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A STUDY OF THE GRADUATION REQUIREMENTS OF  
THE MONTANA PUBLIC HIGH SCHOOLS, 1954-55

by

KENNETH B. CARD


B. S. Montana State College, 1948

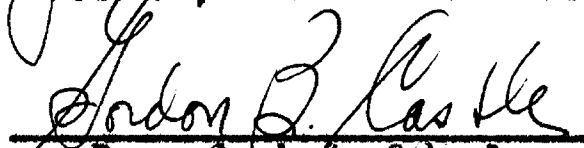
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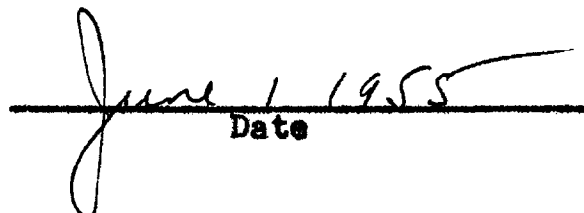
MONTANA STATE UNIVERSITY

1955

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## CHAPTER I

### THE PROBLEM

What does graduation from high school mean? Does it mean that the diploma is a guarantee of quality, and that the student has attained a certain standard of academic achievement? Does it mean that an individual, who in conjunction with his school, has worked with a satisfactory diligence over a period of years terminating at the twelfth grade? Exact knowledge of what graduation from high school means is a difficult proposition, and one that is not easily understood.<sup>1</sup> Even in schools which have rigid requirements for graduation the students may select many of their subjects. A total of at least fifteen units has generally been required for graduation from an approved high school. This factor alone has been the only minimum constant requirement for granting a high school diploma on the national basis. Thirty-eight states required a minimum of fifteen units for graduation as of December, 1948.<sup>2</sup>

The graduation requirements of Montana Public High Schools are formulated from the requirements stipulated by

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<sup>1</sup>Will French, J. Dan Hull, and B. L. Dodds, American High School Administration: Policy and Practice (New York: Rinehart and Company, Inc., 1951), pp. 399-400.

<sup>2</sup>Federal Security Agency, Requirements and High School Students' Programs (U.S. Office of Education, Circular No. 300; Washington, D.C.: Government Printing Office, February, 1949), Table I.

three sources. These sources are: (1) the Montana State Board of Education, (2) the Northwest Association of Secondary and Higher Schools, and (3) the local Boards of Education.

The requirements set forth by the Montana State Board of Education are as follows:<sup>3</sup>

**Requirements for Graduation**

- A. The school year shall consist of a minimum of 175 days of actual teaching, exclusive of all holidays and vacations.
- B. A school day of actual teaching is defined as a day when a majority of all classes meet and recitations are conducted for the greater part of the day. (A day given over entirely for a football game is not given as an actual day taught.)
- C. The minimum length of the recitation period shall be forty-five minutes.
- D. A unit of credit in a course is defined as covering a school year that shall include in the aggregate the following:

Academic subject (without laboratory work) 200 minutes of recitation per week.

Academic and vocational subjects (with laboratory work) 280 minutes per week, divided approximately in the ratio of 120 minutes for recitation and 160 for laboratory work. Subjects requiring no outside preparation such as typewriting and manual training, 400 minutes per week.

- E. Four-year high schools must maintain a minimum of sixteen units for graduation.
- F. Four-year high schools must require and maintain at all times at least four years of English and

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<sup>3</sup>Montana State Board of Education, Standards for Accrediting and Supervision of Secondary Schools in Montana (Helena: Montana State Board of Education, May 5, 1952), p. 4.

Communications, in accordance with the State course of study.

G. Four-year high schools must require one unit in American History and one-half unit in American Government for graduation. A two unit course in American History and Problems of American Democracy, which includes Government, may be substituted for this requirement; such courses in American Government should include the study of local and state, as well as national government structure.

H. Students should not be graduated from high school (except in unusual cases) with less than four years of work. Schools making a practice of graduating students at the end of the junior year will be placed on the warned list.

