely possibility that a married girl might be pregnant with a child conceived in wedlock, had not been deemed a reasonable basis for expulsion of a student from school; (3) there did seem to be some basis for school board action in suspending or expelling a married student from school if it was shown that the presence and/or influence of the married student was harmful to the morals or general welfare of the other students; the same grounds also existed for other students without regard to marital status; and (4) there was strong reason to doubt the advisability, if not the legality, of home study programs for married students because they could easily become discriminatory; furthermore, they seemed to be unnecessary if other means were used to deal with married students in the regular school program. At the time of Ivins' writing, no court testing of school board action regarding married high school students had been made.

In actual practice, twelve of the seventy-five school boards of control represented in the New Mexico sample had definite policies for immediate expulsion of any student who married; six additional boards suspended students who married for periods ranging from one semester to permanent suspension as a matter of policy but did not have written policies stating such; two principals indicated they expelled students who married, without direct action of the board; and two other principals indicated they suspended students immediately

after marriage, without board action. Responses to the questionnaire showed that a typical action taken by the principals was to hold conferences with the students upon their return to school after marriage. The purpose of those conferences appeared to be discouragement of continuance in most cases, outlining new and more stringent conditions, making clear the students could not participate in extra-curricular activities, or in other ways indicating to the students that conditions would be different as a result of marriage.<sup>7</sup>

In Landis' study in California, administrators generally took a negative attitude toward married students and encouraged early withdrawal. State laws did not permit expelling students for marrying, but very few enforced compulsory attendance laws following marriage. In cases of pregnancy after marriage, some principals encouraged withdrawal, some expelled students as soon as the condition became known, some provided home instruction, and one principal considered pregnant students beneficial to other students. Most principals reported no contemplated changes of policy although Landis suggested the positive approach would include premarital and post-marital counseling and more adequate teaching of family relations.<sup>8</sup>

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<sup>7</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) pp. 46-48.

<sup>8</sup> Judson T. Landis, "Attitudes and Policies Concerning Marriages Among High School Students," Marriage and Family Living, 18:130-132, May, 1956.



Garber, writing in The Nation's Schools in 1958,<sup>9</sup> stated that a school principal's views of the effects of married students on others would probably be upheld by a court. In Marion County, Tennessee, the court did rule that school boards can expel married students.

According to Cavan and Beling, Illinois high schools had no legal right to suspend or expel students because of marriage; however, they could expel or suspend students whose presence in school negatively affected the morals of other students. Most schools lacked definite policies, and where they did exist, there was much variation from one school to another. Without regard for the law, six of the eighty-four schools reporting either expelled immediately or permanently suspended a student after marriage, and in twenty-one other schools the student was either dropped or automatically left school. Principals of eleven schools took no action, and fourteen principals allowed students to remain in school if they desired. In twenty-seven other schools married students were allowed to remain as long as conduct and scholarship were above reproach and the married girl did not become pregnant. Only twenty-nine schools allowed married students to continue in school on the same basis as unmarried students. Pregnancy

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<sup>9</sup> Lee O. Garber, "School Board Can Expel Married Students, Court Rules," The Nation's Schools, 61:63-64, April, 1958.

was considered the most serious problem with almost half the principals stating they would dismiss or request the student to withdraw from school when pregnancy became known. Although many principals and other school personnel regarded married students as school problems which they could best deal with by eliminating them quickly and permanently or by restricting their freedom in activities or contacts with other students, seventy-four of the schools had some type of counseling program and 70 per cent had family life courses.<sup>10</sup>

Literature on special problems of married students in high school. Slightly more than one third of the principals who reported in Landis' California study thought married students created classroom problems while over half thought no classroom problem existed. Extra-curricular activities were the source of greatest trouble with emotional disturbances listed as the chief problem. Types of problems created by married students in the order of number of times listed by principals were (1) discussion of marital sexual experiences, which Landis believed was mostly imagined, and if true, was not limited to educational status, age, and sex of that group; (2) irregular attendance and high drop-out rate, and (3) encouragement to others to marry, which Landis believed would deter as often as impel fellow students as they saw the

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<sup>10</sup> Ruth Shonle Cavan and Grace Beling, "A Study of High School Marriages," Marriage and Family Living, 20:293-294, August, 1958.

problems the married students had to face. Married students were considered more stable, more mature, and an asset to the school environment by thirty-one principals.<sup>11</sup>

In the first questionnaire sent by Ivins, many principals in New Mexico high schools volunteered the opinion that student marriages did not constitute a problem for the school; however, when principals were asked specifically in a second questionnaire if they believed student marriages were a problem for the principal, teachers, or the school in general, their responses were somewhat different. Of seventy-five principals, forty-one replied that student marriage was a real problem compared to twenty who said it was not a problem. The persons for whom the problems were most severe and the reasons given by the principals in the order of the number of times listed were (1) for the principal, student marriages created additional administrative work and problems such as making provisions for special scheduling, establishing special rules and regulations, and developing new procedures for discipline; they made a difficult situation for administrators when pregnancy occurred; and they created a shortage in average daily attendance and consequently a shortage of state support; (2) for the community, high school students were too immature

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<sup>11</sup> Judson T. Landis, "Attitudes and Policies Concerning Marriage Among High School Students," Marriage and Family Living, 18:132-134, May, 1956.

to marry and thereby "upset" the community; and marriage often eliminated students from school and the community lost the benefits to be derived from more highly educated citizens; (3) for fellow students, there was immediate pressure from the principal and teachers to avoid the fad of marrying; and there was difficulty in maintaining morale and self-discipline in the face of deviate behavior of married students; (4) for teachers, the married students lost interest in school and were hard to motivate; they attended irregularly and thereby complicated the work of the teacher; and teachers were often blamed by the principal or community citizens for some of the actions of their students; and (5) for the married students themselves, there were difficulties in adjusting to their new status while continuing as students. In response to the question of which aspect of the marriage problem was most serious to the school in general, nine out of every ten principals stated either the undesirable influence of married students upon the unmarried students or the lack of maturity and the resulting lack of satisfactory adjustment of newly-married students to both marriage and different status in school. While twenty-nine principals considered married students as an asset to the school, twenty-six stated they were a definite liability and twelve had divided

opinions depending on the circumstances.<sup>12</sup>

Cavan and Beling found that pregnancy was considered the most serious problem resulting from student marriages in Illinois high schools. Other reasons given by principals for considering married students as problems were married girls discussed intimate family living with unmarried students, they glamorized marriage to the extent that early marriage was likely to become a fad, they attended school irregularly, they were no longer typical high school students, and/or they had too many adjustments to make. Only four principals considered married students an asset to the school situation. Although 38.9 per cent of the married boys and 65.8 per cent of the married girls dropped out of school at the time of marriage, principals did not regard that as a problem.<sup>13</sup>

Literature on opinions concerning high school marriages.

Although many writers have written numerous articles for lay magazines and newspapers in very recent years, only authoritative opinions appear to have value for this study.

As early as 1951, Kirkendall expressed the opinion that "it appears reasonably certain that the problem of high school marriages is one which will be forced increasingly

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<sup>12</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) pp. 53-59, 71-73.

<sup>13</sup> Ruth Shonle Cavan and Grace Beling, "A Study of High School Marriages," Marriage and Family Living, 20:294, August, 1958.

on our attention. If this is so, we must begin now to develop effective ways of meeting the needs."<sup>14</sup>

In another source<sup>15</sup> Kirkendall suggested that parents and teachers could help high school students find satisfactions in their day-by-day living and reduce their need to use marriage as an escape. He also suggested that the school might need to adjust its curriculum and that parents might need to alter their dreams for their children and/or provide more freedom for life decisions. He further stated that the entire problem of youthful marriages points up the need for a sound program of marriage education. He concluded, positively, that facing problems may cause a couple to draw courage from each other, their sacrifices and difficulties building a marriage of unusual strength, and that further education should not be denied just because of marriage.