As indicated on the Annual Report Form of the Northwest Association, which is submitted to the Association by membership schools, the following graduation requirements are in evidence:<sup>4</sup>

#### Standard 4--Graduation Units

The Association will accredit high schools organized on the 10-12 or the 9-12 grade plan. Three-year high schools shall indicate what provision is made in the city system for junior-high school organization. The minimum graduation requirements of three- and four-year high schools shall be respectively eleven and fifteen units.

Interpretation: A unit course of study in a secondary school is defined as a course covering an academic year of not less than 36 weeks that shall include in the aggregate not less than the equivalent of one hundred and twenty - 60-minute hours of classroom work. The length of class periods allowed for all subjects of laboratory nature, such as home economics, industrial arts, and laboratory science courses, for such days as are assigned to laboratory work shall be not less than

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<sup>4</sup>Northwest Association of Secondary and Higher Schools, Annual Report to the Northwest Association (Eugene: Northwest Association of Secondary and Higher Schools).

55 minutes in actual class time daily. In no case should there be less than 172 days when schools actually are in session.

#### PURPOSE OF THE STUDY

The purpose of this study is to encompass the sources that influence Montana High School graduation requirements, that is, to find out what requirements the individual schools have established which supplement those of the State Board of Education and the Northwest Accrediting Association. These local requirements need to be compiled and analyzed in such a manner as to be of benefit to the local boards of education and to the school administrators. The information would be so structured that the local school boards and administrators could evaluate their educational programs in terms of current statewide practices. Student transfers from one school to another present a problem which is common to most secondary schools. Knowledge of statewide graduation requirements would aid school administrators in arriving at satisfactory programs for transfer students. Information provided by this study should be of assistance to those persons working on curriculum improvement throughout the State of Montana. Knowledge of existing practices is one of the first steps that must be taken in the area of curriculum planning and improvement.

#### LIMITS OF THE STUDY

The study does not present a historical account of

high school graduation requirements either on a national or on a statewide level. Nor does the study attempt to establish the complete subject offerings which are found in the secondary schools. The theme maintained throughout the study is, "what requirements must be completed by all graduating students." The study does not propose to determine the types of courses offered to the students such as: college entrance, commercial, general, and industrial. The requirements compiled and analyzed are those of Montana Public High Schools which are required of all graduating students for the school year 1954-55.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

There is an increasing tendency to regard the American high school as part of the common school. Traditionally the elementary school has been regarded as the common school and the high school as a selective institution. Many high schools have reached a point in this transition period whereby all adolescent youth who fall within broad ranges of normality are admitted as regular high school students. These schools also assume that all students who try to profit from the learning activities provided will make normal progress and eventually graduate from high school. Schools supporting the above point of view do not assume that all the high school graduates have attained minimum standards in subject matter or have mastered prescribed blocks of subject matter.

They assume that the school has done its best to prepare each student for living and that each student has made a reasonable effort to gain from his school experience. . . . The fact of high school graduation has never guaranteed much in particular about any graduate, and time has done nothing to assure the world that graduates have attained a common fixed standard of acceptability.<sup>1</sup>

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<sup>1</sup>Will French, J. Dan Hull, and E. L. Dodds, American High School Administration: Policy and Practice (New York: Rinehart and Company, Inc., 1951), p. 377.

## CARNEGIE UNIT

In general, graduation requirements are stated in terms of a certain number of units. The "unit" is a device for measuring high school work in terms of credits based on time spent in the classroom. The present concept of unit has been designated as the Carnegie Unit. This measure is defined as "a course of five periods weekly throughout an academic year of the preparatory school."<sup>2</sup>

The Carnegie Unit was first stated in 1909 by the Carnegie Foundation for the Advancement of Teaching. It was approved by the College Entrance Examination Board in November 1909.<sup>3</sup>

The original purpose of the Carnegie Unit was to "afford a standard of measurement for the work done in secondary schools and thereby to facilitate transfer of credits between schools and colleges."<sup>4</sup> The four year high school was selected as a basis, and it was assumed (1) that the length of the school year was from thirty-six to forty

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<sup>2</sup>Carnegie Foundation for the Advancement of Teaching, Annual Report, 1909, p. 38, cited by Harold Spears, The High School For Today (New York: American Book Company, 1950), p. 318.