Ivins terminated his study by recommending that ... the citizens, the boards of control, and the professional educators in the public secondary schools in the nation (1) recognize that there is a problem of student marriage in the schools, (2) accept and act upon the conclusion that expulsion, suspension or discouragement from continued attendance in school are not sound practices likely to solve the problems of student marriage, (3) recognize and accept the conclusion

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<sup>14</sup> Lester A. Kirkendall, "Now It's Marriage in the High Schools," Oregon Education Journal, 26:30, September, 1951.

<sup>15</sup> Lester A. Kirkendall, "School Bells and Wedding Chimes," National Parent Teacher, 49:9, 10, March, 1955.

that there are sound educational approaches to solution of the problem through instructional and guidance services already existing in the school, and (4) --and most importantly--begin to study the problem as it exists in each school as the first step in development of policies and practices of which they can be proud.<sup>16</sup>

The dean of girls of an Illinois high school<sup>17</sup> made two suggestions for teachers and counselors: (1) attempt to postpone the marriage, and, if that fails, (2) help to make the marriage succeed.

Landis suggested that the positive approach to the problem of high school marriages would be premarital and postmarital counseling and more adequate teaching of family relations. His conclusion was that principals and teachers, in general, have not yet thought through the problem and that there is a great need for careful evaluation of present policies and introduction of constructive action for meeting student needs.<sup>18</sup>

One newspaper writer quoted authorities speaking at the sixtieth annual convention of the National Congress of Parents and Teachers on the trend to earlier marriage.

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<sup>16</sup> Wilson H. Ivins, Student Marriages in New Mexico Secondary Schools (Albuquerque: The University of New Mexico Press, 1954) p. 76.

<sup>17</sup> Velora Buscher, "Forsaking All Others," National Education Association Journal, 44:76-77, May, 1955.

<sup>18</sup> Judson T. Landis, "Attitudes and Policies Concerning Marriages Among High School Students," Marriage and Family Living, 18:135-136, May, 1956.

Mrs. Dorothy Nyswander, psychologist and professor of public health at the University of California said,

It can't help but be a good thing. People become physically mature in their early teens. When they are kept dependent and treated as children after they are full-grown, it creates tremendous conflicts.

Ralph H. Ojeman, University of Iowa professor of psychology and National Parent Teacher Association family life education chairman said,

Young marriage is a fine thing. When a girl works along with a boy to get a marriage started, it becomes a genuine cooperative enterprise. I think we made a mistake when we emphasized waiting until a man was financially established.

Evelyn Duvall, agreeing with Ojeman, added that sometimes young people rush into impulsive marriages as a cure-all for problems at home and in school. To prevent such rashness, she said parents must learn how to prepare teen-agers for love and marriage and should work for family life courses in high school.<sup>19</sup>

Harold T. Christensen, professor of sociology at Purdue University stated the opinion that

...it is probably no accident that the increasing divorce rate in the United States is paralleled by a decreasing age at marriage. The causes of divorce are many, to be sure, but marrying too young is definitely one of them....

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<sup>19</sup> Ruth Dunbar, "Experts Like Trend to Early Marriages," (in Chicago Sun Times), Science Digest, 40:22, October, 1956.



In the end it all boils down to the necessity for doing a better job of family life education--in the home largely by example and in the school largely by instruction. It must be an education that not only imparts facts but shapes attitudes, that builds values and provides incentives. And it must be an education that comes early enough to do some good, starting in elementary school and continuing through college.

If we are worrying about high school marriages, why not start by initiating good family life education at the high school level? This would have two desirable results: It would delay or prevent many of the early marriages now taking place; and to those few youthful marriages that are probably bound to occur in any event--human nature being what it is--it would give a better foundation.<sup>20</sup>

Cavan and Beling concluded that many schools have existing resources such as counseling programs and family relations courses that could be used in two ways:

...to help more unmarried students discover the realities of marriage with its need for maturity and adequate preparation, and to help the married students in adjusting to the new status while continuing with school work. Unfortunately only a minority of schools see teen-age marriages as situations in which they have a responsibility to help students make a success of both marriage and education.<sup>21</sup>

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<sup>20</sup> Harold T. Christensen, "Why All These Young Marriages," National Parent Teacher, 52:6, April, 1958.

<sup>21</sup> Ruth Shonle Cavan and Grace Beling, "A Study of High School Marriages," Marriage and Family Living, 20:294, August, 1958.

## CHAPTER III

### METHODS AND PROCEDURES

Each student in Greensboro Senior High School who was listed as married on June 2, 1958, was matched by age, sex, class, and intelligence quotient with an unmarried student in the same school. Factual data for all persons in the sample were secured from official school records and analyzed for similarity or dissimilarity of those two groups of students in attendance, subject grades, achievement test scores, conduct grades, and subject choices.

#### I. THE SITUATION

With the exception of Curry, a small demonstration school for the Woman's College of the University of North Carolina, Greensboro Senior High School was the only public senior high school for white students in a city of approximately one hundred and twenty thousand people at the time this study was conducted. Grades ten, eleven, and twelve had a total enrollment of almost two thousand students during the school year 1957-1958. On June 2, 1958, thirty-seven of those students admitted or were known to be married. That number did not include any who were married and transferred or dropped out of school earlier in the year. The length of time each student had been married was not considered

in this study; however, the investigator knew some students who were married only a few weeks before the date given and others who had been married as long as two years.

No written statement of school policy had been made, but the Greensboro City School Board of Education allowed married students to remain in school on the same conditions as unmarried students. They were not required to notify the school office of their change in marital status. Married girls continued to use their unmarried names; and school records, except when homeroom teachers chose to make notations, did not include information pertaining to marriage. With the exception of surveys made by the family life education teacher, no official count had been made at any time to determine the total number of married students who were enrolled.

Girl students who became pregnant were allowed to continue in school until their conditions became embarrassing either for themselves, other students, or members of the faculty or staff. Most married students who were pregnant dropped out of school by their own choice. Two girls in latter stages of pregnancy were asked in late April, 1958, to stay home for the remainder of the semester; however, they were permitted to do assignments, take tests and have conferences with teachers after class in order to graduate.

No student had in any way been penalized for being

married as far as the official policy of the school was concerned. In many cases, teachers had not known some of their students were married. The procedure at Greensboro Senior High School had not been very different from the greater majority of the nation's schools as reported in the opinion poll of administrators referred to in one professional journal.<sup>1</sup>

There have been divided feelings among teachers and students with some of both groups wholeheartedly approving and supporting all matters pertaining specifically to married students, others wholeheartedly disapproving, and many who were somewhat indifferent.

## II. THE SAMPLE

Names of married students were secured from homeroom teachers on June 2, 1958. Because no other school record of married students existed, those reports were accepted as accurate although some teachers admitted they made their reports from their knowledge of married students in their homerooms rather than from asking for the information from the groups. Names of thirty-five students were reported. The names of two other persons were added by the investigator.

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<sup>1</sup> Opinion Poll, "If Students Marry, They Should Be Permitted To Stay in Public High Schools, Believes Majority of Administrators," Nation's Schools, 58:86, November, 1956.

One name was that of a girl who had talked with the investigator and another teacher about her secret marriage. Neither of the teachers doubted the truth of her information. The other name added was that of a boy who was not living with his wife but was known by students and faculty to be married. While in a family life education class the boy had told the teacher details of his marriage. Both persons fitted the definition of a married student as used in this study. Including those two, a total of thirty-seven married students were listed.

By class distribution, 67.6 per cent, or twenty-five persons, were seniors; 21.6 per cent, or eight persons, were juniors; and 10.8 per cent, or four persons, were sophomores. By sex distribution, five were males and all others females. The junior class had no married boys; four of the five boys were seniors and one was a sophomore. There were no married couples enrolled on June 2, 1958, although there had been at least two couples earlier in the year.