<sup>3</sup>U.S. Department of Health, Education, and Welfare, The Carnegie Unit: Its Origin, Status, and Trends (Office of Education, Bulletin No. 7; Washington D.C.: Government Printing Office, 1954), p. 5.

<sup>4</sup>Ibid., p. 4.

weeks, (2) that a period was from forty to sixty minutes long, and (3) that a subject was studied for four or five periods a week.<sup>5</sup>

Information presented in a recent survey of college admission practices substantiate that the majority of high schools and colleges still subscribe to the provisions of the Carnegie Unit.<sup>6</sup> The survey further indicates that there is more opposition toward the use of the Carnegie Unit on the part of the high schools than there is on the part of colleges. However, there is no large proportion of high schools pressing for some type of credit counting other than the Carnegie Unit.<sup>7</sup>

Current comment on and criticism of the Carnegie Unit seem to indicate that it interferes with good education. Some of the ways that it adversely affects high school education are:<sup>8</sup>

- (1) It lends prestige to those subjects acceptable to colleges in terms of entrance Units, and discriminates against other subjects excellent in their own right but as yet unacceptable for Unit measure.
- (2) It considers of equal magnitude all subjects for which classes meet an equal number of minutes per

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<sup>5</sup>Ibid.

<sup>6</sup>Arthur E. Traxler and Agatha Townsend, Improving Transition from School to College (New York: Harper and Brothers, 1953), pp. 62-64.

<sup>7</sup>Ibid.

<sup>8</sup>Office of Education, Bulletin No. 7, op. cit., p. 19.



semester, provided outside pupil preparation is required. Five periods of English is equal to 5 periods of mathematics, etc.

- (3) It tends to make inflexible the daily and weekly time schedules of the school, for the Carnegie Unit nourishes the idea that a class should meet one period a day five times a week.
- (4) It restricts the development of a more functional curriculum based upon students' abilities, interests, and life-needs, because it has been difficult for the high school to obtain units of credit acceptable to the colleges in certain more functional subjects.
- (5) It measures quantitatively experiences in different subjects and in different schools and counts them as similar in outcome.
- (6) It ranks pupils in graduating class despite the fact that few of them ever have exactly the same program of studies and despite the fact that seldom are all the years in school counted in the ranking of the pupil.
- (7) It measures a high-school education (and diploma) in terms of time served and credits earned by the pupil.

Even though many new subjects have been added and new names assigned to the high school curriculum, the emphasis upon units and schematic arrangements of credits for subjects required for graduation has remained essentially the same since 1909. The amount of work takes precedence over the quality of such work. Pupils become credit chasers; a trait that is carried throughout high school and likely through college. Credits and units become the major purpose of high school for the students. "The argument that the credit system is the traditional means for the achievement of educational competence and fundamentals does not appear valid. To

facilitate a major purpose of education -- the development of competence in learning -- it may be necessary to supplement or supplant the credit system as a basic measure of high school work."<sup>9</sup>

The objectives of the high school are changing. Originally the secondary school had as its chief goal to prepare the youth for college. Now, college preparation is only one of the many purposes of secondary education. The high school is being recognized more and more for its task of preparing youth for the many aspects of modern living. This changing aspect of present day secondary education places the Carnegie Unit under serious question. "Psychological research has shown that units of subject matter are not of equal difficulty, and students enter high school with varying degrees of subject matter already achieved."<sup>10</sup> Also shown is the fact that some youth learn the required subject matter much faster than others, and that there are wide differences in one type of subject matter as compared to another. "The widespread reluctance to relinquish the unit method of reporting is due not so much to predilection of the Carnegie Unit itself as to the difficulty of finding any other acceptable standard to replace it."<sup>11</sup>

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<sup>9</sup>Ibid., p. 22.

<sup>10</sup>Ibid., pp. 24-25.

<sup>11</sup>Traxler, op. cit., p. 5.