The names of married students were listed according to class and sex. Additional matching information was taken from the cumulative folders. That information included birth date and intelligence quotient. Some students had more than one intelligence quotient recorded; in those cases, the most recent information was used. The intelligence quotient was considered so vital for matching unmarried students that

the folder was regarded as incomplete if it was not recorded therein. The service of the guidance counselors was sought in trying to locate misplaced folders or missing information on incomplete folders. A total of ten folders remained either missing or incomplete, leaving twenty-seven married students for whom there was enough information available for matching and comparing each with an unmarried student.

For the twenty-seven married students having intelligence quotients recorded, The California Test of Mental Maturity was the last test administered in seventeen cases; The Pintner Intermediate Test, Form A, in six cases; The Kuhlmann-Anderson Intelligence Test in three cases; and The Henmon-Nelson Test of Mental Ability in one case.

The more lengthy process of securing a matched sample of unmarried students followed. Cumulative folders for the approximately two thousand sophomores, juniors, and seniors were used. The same information as that taken for married students--name, class, sex, birth date, and intelligence quotient--was written on cards for every tenth pupil, using the 1, 11, 21, 31, etc., sequence, until the number was completed. Cards were first separated by class. Within each class group, such as the senior class, males and females were separated into two groups. Only age and intelligence quotients remained to be matched individually within each class group of males and females. The information cards

for unmarried students were examined separately until each married student had a corresponding unmarried student whose intelligence score was within five points, more or less, and whose age was no more than three months older or younger.

In the first sampling of unmarried students, all married students except one male and one female senior were matched within the limitations allowed. Both of those were about a year older than most of the other students of the senior class. The original sample proceedings were followed in other sequences until matching criteria were secured.

For the twenty-seven matched unmarried students, The California Test of Mental Maturity was the last intelligence test administered in eleven cases; The Pintner Intermediate Test, Form A, in nine cases; and The Kuhlmann-Anderson Intelligence Test in seven cases.

### III. TECHNIQUES

All data used were concrete and were taken from permanent school records. Married and unmarried students were compared on attendance, subject grades, achievement test scores, conduct grades, and subject choices.

Achievement test scores were kept in the guidance center, so the composite score for each married and unmarried student in the matched sample was recorded on the card used in securing the sample and at the same time the

the sample was secured. This was completed prior to securing other variable information primarily for the convenience of the investigator and guidance counselors who helped in locating some records not yet filed at that time. Achievement test records were not available for three married students.

Register records, which were kept locked in the school vault, provided all other information needed--attendance, subject grades, conduct grades, and subjects--for the senior high school years for both married and unmarried students in the sample. Those records were taken singly for each individual and recorded on coded sheets so complete information would be available throughout the analysis if needed. Achievement test scores were transferred from the cards used in getting the sample to the coded sheets, making the data for each student in the sample complete. A sample code sheet is included in Appendix A.

The code system used first distinguished class by S for seniors, J for juniors, and no letter for sophomores. The letter M represented married and U unmarried students. The order of the listing on the code sheet was simply given the same number as the order of the names for the coded record with seniors having the lowest numbers, juniors the next lowest, and sophomores being last on the list and having the highest numbers; thus, the code number represented the order from the total number rather than from a single class



grouping as each class was not separated except by numerical order. For example, SM-7 was the seventh married senior listed on the code sheet, JU-20 was the unmarried junior in the twentieth position on the list; and M-25 was the married sophomore in the twenty-fifth position on the list. Code numbers were kept consistent in all places used except in the data sheet for achievement test scores; three of the achievement test scores were unavailable for married students and thus three matched pairs were not included.

Mimeographed form sheets were made for each code number for computations on individuals. Information from the original sheet taken from register data was reduced to the figures later to be used in comparisons. The form sheets were used for all the remainder of the computations and analyses.

Attendance. Attendance figures were converted into percentages. This formed the only fair comparison since some students in the same class had been in school an extra semester due to failures or illness necessitating dropping out of school after starting a semester. Percentages were secured by using the total number of days enrolled during regular sessions as the denominator and the total number of days attended during regular sessions as the numerator. Code numbers were used on data sheets for attendance with percentages of attendance for married students being placed

in the first column and percentages of attendance for unmarried students being placed in the second column so that matched pairs were located together for further computations. The data sheet for attendance is included in Appendix B.

Subject Grades. A grade average for the entire high school period was taken for each student. This was done by using a frequency table on the mimeographed code sheet for recording letter grades. Grades for distributive education and diversified occupations, which give two credits for each hour in class, were counted twice whereas all others were only counted once. The numerical evaluation assigned each letter at Greensboro Senior High School was used as the value and a mean grade was computed. The means for the married students were placed in one column and the means for unmarried students in another column directly beside the first as was done for attendance percentages. The data sheet for grades is included in Appendix C.

Achievement test scores. The composite score from achievement test scores was used for each student without additional computation. The scores for married students were placed in one column and the scores for unmarried students in a corresponding column so scores for matched pairs lay side by side as for attendance and grades. The data sheet for achievement test scores is included in Appendix D. Because scores were not available for three persons in

the experimental group, only twenty-four matched pairs were included in the sample for this comparison.

Conduct. The conduct grades were treated exactly as subject grades were treated and the data sheet is in Appendix E.

Subject choices. Choices between major and minor subjects were less definite than other data. It was decided to weight the subject so that a major subject carried a value of one and a half and a minor subject carried a value of one. This amount of weighting seemed reasonable considering the difference in the amount of time and effort required in receiving a particular grade in a major subject and in receiving the same grade in a minor subject. The total subject evaluations for each pupil were sums of the number of major subjects times one and a half, plus the number of minor subjects times one. Appendix G shows those figures. Those total evaluations for each pupil were placed in respective columns for married and unmarried students as was done for each of the other variables. The data sheet for subject choices is included in Appendix F.

At first all subjects ever listed in school records were considered; but upon further investigation it appeared unrealistic to allow a failed and repeated subject to be

listed as two major subject choices.<sup>2</sup> For that reason, a subject was listed only the first time it was chosen regardless of the number of times it was repeated. Although diversified occupations and distributive education carry two units of credit, they were recorded separately as singular subject choices in this comparison.

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<sup>2</sup> It is noteworthy that no student in the samples had either failed or repeated a minor subject; all repeated subjects were major subjects. Perhaps there are at least two explanations: (1) minor subjects are generally easier and (2) minor subjects, with one exception, are electives and are selected with the expectation of passing or because they are of special interest.

## CHAPTER IV

### ANALYSIS OF THE DATA

The purpose of this study was to compare the scholastic achievements of students who married while in high school with those of students who remained unmarried in regard to (1) attendance, (2) subject grades, (3) achievement test scores, (4) conduct grades, and (5) choices of major and minor subjects.

The question to be answered concerning each of the five areas of comparisons was whether there was a difference between the achievements of married students and the achievements of unmarried students on the basis of marital status. Could married high school students be expected to have better or poorer records in each area studied than the matched students who were unmarried?

Because the investigator was dealing with relative assumptions pertaining to differences that existed between married and unmarried students, it was necessary to use the more exacting null hypothesis<sup>1</sup> which asserts that no true difference exists between the two samples; thus, this definite hypothesis can be treated statistically in order to

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<sup>1</sup> Henry E. Garrett and R. S. Woodworth, Statistics in Psychology and Education (New York: Longmans, Green and Co., 1947) pp. 232-234.

arrive at a conclusive answer. In this study, the general hypothesis was, therefore, that there was no significant difference between the scholastic achievements of married and unmarried students in five areas: attendance, subject grades, achievement test scores, conduct grades, and choices of major and minor subjects. The degree of confidence with which to reject or accept this hypothesis would depend upon the relative frequency with which results deviating as much from the hypothetical as those found in this sample would occur by chance if the hypothesis were true.

Since the samples used in this study were small, statistical treatment of the likelihood of error in the samples was necessary in order to determine the significance of any differences in data secured for the two samples of matched pairs. Standard deviations in small samples tend to be smaller than standard deviations in the population; therefore, the formula for  $t$  for small related samples was used to test the standard deviation in sampling.<sup>2</sup> This formula is the improved estimate of the variance (square of the standard deviation of any distribution) of the mean in small samples. The formula for related or paired measures

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<sup>2</sup> E. F. Lindquist, Statistical Analysis in Educational Research (Atlanta: Houghton Mifflin Co., 1940) p. 51.

is

$$t = \frac{M_O - M_H}{\sqrt{\frac{\sum d^2}{n(n-1)}}}$$

In this formula,  $M_O$  is the observed mean of the difference between the two groups of matched pairs and  $M_H$  is the hypothetical mean of the difference between the two groups and is zero as fits the null hypothesis. The summation of  $d^2$  is the summation of the variance. The number of measures--twenty-seven in this study--is represented by  $n$  and is corrected for small samples by using  $n(n-1)$  in the formula. The denominator serves as an estimate of the standard error of the mean.

Attendance. Attendance was studied in percentages which were calculated for individuals by dividing the total number of days attended in senior high school by the total number of days enrolled during regular sessions. The range of attendance percentages for individual married students was 83.3 per cent to 100 per cent and for individual unmarried students the range was from 92.8 per cent to 99.8 per cent. Only one student in the entire sample, a married girl, had a perfect attendance record. The median percentages for all married and unmarried students, respectively, were 94.4 per cent and 97.0 per cent with the latter having a two and six tenths higher median percentage. Calculated means were 93.0

per cent for all married students and 96.8 per cent for all unmarried students, a difference of three and eight tenths greater percentage for the latter. These figures are shown in Table I.

TABLE I  
ATTENDANCE PERCENTAGE DIFFERENCES FOR MARRIED  
AND UNMARRIED STUDENTS

|        | Married* | Unmarried* | Difference |
|--------|----------|------------|------------|
| Range  | 83.3-100 | 92.8-99.8  |            |
| Median | 94.4     | 97.0       | -2.6       |
| Mean   | 93.0     | 96.8       | -3.8       |

\*N = 27

One of the hypotheses of this study was that there was no true difference in attendance percentages between married high school students and unmarried high school students. Using the raw data for attendance in Appendix B, the mean of the differences between the two samples of matched pairs was three and eight tenths; hence, for  $M_H = 0$ , the value of  $t$  for the distribution of differences was

$$t = \frac{-3.8 - 0}{\sqrt{\frac{357.2}{27(26)}}} = \frac{-3.8}{.713} = -5.33 .$$

If the hypothesis were true, an absolute value of  $t$  this large would be found less than 1 per cent of the time<sup>3</sup>; thus,

<sup>3</sup> Ibid., p. 53.



there was a high degree of confidence that the hypothesis was false. Stated differently, there was a significant difference between the means of the two samples beyond the 1 per cent level of confidence.

In rejecting the hypothesis, it was to be noted that the value of  $t$  was a minus figure which indicated that the control group, the unmarried students, had a significantly better attendance record than did the experimental group. It was possible there were several reasons why married students had lower percentages of attendance: greater responsibilities at home, less interest in school, future goals not as high, lower emotional stability, sometimes necessary employment interference, some sickness due to pregnancy, and perhaps other less important reasons. It must be noted here, however, that the figures for attendance in this study did not distinguish between attendance before marriage and attendance after marriage, and the same students could have had poorer attendance records regardless of marital status.

Subject grades. A grade average for the entire high school period was taken for each student by using a frequency table and converting letter grades into numerical values according to the evaluations employed at Greensboro Senior High School. Mean subject grades for individual married students ranged from 71.2 to 92.6; and the mean subject grades for individual unmarried students ranged from 67.5

to 96.7. Median subject grades for all married and unmarried students, respectively, were 81.7 and 85.2; and the means were 82.1 and 85.2. These figures are shown in Table II.

TABLE II  
SUBJECT GRADE DIFFERENCES FOR MARRIED  
AND UNMARRIED STUDENTS

|        | Married*  | Unmarried* | Difference |
|--------|-----------|------------|------------|
| Range  | 71.2-92.6 | 67.5-96.7  |            |
| Median | 81.7      | 85.2       | -3.5       |
| Mean   | 82.1      | 85.2       | -3.1       |

\*N = 27

Grades for distributive education and diversified occupations, which give two credits for each hour in class, were counted twice whereas all others were counted only once. The differences in range and central tendencies for the two groups of students were affected considerably by that fact. Because more married students than unmarried students were enrolled in those two courses and because grades in those courses were considerably higher than other grades generally, the effects favored the married students. There were thirty-four semesters of those two subjects listed for married students contrasted to only ten semesters for unmarried students. By recording the semester grade averages twice, the difference in grades was actually double the number of

semesters. Further, the mean grade in those two subjects for married students was 90.3 compared to the mean grade on all subjects of 82.1. This would indicate that the averages for those two subjects positively influenced the mean for all subjects. For all unmarried students in the sample, who enrolled in twenty-four fewer semesters equivalent to forty-eight fewer grades, the mean grade for those two subjects was 93.0 contrasted to a mean of 85.2 for all subjects. These figures are presented in Table III. The control group, the unmarried students, maintained a consistently higher average than the experimental group; nevertheless, the overall effect of those two subjects favored the married students because of the difference in numbers of grades recorded.

TABLE III

NUMBER SEMESTERS AND MEAN GRADES IN TWO SUBJECTS AND MEAN GRADES IN ALL SUBJECTS FOR MARRIED AND UNMARRIED STUDENTS

|   | Married | Unmarried |
|---|---------|-----------|
| Number of semesters of distributive education and diversified occupations | 34      | 10        |
| Mean grade for distributive education and diversified occupations         | 90.3    | 93.0      |
| Mean grade for all subjects   | 82.1    | 85.2      |

Could the null hypothesis be accepted in the comparison of subject grades of married and unmarried students? From raw data for subject grades (see Appendix C) a mean

difference of three and no tenths between the average grades of the two groups of matched pairs was computed. This distribution of differences yielded a  $t$  of  $-2.275$  which was significant well beyond the 5 per cent level of confidence. This indicated that allowing five or fewer sampling errors in each one hundred, there was a significant difference between the mean differences of grades of the two groups compared. Because the value of  $t$  was a minus figure, the hypothesis was rejected in favor of the control group; thus, it could be stated with confidence that the grades of unmarried students were significantly better than the grades of married students in this sample.

Achievement test scores. The composite scores from achievement test scores were used in this study without further computation. The range of scores for married students was 15 to 93, and for unmarried students it was 24 to 93. For all married students and unmarried students, respectively, the medians were 54.0 and 60.5; and the means were 53.4 and 60.7. These figures are shown in Table IV.

One of the hypotheses of this study was that there was no true difference in achievement test scores of

married and unmarried students in high school. A mean difference of seven and three tenths between the composite scores of the matched pairs in the two groups was computed from the data. (See Appendix D). The resulting  $t$  for this difference was  $-2.018$  which was not quite significant at the 5 per cent level of confidence. Although less significant than attendance and subject grade differences, it could be stated with a reasonable degree of confidence that there was a difference between achievement test scores of married and unmarried students that could not be expected to occur by chance or by sampling error.

TABLE IV

ACHIEVEMENT TEST SCORE DIFFERENCES FOR  
MARRIED AND UNMARRIED STUDENTS

|        | Married* | Unmarried* | Difference |
|--------|----------|------------|------------|
| Range  | 15-93    | 24-93      |            |
| Median | 54.0     | 60.5       | -6.5       |
| Mean   | 53.4     | 60.7       | -7.3       |

\*N = 24

A question might well be raised concerning the difference in significance of subject grades and achievement test scores. Why was there a difference between the significance in these two comparisons for married and unmarried

students? The answer may have been in the inconsistency of grading used by high school teachers compared to the standardized achievement tests; or, there may have been a difference in the application of their knowledge made by the students.