As secondary education becomes more universal and compulsory, the problems centering around the granting of credits and diplomas become more complex. Knowledge that many students, regardless of their best efforts, are unable to master certain required courses is one of these problems. To require a youth to attend high school and then offer him courses that are beyond his productivity is not conducive to good educational practice. Many new functional courses and courses of lower achievement standards have been set up to provide educational opportunity for all youth. Along this same line, graduation and diploma requirements have been revised. Some secondary school leaders advocate granting a diploma after four years of high school attendance. Their requirement is that the student must make an honest effort in the required subjects and any repeats or failures would be made up in the elective courses. Other school leaders who object to the "time-serving-age" basis for graduation, advocate different instructional programs for different youth. They would offer sequences of courses such as college preparatory, general homemaking, industrial, agricultural, business and grant a distinct diploma for each. Still other school leaders advocate granting a high school diploma to only those students of high academic scholarship. The students not meeting this academic level would be awarded a "school-leaving" certificate. Still others argue that the above mentioned differentiations in high school graduation

practices are undemocratic and therefore they reject such systems. Also, due to the growing emphasis upon a comprehensive general education during the high school period, rather than technical and semi-professional specialization, is regarded by many as inconsistent with the granting of diplomas in specialized fields.<sup>12</sup>

The report contained in the Office of Education Bulletin number seven, 1954, proposes:<sup>13</sup>

. . . (1) that a formal diploma be granted to each pupil who has attended high school regularly for a required number of years and has done his best while there, and (2) that his diploma (preferably on the reverse side) be accompanied by a qualitative statement summarizing all the positive achievements the pupil's cumulative record may show.

French sets forth the following guiding principles as to who shall attend and graduate from high school:<sup>14</sup>

- (1) All youth wishing to attend high school should have an opportunity to do so until at least 18 years of age.
- (2) Educational programs appropriate to the needs and abilities of all should be provided.
- (3) The chief objectives of the high school should be to help youth to improve his environment and live better in it.
- (4) Conditions within the schools should help all youth toward maximum success and tolerate a minimum of failure.

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<sup>12</sup>Office of Education Bulletin, No. 7, op. cit., pp. 45-46.

<sup>13</sup>Ibid.

<sup>14</sup>Will French, "What Should Graduation from the Secondary School Mean?" The Bulletin of the National Association of Secondary-School Principals, 24:46-51, December, 1940.

- (5) When under these conditions the youth and his school reach a point of diminishing returns, and the school can do nothing more to warrant his further stay, then the objectives of his formal education should be regarded as attained and a suitable certificate or diploma awarded.
- (6) When appropriate programs of instruction are provided for all, pupils who have put forth their best efforts should be graduated; those who have not put forth good efforts, especially in elective courses, should not continue as regular pupils, but be guided into other forms of education--school-work plans, part-time schools, apprenticeship programs, etc.
- (7) The graduation certificate or diploma should recognize all essential types of learning and should contain or refer to qualitative data which are objective and meaningful in character, and supplemented from the permanent record on legitimate demand.
- (8) After graduation, opportunities for part-time, continuation education should begin for many of the graduates.
- (9) For those needing financial aid to stay in high school, work programs and similar forms of help should be provided especially during the compulsory attendance period.
- (10) Every effort possible should be made to involve the general public, especially the parents, both in effecting the changes needed in high-school graduation and diplomas, and in understanding what these changes mean.

Several states are working to improve their procedures for evaluating high school graduates for college entrance. These changes giving less emphasis to the Carnegie Units and more to qualitative types of evidence were recently summarized as follows by Fowler:<sup>15</sup>

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<sup>15</sup>Burton P. Fowler, "Are We in Need of a New Plan for Evaluating Student Qualifications for College Entrance?" The Bulletin of the National Association of Secondary-School Principals, 35:92-98, April, 1951.

- (1) Gather more data on each pupil through checklists, scales, paragraph summaries, personality sketches, summaries of non-classroom achievements, and other narrative data describing motives, backgrounds, etc.
- (2) Abolish fixed patterns of subject-matter requirements, number of credits, class percentiles, etc., except when used in connection with other pertinent and more meaningful data.
- (3) Limit entrance tests to reading, writing, and general aptitudes and use all other test data chiefly for guidance and placement within the colleges.
- (4) Change college-entrance procedures from hurdles for excluding students to processes concerned with understanding, guiding, and helping them.

Changes in the attitudes of colleges have brought about a decreasing emphasis by the colleges upon Carnegie Units, and their domination of the high school is weakening.<sup>16</sup>

#### COLLEGE ENTRANCE REQUIREMENTS

Colleges continue to admit students on the basis of six general criteria (1) graduation from an accredited high school, (2) a minimum number of prescribed units in designated subjects, (3) rank in class or average of secondary school marks, (4) recommendation of the principal, (5) tests of aptitude and achievement, and (6) personal qualities, including evidence of good moral character.<sup>17</sup> There is evidence which indicates a trend toward a more liberal

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<sup>16</sup>Office of Education Bulletin, No. 7, op. cit., p. 51.

<sup>17</sup>Traxler, op. cit., p. 1.

entrance policy on the part of the colleges.<sup>18</sup> Such a trend is typified by the change in entrance requirements made by the units of the greater Montana University system. The following entrance requirements were taken from the 1951-1953 University of Montana Bulletin:<sup>19</sup>

The completion of a high school or preparatory course of four years, including at least fifteen units of work, is the standard for regular admission. A unit is the amount of work represented by the successful completion of one subject pursued for a school year of not less than thirty-six weeks, with five recitations per week, each recitation period being not less than forty-two minutes net. Two periods of laboratory, shop, or drawing work count as one recitation.

Students must offer three units of English, one of American history and government, and at least two other units from each of three of the following groups: (a) mathematics: algebra, plane and solid geometry, trigonometry, general mathematics; (b) history and social science: Greek, Roman, medieval, modern or English history, civics, community civics, economics, sociology, citizenship, economic or industrial history, geography, government, psychology, vocations; (c) laboratory science: physics, chemistry, biology, botany, zoology, physiology, agriculture, astronomy, geology, physiography, general science, home economics; (d) foreign languages.

The requirements listed above demonstrate the restrictive influence which was placed on the secondary schools of Montana by the institutions of higher learning. According to these requirements a student would have ten units of his high school work prescribed for him by the college entrance requirements. In contrast to the above restrictive

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<sup>18</sup>Ibid.

<sup>19</sup>Montana State University, University of Montana Bulletin: 1951-1953 Catalog Issue and Official Directory List (Missoula: Montana State University, Series No. 436, July, 1951), p. 20.

requirements are those currently being used by the units of the greater Montana University. These requirements are indicated in the 1953-1955 Montana State University catalog, and are as follows:<sup>20</sup>

Graduates of any fully accredited high school or academy are admitted to regular standing. The completion of a high school or preparatory course of four years, including three years of English and one year of American history and government, is the standard for regular admission.

.....

HIGH SCHOOL PREPARATION. Although general admission to the University is granted as indicated above, additional units of high school work are needed for certain professional curricula. High school courses should be chosen to meet requirements for the curriculum selected, otherwise, additional time may be required in college. The student should check the curriculum of his choice and take in high school those courses listed as "needed" where such courses are indicated under "High School Preparation." The "recommended courses" under "High School Preparation" would be helpful, but no loss of time would be involved if the student did not take them in high school.

The important feature to be noted from the above statements is that the high school student contemplating college attendance should base his program on "needed" and recommended courses stipulated by his prospective college department.