Conduct grades. By the use of a frequency table and converting letter grades into numerical values according to the evaluations employed at Greensboro Senior High School, an average conduct grade was computed for each student for the entire high school period. Mean conduct grades for individual married students ranged from 92.0 to 97.5; and the mean conduct grades for individual unmarried students ranged from 92.5 to 97.5. Median conduct grades for all married and unmarried students, respectively, were 97.2 and 97.1, being slightly lower for the control group; and means were 96.6 for both groups. These figures are presented in Table V.

TABLE V

CONDUCT GRADE DIFFERENCES FOR  
MARRIED AND UNMARRIED STUDENTS

|        | Married*  | Unmarried* | Difference |
|--------|-----------|------------|------------|
| Range  | 92.0-97.5 | 92.5-97.5  |            |
| Median | 97.2      | 97.1       | .1         |
| Mean   | 96.6      | 96.6       | .0         |

\*N = 27

It is important to note in the range that 97.5 was

the highest grade a student could have because that was the numerical value of A, the highest letter grade given. It is to be noted further that students in both groups had maintained an A average on conduct. There were nine married students and eleven unmarried students having that record of no marks against their conduct.

In proving the hypothesis that there was no true difference in conduct grades of married students and unmarried students in high school, a mean difference between the conduct grades of the two groups of matched pairs was computed from the data. (See Appendix E). This distribution of difference yielded a  $t$  of  $-.1589$  which was not significant. Such a small amount of difference may have been due to chance in the smallness of the sample and errors in the population of the sample. It can be stated with confidence that there was no true difference in conduct grades of the married and unmarried students in this sample.

Subject choices. Major and minor subjects were weighted in order to make a distinction between choices of subjects made by students. Major subjects were given a weighted value of one and a half and minor subjects were given a value of one. Because of the number of times some students failed and repeated without choice certain required subjects, only the first time a subject was taken was it considered a choice in this comparison.

Comparisons of ranges, medians, and means for the separate matched groups would have been unfair in this area because of the limitations of sophomores compared to the other two classes and of juniors compared to seniors in the total number of subjects that could have been chosen. (In the other four comparisons, figures were in percentages or scores which were adjudged equal for each class).

Was there a significant difference between the choices of subjects made by married and unmarried students? The data (see Appendix F) provided a very significant difference well beyond the 1 per cent level of confidence which indicated that the control, or unmarried, students made greater choices. A mean difference of three and three tenths between the means of the two groups of matched pairs and the resulting  $t$  of -4.406 were computed.

Further analysis of the data provided additional information: married students chose 530 major subjects and forty-seven minor subjects contrasted to 578 major subjects and sixty-seven minor subjects chosen by unmarried students, differences which were significantly greater for unmarried students both in total number and proportion of major subjects to minor subjects. These figures are presented in Table VI.



TABLE VI  
 SUBJECT CHOICE DIFFERENCES OF  
 MARRIED AND UNMARRIED STUDENTS

|                   | Married* | Unmarried* | Difference |
|-------------------|----------|------------|------------|
| Major<br>Subjects | 530      | 578        | -48        |
| Minor<br>Subjects | 47       | 67         | -20        |

\*N = 27

Perhaps this difference can be explained partially, at least, by the difference in goals for the future between the two groups. More unmarried students than married students would be expected to be doing college preparatory work in high school; likewise, more married students than unmarried students might be expected to terminate their formal education at high school graduation.

Although the investigator made no effort to distinguish between types of subjects chosen other than major or minor subjects, it is to be recalled that more than three times as many married students as unmarried students chose diversified occupations and distributive education courses. One explanation may have been that married students in this group were more definitely interested in vocational preparation for the immediate future. Another explanation may have been that the part-time employment provided by those two subjects was needed by some married students for income.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

With the decrease in the median age at first marriage and the social and economic pressure to acquire higher levels of education, there appears to be a definite trend toward an increased number of married students in high schools in recent years. Surveys and census reports indicate that probably about 3 per cent of the students in the nation's senior high schools are married, the large majority of those being girls who are married to older, out-of-school men. The problem of early marriage is not new, but the circumstances involving the high school are somewhat different from any previously dealt with.

There are many criticisms of married high school students, based primarily on opinions and individual experiences; to date, it is not known definitely whether these criticisms are justified. This study was undertaken in an effort to obtain a more accurate comparison of the scholastic achievements of married students with the scholastic achievements of unmarried students as to: (1) attendance, (2) subject grades, (3) achievement test scores, (4) conduct grades, and (5) subject choices. The results seem more important in indicating areas where change in school organization is needed than in supporting or dispelling criticisms of married

students. Also, the results of this study should suggest that further research is needed for better understanding of the change in marital status of many secondary school students and its effects on curriculum needs, relationships with other students, or other school concerns.

### I. SUMMARY

The literature located indicated that very little research has been conducted with married high school students, and none was found which provided statistical comparisons of the scholastic achievements of married students with the scholastic achievements of unmarried students. Kirkendall did what he termed a "casual survey" in Oregon in 1951, using twenty-seven schools. Ivins reported at length on his study of student marriages in secondary schools of New Mexico as revealed by principals representing over half of the public high schools of that state. Landis compiled data from questionnaires returned by 286 principals of high schools in California. Cavan and Beling conducted a survey of high schools in cities of over ten thousand population in Illinois. Generally, these surveys indicated that most high schools had married students enrolled but that the majority lacked definite policies for dealing with those students who married. Negative attitudes of administrators were indicated more often than positive approaches to helping

the married students adjust to their new roles. The majority of administrators appeared to consider married students as problems which could most easily be handled by their elimination from the schools, but a few principals did consider married students more mature and an asset to school situations.

In this study, the twenty-seven married students for whom there were complete records and a controlled matched sample of twenty-seven unmarried students from Greensboro Senior High School were used for comparing certain scholastic achievements concerned with attendance, subject grades, achievement test scores, conduct grades, and subject choices. All data for comparisons were concrete and were taken from permanent high school records. Matching criteria were class, age, sex, and intelligence quotient. Attendance was compared in percentages based on the number of days enrolled in regular sessions in school. Subject and conduct grades were converted from letters to numerical values using the evaluations employed at the school from which the sample came. The composite scores were used in comparing achievement test scores. Subject choices were less definite, and it was necessary to use weighted values of one and a half for major subjects and one for minor subjects.

In each of the five areas of scholastic achievements compared in this study, the hypothesis was that no true or

significant difference existed between the two matched samples being compared. In order to compare the results statistically, the t-test for small related samples was used to calculate the significance of differences between the means of the control and experimental groups of matched pairs.

A study of the data obtained is summarized here.

1. Attendance. A difference between the means of the two samples of matched pairs was very significant well beyond the 1 per cent level of confidence. The null hypothesis, which declares that no true difference exists, was rejected in favor of the control, or unmarried, students whose attendance records were significantly better than the records of the experimental group. There were several possible reasons why married students had poorer attendance such as educational goals not as high, less emphasis on importance of regular attendance, increased home responsibilities, interference from employment, and sickness due to pregnancy. Because no distinction was made between attendance before and after marriage, it cannot safely be assumed that marriage was the only factor contributing to the poorer record. It appears that there is a need for further investigation into the causes of absences and that an effort be made to determine if there is a correlation between marital status and poorer attendance.

2. Subject grades. The two groups differed to a

lesser but still significant degree (5 per cent level of confidence) with regard to subject grades. The control group had maintained a three point higher mean than the married students, a difference statistically great enough to reject the null hypothesis. Because the pairs had been matched on intelligence quotients, this could not be attributed to a basic difference in ability. Perhaps there was a difference in ambition or interests between the groups. Again, it appears there is a need for further study to determine the causes of the differences.

3. Achievement test scores. There was a significant difference in performance in achievement as measured by composite scores on the Iowa Tests of Educational Development. The difference was in favor of the unmarried group at slightly less than the 5 per cent but greater than the 10 per cent level of confidence. Although less significant than attendance percentages and subject grade differences, it could be stated with a reasonable degree of confidence that the difference was too great to occur by chance and that the unmarried students had significantly better achievement test scores than the married students.