The Eight-Year Study which was conducted by the Progressive Education Association found that the colleges

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<sup>20</sup> Montana State University, University of Montana Bulletin: 1953-1955 Catalog Issue and Official Directory List (Missoula: Montana State University, Series No. 451, October, 1953), p. 26.



can secure all the information they need for the selection of candidates for admission without prescribing the secondary curriculum.<sup>21</sup>

As mentioned previously in this study the American high school was originally concerned with preparing students for college entrance. The secondary school has specialized in college preparation longer than it has worked with the concept of general education or terminal education. "Consequently, the college entrance requirements still have more influence on high school programs than the entrance requirements for most specific occupations."<sup>22</sup>

Whatever restrictive and controlling influence colleges have over secondary schools is exercised largely by means of unit and course prescriptions. So long as a large proportion of American colleges make definite prescriptions of approximately two-thirds of the units of high school study for college preparatory pupils, with the unit defined as a certain number of class periods of specified minimum length, the high schools supplying students to these colleges are going to be under a good deal of control from above.<sup>23</sup>

Regarding the college prescriptions in subject fields an analysis of 419 colleges revealed that in general the pattern of requirements remains practically the same as in past years. The usual requirements being three units of English, two of mathematics, two of foreign language, one of social studies, and one of science. The prescription

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<sup>21</sup>Wilford M. Aikin, The Story of the Eight-Year Study, (New York: Harper and Brothers, 1942), p. 122.

<sup>22</sup>Traxler, op. cit., pp. 19-20.

<sup>23</sup>Ibid., p. 61.

on the part of the high schools appears to be greater than that indicated in the entrance requirements of most colleges. Many of the secondary schools plan their programs on the most conservative college entrance requirements. These schools probably make the assumption that because they are sending their graduates on to many different colleges, some of which have liberalized their entrance requirements, that the high schools can not justify making their own prescriptions less rigid.<sup>24</sup>

#### STATE REQUIREMENTS FOR HIGH SCHOOL GRADUATION

A study was conducted by the U.S. Office of Education on State minimum requirements for graduation from secondary schools as of January 1948. The following summary reveals the common requirements and special variations among States:<sup>25</sup>

- (1) Three or more years of English are required by forty-one of the forty-eight States.
- (2) In the social studies, three units are required by only ten States, and four units by only one (Iowa). Requirements not exceeding one and one-half units or no requirements were present in twenty-one States. Since a study of American history and the Federal

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<sup>24</sup>Ibid., pp. 69-72.

<sup>25</sup>U.S. Office of Education, Circular No. 300, op. cit., pp. 5-6.

and State constitutions is mandatory in many States, one and one-half units are probably required to meet statutory minimum and the three unit requirement for English (which is fairly well established) prevail in the remaining eighteen States.

- (3) In two other subject fields requirements are reported from more than half of the States: one or more units in science are required by twenty-eight States; one or more units of mathematics by twenty-one States.
- (4) Requirements in health and physical education are reported by thirty-five States. In this field the time requirement and units of credit vary from State to State.

#### SCHOOL REQUIREMENTS

Lawrence E. Vredevoe, Professor of Education at the University of California, Los Angeles in a recent article, "The Upside-down Program of the Secondary School," contends that the secondary school does not recognize the student's increase in maturation and physical ability.<sup>26</sup> A review of the programs of studies in seven hundred secondary schools by Vredevoe revealed that in many cases the school tasks

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<sup>26</sup>Lawrence E. Vredevoe, "The Upside-down Program of the Secondary School," The Bulletin of the National Association of Secondary-School Principals, 38:18, December, 1954.

were decreasing in challenge and difficulty while the individual was increasing in physical and learning ability. He states that "this was the result of the system of requirements that was found in these secondary schools." Students in many cases were found to be doing their hardest work during their first years in high school and not during the time when they are most fit for it.<sup>27</sup>

A student is usually informed of the requirements necessary for graduation before he begins his high school work. These requirements are completed by the student as early as possible, which permits him to take it easy during the senior year. A review of the programs of the seven hundred schools studied by Vredevoe revealed the following facts relative to high school graduation.<sup>28</sup>

- (1) Six hundred forty-two schools required three years of English for all students. These were required in grades 9, 10 and 11. (Three-year senior high schools accepted work in the ninth grade of junior high schools.) Three hundred ninety-eight required four years of English for college preparatory students. Six hundred forty-two of the seven hundred required no English of general course students in the twelfth grade.
- (2) Five hundred seventeen required one year of mathematics and four hundred fifty-three of this group placed the requirement in the ninth grade. This meant that, although students had just completed six to eight years of arithmetic since first grade, they were required to take one more and then none other before graduation.