4. Conduct grades. A difference so slight as to be nonsignificant was found between the conduct grades of the two samples in this study. Either teachers had failed to make distinctions between varying degrees of conduct or

many of the criticisms concerning behavior of married students could not be ascribed to this particular group. If there was a difference in maturity as often alleged by critics, it was not revealed in the conduct grades.

5. Subject choices. Unmarried students made more extensive subject choices than married students both in total number of subjects and in the proportion of major subjects to minor subjects. A significant difference beyond the 1 per cent level of confidence was found, and the null hypothesis was rejected. Educational goals, with most married students aiming no further than high school graduation, might possibly explain the difference in subject choices.

In this study, unmarried students were found to make greater achievements in four of the five areas compared than the married students. For attendance and subject choices, the differences were most highly significant beyond the 1 per cent level of confidence followed in order by subject grade differences significant beyond the 5 per cent level of confidence and achievement test scores almost significant at the 5 per cent level of confidence. Any existing difference in conduct grades was so small as to be nonsignificant and could be attributed to sampling errors.

Are these differences between the two samples great enough to conclude that students who remain unmarried in high school make better scholastic achievements than students

who marry and continue in school? The answer is evidently affirmative under the limited conditions of the present study. Another question of importance might be: do these differences indicate needs for changes in school programs? The answer is less definite and may depend partially on whether attention is focused on the married or the unmarried students. Practically all the research has been based on opinion questionnaires, the advantage of this study being that it used actual performance records. More careful consideration of this and additional research appears to be needed before that question can be answered adequately.

## II. CONCLUSIONS

Conclusions as to the limitations of the sample and method. The investigator recognizes the following limitations of this study:

1. reports of the students who were married, as made by homeroom teachers, may not have been complete;
2. ten students who were reported as married did not have complete records and could not be used in the sample, a number which could have been great enough to alter the findings for the entire group;
3. the sample did not include all students who were married during the year but only those still in school on a specific date, with the possibility of different results



had another date been selected;

4. summer school attendance was not used because both members of matched pairs would not have attended summer sessions in most cases; attendance in summer sessions might have affected performance in some cases;

5. failing grades of F were assigned a fixed numerical value of 60.0 although in most cases it was probably either higher or lower;

6. no distinction was made as to the time of marriage either in regard to total length of marriage or students' class in school at the time of marriage, which may have influenced the achievements compared in this study; and

7. there was no consideration of differences in emotional maturity between individuals in either sample.

In attempting to draw any general conclusions, the investigator recognized the limitation of the sample itself. Because an urban senior high school of larger enrollment than most schools in the state was the locale of this study and because the data were secured at a particular time, conclusions cannot be applied to married students in general nor to any other specific situations.

Conclusions as to recommendations for further research.

The limitations of this study suggest that further research is needed to provide a better understanding of scholastic needs of married high school students. Specific suggestions

are made as follows:

1. a larger sample drawn from a more general population for the same or similar comparisons would provide the basis for more generalized conclusions as related to the general population;
2. data comparing the achievements of the same students before and after marriage would determine more precisely the effects of marriage on scholastic achievements of high school students;
3. inclusion of socio-economic and emotional maturity factors in matching criteria for comparisons of married and unmarried students would provide more adequate controls if used in addition to matching criteria of this study;
4. critical study of the types of subjects selected by students who marry with emphasis on the immediate and long-range future needs in such areas as vocational preparation, homemaking, and relationships is needed to assist schools in planning programs which would better meet needs of married students; and
5. investigation of students who marry early in high school and those who marry shortly prior to graduation as to reasons for marriage, special problems for themselves and others, likelihood of failing to complete educational goals, adjustments to marriage, and other concerns of the school and community are needed to determine the effects of marriage on such social and psychological factors.

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APPENDIX A

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Table with 3 columns and 10 rows, mostly blank.

APPENDIX

Name \_\_\_\_\_  
Age \_\_\_\_\_  
Sex \_\_\_\_\_  
Address \_\_\_\_\_

Subject \_\_\_\_\_  
No. pages \_\_\_\_\_  
No. minore \_\_\_\_\_

Achievement Test Score \_\_\_\_\_

## APPENDIX A

Code No. \_\_\_\_\_

## Subject Grades

| Grade  | F | V | FV |
|--------|---|---|----|
| A      |   |   |    |
| A-     |   |   |    |
| B      |   |   |    |
| B-     |   |   |    |
| C+     |   |   |    |
| C      |   |   |    |
| C-     |   |   |    |
| D+     |   |   |    |
| D      |   |   |    |
| D-     |   |   |    |
| F      |   |   |    |
| Totals |   |   |    |
| Mean   |   |   |    |

## Conduct Grades

| Grade  | F | V | FV |
|--------|---|---|----|
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
|        |   |   |    |
| Totals |   |   |    |
| Mean   |   |   |    |

Attendance \_\_\_\_\_

No. days enrolled \_\_\_\_\_

No. days attended \_\_\_\_\_

% attendance \_\_\_\_\_

Subjects \_\_\_\_\_

No. majors \_\_\_\_\_

No. minors \_\_\_\_\_

Achievement Test Score \_\_\_\_\_

## APPENDIX B

## ATTENDANCE PERCENTAGES

| Code No. | Per Cent | Code No. | Per Cent | Difference | d   | d <sup>2</sup> |
|----------|----------|----------|----------|------------|-----|----------------|
| SM-1.    | 89.5     | SU-1.    | 99.8     | -10.3      | 6.5 | 42.2           |
| SM-2.    | 93.3     | SU-2.    | 99.5     | -6.2       | 2.4 | 5.8            |
| SM-3.    | 100.     | SU-3.    | 98.1     | 1.9        | 5.7 | 32.5           |
| SM-4.    | 95.2     | SU-4.    | 97.0     | -1.8       | 2.0 | 4.0            |
| SM-5.    | 96.1     | SU-5.    | 98.9     | -2.8       | 1.0 | 1.0            |
| SM-6.    | 92.0     | SU-6.    | 96.7     | -4.7       | .9  | .8             |
| SM-7.    | 96.3     | SU-7.    | 96.9     | -.6        | 3.2 | 10.2           |
| SM-8.    | 97.4     | SU-8.    | 95.4     | 2.0        | 5.8 | 33.6           |
| SM-9.    | 93.0     | SU-9.    | 96.1     | -3.1       | .7  | .5             |
| SM-10.   | 95.4     | SU-10.   | 97.6     | -2.2       | 1.6 | 2.6            |
| SM-11.   | 98.5     | SU-11.   | 99.5     | -1.0       | 2.8 | 7.8            |
| SM-12.   | 96.7     | SU-12.   | 97.2     | -.5        | 3.3 | 10.9           |
| SM-13.   | 95.9     | SU-13.   | 97.6     | -1.7       | 2.1 | 4.4            |
| SM-14.   | 94.3     | SU-14.   | 98.1     | -3.8       | 0   | 0              |
| SM-15.   | 95.6     | SU-15.   | 98.7     | -3.1       | .7  | .5             |
| SM-16.   | 95.7     | SU-16.   | 98.7     | -3.0       | .8  | .6             |
| SM-17.   | 96.9     | SU-17.   | 99.8     | -2.9       | .9  | .8             |
| JM-18.   | 85.3     | JU-18.   | 95.6     | -10.3      | 6.5 | 42.2           |
| JM-19.   | 92.5     | JU-19.   | 94.2     | -1.7       | 2.1 | 4.4            |
| JM-20.   | 88.6     | JU-20.   | 93.1     | -4.5       | .7  | .5             |
| JM-21.   | 94.4     | JU-21.   | 95.3     | -.9        | 2.9 | 8.4            |
| JM-22.   | 83.3     | JU-22.   | 95.5     | -12.2      | 8.4 | 70.6           |
| JM-23.   | 89.3     | JU-23.   | 99.7     | -10.4      | 6.6 | 43.6           |
| JM-24.   | 88.2     | JU-24.   | 93.1     | -4.9       | 1.1 | 1.2            |
| M-25.    | 85.0     | U-25.    | 92.8     | -7.8       | 4.0 | 16.0           |
| M-26.    | 87.2     | U-26.    | 93.3     | -6.1       | 2.3 | 5.3            |
| M-27.    | 94.4     | U-27.    | 95.6     | -1.2       | 2.6 | 6.8            |



## APPENDIX C

## MEAN SUBJECT GRADES

| Code No. | Grades | Code No. | Grades | Difference | d    | d <sup>2</sup> |
|----------|--------|----------|--------|------------|------|----------------|
| SM-1.    | 87.2   | SU-1.    | 86.8   | .4         | 3.4  | 11.6           |
| SM-2.    | 81.7   | SU-2.    | 78.0   | 3.7        | 6.7  | 44.9           |
| SM-3.    | 81.9   | SU-3.    | 84.5   | -2.6       | .4   | .2             |
| SM-4.    | 89.8   | SU-4.    | 85.9   | 3.9        | 6.9  | 47.6           |
| SM-5.    | 87.0   | SU-5.    | 89.4   | -2.4       | .6   | .4             |
| SM-6.    | 90.6   | SU-6.    | 96.7   | -6.1       | 3.1  | 9.6            |
| SM-7.    | 91.9   | SU-7.    | 92.6   | -.7        | 2.3  | 5.3            |
| SM-8.    | 83.2   | SU-8.    | 85.3   | -2.1       | .9   | .8             |
| SM-9.    | 75.6   | SU-9.    | 82.3   | -6.7       | 3.7  | 13.7           |
| SM-10.   | 77.0   | SU-10.   | 74.8   | 2.2        | 5.2  | 27.0           |
| SM-11.   | 89.0   | SU-11.   | 93.0   | -4.0       | 1.0  | 1.0            |
| SM-12.   | 72.6   | SU-12.   | 80.0   | -7.4       | 4.4  | 19.4           |
| SM-13.   | 91.1   | SU-13.   | 91.3   | -.2        | 2.8  | 7.8            |
| SM-14.   | 90.7   | SU-14.   | 90.6   | .1         | 3.1  | 9.6            |
| SM-15.   | 92.4   | SU-15.   | 82.3   | 10.1       | 13.1 | 171.6          |
| SM-16.   | 78.6   | SU-16.   | 94.6   | -16.0      | 13.0 | 169.0          |
| SM-17.   | 72.0   | SU-17.   | 91.9   | -19.9      | 16.9 | 285.6          |
| JM-18.   | 76.6   | JU-18.   | 79.6   | -3.0       | 0    | 0              |
| JM-19.   | 76.6   | JU-19.   | 85.2   | -8.6       | 5.6  | 31.4           |
| JM-20.   | 80.9   | JU-20.   | 76.2   | 4.7        | 7.7  | 59.3           |
| JM-21.   | 81.5   | JU-21.   | 80.3   | 1.2        | 4.2  | 17.6           |
| JM-22.   | 74.5   | JU-22.   | 83.6   | -9.1       | 6.1  | 37.2           |
| JM-23.   | 92.6   | JU-23.   | 96.0   | -3.4       | .4   | .2             |
| JM-24.   | 74.1   | JU-24.   | 87.1   | -13.0      | 10.0 | 100.0          |
| M-25.    | 71.2   | U-25.    | 81.8   | -10.6      | 7.6  | 57.8           |
| M-26.    | 73.0   | U-26.    | 67.5   | 5.5        | 8.5  | 72.2           |
| M-27.    | 84.8   | U-27.    | 83.2   | 1.6        | 4.6  | 21.2           |

## APPENDIX D

## COMPOSITE ACHIEVEMENT TEST SCORES

| Code No. | Score | Code No. | Score | Difference | d    | d <sup>2</sup> |
|----------|-------|----------|-------|------------|------|----------------|
| SM-2.    | 16    | SU-2.    | 25    | - 9        | 1.7  | 2.9            |
| SM-3.    | 15    | SU-3.    | 44    | -29        | 21.7 | 470.9          |
| SM-4.    | 51    | SU-4.    | 81    | -30        | 22.7 | 515.3          |
| SM-5.    | 19    | SU-5.    | 37    | -18        | 10.7 | 114.5          |
| SM-6.    | 87    | SU-6.    | 90    | - 3        | 4.3  | 18.5           |
| SM-7.    | 57    | SU-7.    | 74    | -17        | 9.7  | 94.1           |
| SM-8.    | 30    | SU-8.    | 57    | -27        | 19.7 | 388.1          |
| SM-10.   | 44    | SU-10.   | 24    | 20         | 27.3 | 745.3          |
| SM-11.   | 26    | SU-11.   | 30    | - 4        | 3.3  | 10.9           |
| SM-12.   | 57    | SU-12.   | 75    | -18        | 10.7 | 114.5          |
| SM-13.   | 75    | SU-13.   | 51    | 24         | 31.3 | 979.7          |
| SM-14.   | 64    | SU-14.   | 69    | - 5        | 2.3  | 5.3            |
| SM-15.   | 93    | SU-15.   | 90    | 3          | 10.3 | 106.1          |
| SM-16.   | 42    | SU-16.   | 32    | 10         | 17.3 | 299.3          |
| SM-17.   | 79    | SU-17.   | 93    | -14        | 6.7  | 44.9           |
| JM-18.   | 32    | JU-18.   | 45    | -13        | 5.7  | 32.5           |
| JM-19.   | 79    | JU-19.   | 79    | 0          | 0    | 0              |
| JM-20.   | 69    | JU-20.   | 87    | -18        | 10.7 | 114.5          |
| JM-21.   | 90    | JU-21.   | 93    | - 3        | 4.3  | 18.5           |
| JM-22.   | 32    | JU-22.   | 83    | -51        | 43.7 | 1909.7         |
| JM-24.   | 79    | JU-24.   | 64    | -15        | 22.3 | 497.3          |
| M-25.    | 26    | U-25.    | 51    | -25        | 17.7 | 313.3          |
| M-26.    | 45    | U-26.    | 32    | 13         | 20.3 | 412.1          |
| M-27.    | 75    | U-27.    | 51    | 24         | 31.3 | 979.7          |

## APPENDIX E

## MEAN CONDUCT GRADES

| Code No. | Grade | Code No. | Grade | Difference | d    | d <sup>2</sup> |
|----------|-------|----------|-------|------------|------|----------------|
| SM-1.    | 92.0  | SU-1.    | 94.83 | -2.83      | 2.78 | 7.7            |
| SM-2.    | 97.0  | SU-2.    | 97.5  | - .5       | .45  | .2             |
| SM-3.    | 97.5  | SU-3.    | 97.1  | .4         | .45  | .2             |
| SM-4.    | 97.5  | SU-4.    | 95.5  | 2.0        | 2.05 | 4.2            |
| SM-5.    | 97.38 | SU-5.    | 97.38 | 0          | 0    | 0              |
| SM-6.    | 97.22 | SU-6.    | 96.66 | .56        | .61  | .4             |
| SM-7.    | 97.38 | SU-7.    | 97.5  | - .12      | .07  | .0             |
| SM-8.    | 97.5  | SU-8.    | 92.5  | 5.0        | 5.05 | 25.5           |
| SM-9.    | 96.5  | SU-9.    | 97.5  | -1.0       | .95  | .9             |
| SM-10.   | 96.94 | SU-10.   | 96.25 | .69        | .74  | .5             |
| SM-11.   | 96.8  | SU-11.   | 97.5  | - .7       | .65  | .4             |
| SM-12.   | 97.5  | SU-12.   | 97.5  | 0          | 0    | 0              |
| SM-13.   | 97.2  | SU-13.   | 97.5  | - .3       | .25  | .1             |
| SM-14.   | 97.5  | SU-14.   | 97.5  | 0          | 0    | 0              |
| SM-15.   | 96.38 | SU-15.   | 97.5  | -1.12      | 1.07 | 1.1            |
| SM-16.   | 95.83 | SU-16.   | 96.66 | - .83      | .78  | .6             |
| SM-17.   | 95.69 | SU-17.   | 97.5  | -1.81      | 1.76 | 3.0            |
| JM-18.   | 94.79 | JU-18.   | 97.29 | -2.5       | 2.45 | 6.0            |
| JM-19.   | 97.5  | JU-19.   | 97.5  | 0          | 0    | 0              |
| JM-20.   | 93.12 | JU-20.   | 95.83 | -2.71      | 2.66 | 7.0            |
| JM-21.   | 95.41 | JU-21.   | 94.79 | .62        | .67  | .4             |
| JM-22.   | 97.5  | JU-22.   | 94.77 | 2.73       | 2.78 | 7.7            |
| JM-23.   | 96.83 | JU-23.   | 96.45 | .38        | .43  | .2             |
| JM-24.   | 97.16 | JU-24.   | 96.25 | .91        | .96  | .9             |
| M-25.    | 97.5  | U-25.    | 97.08 | .42        | .47  | .2             |
| M-26.    | 96.04 | U-26.    | 97.5  | -1.46      | 1.41 | 2.0            |
| M-27.    | 97.5  | U-27.    | 96.66 | .84        | .89  | .8             |