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<sup>27</sup>Ibid., pp. 17-19.

<sup>28</sup>Ibid., pp. 19-20.

- (3) Three hundred ninety-seven of the schools required one year of science which stipulated biology or life science in grades nine or ten. Two hundred three of the schools had no science requirement for graduation.
- (4) Requirements for foreign languages for non-college preparatory students were found in relatively few public secondary schools. In those where there was a requirement, provision was made for a waiver of the requirement in most cases. The trend in both public and private schools was toward the elimination of this requirement for the general-course student. Four hundred eighty-nine of the seven hundred did require two years of foreign language for those preparing for college. All of these recommended that this work be taken in the ninth and tenth or tenth and eleventh grades.
- (5) Five hundred seventy-eight of these schools required two years of social studies. Five hundred ninety-one required American history in either the eleventh or twelfth grades. Civics was also required in most of these schools in the twelfth grade for those who had not taken a course previously. It was interesting to note that, if there was a requirement in the twelfth grade, it was either social studies or English.
- (6) The requirement for physical education and health and practical or industrial arts depended upon facilities. Few schools had any requirements relative to music and art after the eighth grade.

The study by Vredevoe indicated that most students could have completed their requirements for graduation by the end of their junior year. In answering the question, "What difference does it make when a student takes a subject as long as he takes it during his high school course?" Vredevoe pointed out that the student learns best when his work has meaning and value to him.<sup>29</sup>

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<sup>29</sup>Ibid., p. 20.

## CHAPTER III

### PROCEDURE

Source of data. The information used in this study was obtained from questionnaire results completed by principals of Montana Public High Schools that are listed in Montana Educational Directory, 1954-1955.<sup>1</sup> A letter of explanation and instructions<sup>2</sup> together with two copies of the questionnaire<sup>3</sup> were mailed to each of the 172 Montana Public High School Principals February 1, 1955. A postcard follow-up<sup>4</sup> was mailed the twelfth of February to the fifty-five principals who had not returned a completed questionnaire. The second follow-up consisting of a letter<sup>5</sup> and an additional copy of the questionnaire was mailed February twenty-third to the thirty-six principals who had not yet responded. The third and final follow-up<sup>6</sup> was mailed the seventh of March to the fourteen principals who had not returned a completed questionnaire. From the time of the third follow-up to the

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<sup>1</sup>Montana State Department of Public Instruction, Montana Educational Directory, 1954-1955 (Helena: Montana State Department of Public Instruction), pp. 5-26.

<sup>2</sup>See Appendix A.

<sup>3</sup>See Appendix B.

<sup>4</sup>See Appendix C.

<sup>5</sup>See Appendix D.

<sup>6</sup>See Appendix E.

first of April, six completed questionnaires were received. This brought the total of questionnaires received to 162 out of a possible 172 sent out for a response of 95.4 per cent.

Grouping of the schools. Prior to tabulation of the data the schools were grouped according to enrollment. The groups were those set forth by Barnes:<sup>7</sup>

Group	I	351	students and over
Group	II	151-350	students
Group	III	76-150	students
Group	IV	41-75	students
Group	V	0-40	students

The enrollment figures were taken from the Montana Educational Directory, 1954-1955.<sup>8</sup> To standardize the enrollment figures, all high schools were considered on the four year plan. For high schools that were listed in the Directory as grades ten, eleven, and twelve, the enrollments of their respective ninth grades were added to the senior high totals. Table I, page 23, indicates the group division of the high schools as used in this study. The number of schools represented by each group are as follows: group I, sixteen, group II, thirty-three, group III, forty, group IV, forty-two, and group V, thirty-three. As shown from Table I, the state enrollment coverage given by the 95.4 per cent returns

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<sup>7</sup>Antrim E. Barnes, "Educational Offerings in Montana High Schools 1945-47," (unpublished Master's thesis, Montana State University, June, 1948), pp. 18-21.