## APPENDIX F

## WEIGHTED SUBJECT CHOICES

| Code No. | Value* | Code No. | Value* | Difference | d   | d <sup>2</sup> |
|----------|--------|----------|--------|------------|-----|----------------|
| SM-1.    | 29.    | SU-1.    | 42.    | -13.       | 9.7 | 94.1           |
| SM-2.    | 33.    | SU-2.    | 39.    | - 6.       | 2.7 | 7.3            |
| SM-3.    | 36.    | SU-3.    | 43.5   | - 7.5      | 4.2 | 17.6           |
| SM-4.    | 37.    | SU-4.    | 41.    | - 4.       | .7  | .5             |
| SM-5.    | 38.5   | SU-5.    | 42.    | - 3.5      | .2  | .0             |
| SM-6.    | 32.5   | SU-6.    | 44.    | -11.5      | 7.2 | 51.8           |
| SM-7.    | 37.5   | SU-7.    | 43.    | - 5.5      | 2.2 | 4.8            |
| SM-8.    | 37.    | SU-8.    | 38.    | - 1.       | 2.3 | 5.3            |
| SM-9.    | 37.    | SU-9.    | 43.5   | - 6.5      | 3.2 | 10.2           |
| SM-10.   | 33.    | SU-10.   | 40.5   | - 7.5      | 4.2 | 17.6           |
| SM-11.   | 38.5   | SU-11.   | 45.    | - 6.5      | 3.2 | 10.2           |
| SM-12.   | 39.    | SU-12.   | 42.    | - 3.       | .3  | .1             |
| SM-13.   | 38.    | SU-13.   | 40.    | - 2.       | 1.3 | 1.7            |
| SM-14.   | 39.    | SU-14.   | 39.    | 0          | 0   | 0              |
| SM-15.   | 39.    | SU-15.   | 35.5   | 3.5        | 6.8 | 46.2           |
| SM-16.   | 37.5   | SU-16.   | 39.5   | - 2.       | 1.3 | 1.7            |
| SM-17.   | 32.    | SU-17.   | 37.5   | - 5.5      | 2.2 | 4.8            |
| JM-18.   | 24.5   | JU-18.   | 30.    | - 5.5      | 2.2 | 4.8            |
| JM-19.   | 27.    | JU-19.   | 28.    | - 1.       | 2.3 | 5.3            |
| JM-20.   | 25.    | JU-20.   | 28.    | - 3.       | .3  | .1             |
| JM-21.   | 29.    | JU-21.   | 24.    | 5.         | 8.3 | 68.9           |
| JM-22.   | 29.    | JU-22.   | 30.    | - 1.       | 2.3 | 5.3            |
| JM-23.   | 28.5   | JU-23.   | 30.    | - 1.5      | 1.8 | 3.2            |
| JM-24.   | 25.5   | JU-24.   | 28.    | - 2.5      | .8  | .6             |
| M-25.    | 14.    | U-25.    | 14.    | 0          | 0   | 0              |
| M-26.    | 13.    | U-26.    | 13.5   | - .5       | 2.8 | 7.8            |
| M-27.    | 14.    | U-27.    | 13.5   | .5         | 3.8 | 14.4           |

\*Total Value from Appendix G

## APPENDIX G

## NUMBERS OF SUBJECTS AND WEIGHTED VALUES

| Code No. | Majors* | Minors** | Total Value |
|----------|---------|----------|-------------|
| SM-1.    | 18      | 2        | 29          |
| SM-2.    | 22      | 0        | 33          |
| SM-3.    | 24      | 0        | 36          |
| SM-4.    | 22      | 4        | 37          |
| SM-5.    | 25      | 1        | 38.5        |
| SM-6.    | 21      | 0        | 31.5        |
| SM-7.    | 25      | 0        | 37.5        |
| SM-8.    | 22      | 4        | 37          |
| SM-9.    | 22      | 4        | 37          |
| SM-10.   | 22      | 0        | 33          |
| SM-11.   | 25      | 1        | 38.5        |
| SM-12.   | 26      | 0        | 39          |
| SM-13.   | 24      | 2        | 38          |
| SM-14.   | 26      | 0        | 39          |
| SM-15.   | 26      | 0        | 39          |
| SM-16.   | 25      | 0        | 37.5        |
| SM-17.   | 20      | 2        | 32          |
| JM-18.   | 15      | 2        | 24.5        |
| JM-19.   | 14      | 6        | 27          |
| JM-20.   | 14      | 4        | 25          |
| JM-21.   | 18      | 2        | 29          |
| JM-22.   | 18      | 2        | 29          |
| JM-23.   | 19      | 0        | 28.5        |
| JM-24.   | 15      | 3        | 25.5        |
| M-25.    | 8       | 2        | 14          |
| M-26.    | 6       | 4        | 13          |
| M-27.    | 8       | 2        | 14          |

\*Assigned Value of 1.5

\*\*Assigned Value of 1.0

## NUMBERS OF SUBJECTS AND WEIGHTED VALUES (Continued)

| Code No. | Majors* | Minors** | Total Value |
|----------|---------|----------|-------------|
| SU-1.    | 24      | 6        | 42          |
| SU-2.    | 26      | 0        | 39          |
| SU-3.    | 29      | 0        | 43.5        |
| SU-4.    | 26      | 2        | 41          |
| SU-5.    | 24      | 6        | 42          |
| SU-6.    | 28      | 2        | 44          |
| SU-7.    | 26      | 4        | 43          |
| SU-8.    | 24      | 2        | 38          |
| SU-9.    | 29      | 0        | 43.5        |
| SU-10.   | 23      | 6        | 40.5        |
| SU-11.   | 30      | 0        | 45          |
| SU-12.   | 24      | 6        | 42          |
| SU-13.   | 24      | 4        | 40          |
| SU-14.   | 26      | 0        | 39          |
| SU-15.   | 21      | 4        | 35.5        |
| SU-16.   | 21      | 8        | 39.5        |
| SU-17.   | 25      | 0        | 37.5        |
| JM-18.   | 20      | 0        | 30          |
| JU-19.   | 16      | 4        | 28          |
| JU-20.   | 16      | 4        | 28          |
| JU-21.   | 16      | 0        | 24          |
| JU-22.   | 20      | 0        | 30          |
| JU-23.   | 20      | 0        | 30          |
| JU-24.   | 16      | 4        | 28          |
| U-25.    | 8       | 2        | 14          |
| U-26.    | 7       | 3        | 13.5        |
| U-27.    | 9       | 0        | 13.5        |

\*Assigned Value of 1.5

\*\*Assigned Value of 1.0