<sup>8</sup>Montana Educational Directory, 1954-1955, loc. cit.

TABLE I  
NUMBER AND SIZE OF THE ACCREDITED PUBLIC HIGH SCHOOLS IN MONTANA, 1954-55,  
WITH INDICATION OF GROUPING OF SCHOOLS USED IN THIS STUDY

	Schools concerned in this study						Schools not in study	Total all schools
	Enrollment groups							
	I	II	III	IV	V	Total		
Schools per group	16	33	40	42	33	164	8	172
	9.3	19.2	23.3	24.4	19.2	95.4	4.6	100
Range of enrollment	351 to 2,118	151 to 350	76 to 150	41 to 75	12 to 40			
Average enrollment	800	222	109	58	28	177	35	170
Number of students	13,849	7,340	4,365	2,431	935	28,920	280	29,200
Per cent of enrollment	47.4	25.1	14.9	8.3	3.3	99.0	1.0	100



is 99 per cent of the total public high school enrollment as shown in the 1954-55 Directory. One school completed the questionnaire on the basis of grades ten, eleven, and twelve. This return necessitated securing additional information on the ninth grade requirements of that particular school system. A questionnaire containing specific notations was sent to the junior high principal who supplied the requested data. The questionnaire received from the senior high school and the one from the junior high school provided the data necessary to compute the graduation requirements on the four-year plan. Thus, comparability was achieved for all returns.

Recording the data. In preparation for recording the data, a vertical listing of the schools participating in the study was made according to enrollment size. Space was provided between the groups previously described to allow computation to be made for each category. A horizontal listing of the items appearing on the questionnaire was then made. Squared paper containing eight lines to an inch was used for the master sheet. Tabulation consisted of marking an "X" in the appropriate square according to the school and the questionnaire response. After all the questionnaires were tabulated, the total for each vertical column according to enrollment group was made and transcribed immediately below the column. After all the vertical columns for all the enrollment groups were tallied, the percentage was

computed for each column. This material constitutes the basic data used in this study. The individual column summaries were used to prepare the tables which appear in this thesis.

## CHAPTER IV

### MONTANA PUBLIC HIGH SCHOOL GRADUATION REQUIREMENTS

The purpose of this chapter is to present the basic data obtained from the principals of Montana Public High Schools concerning high school graduation requirements. Organization of the material will follow this sequence: (1) how the student is informed of graduation requirements, (2) class periods, units, and solids, (3) which students may carry more than the normal load of solids, (4) specific subject requirements, (5) subject requirements not designated under the specific subject requirements, (6) transfer student, (7) sub-standard diploma, and (8) comments by the principals.

#### HOW THE STUDENT IS INFORMED OF GRADUATION REQUIREMENTS

An assumption was made that students receive information relative to graduation requirements from three general methods. These being by means of: (1) a student's handbook, (2) specific mimeographed or printed materials, and (3) verbal instructions either in a group situation or as an individual. As shown in Table II, verbal instructions given both in group sessions and individually was the most prevalent method. This method was used by 70 per cent of schools. One school did not use verbal instructions. As to the method of handbooks, only 19 per cent of the schools offered such a publication. The indication was that the smaller the school

TABLE II

HOW THE STUDENT IS INFORMED OF HIGH SCHOOL GRADUATION REQUIREMENTS

Enrollment Groups												Total all Groups
over 350		I	II	III	IV	V						
#	%	#	%	#	%	#	%	#	%	#	%	#
HANDBOOK												
Furnished all students												
Available at a cost												
None available												
No response												
MIMEOGRAPHED MATERIALS												
Furnished all students												
Furnished students and parents												
None available												
No response												
VERBAL INSTRUCTIONS												
Group sessions												
Individual explanations												
Group and individual												
None given												
No response												

the less likely the use of a handbook. Percentage-wise, the range was from 44 per cent of the group I schools down to 9 per cent of the group V schools. The same procedure was noted in the use of specific mimeographed or printed materials. However, the percentages were higher in all categories, with 46 per cent of all schools providing this method of informing the student. Only seventeen schools indicated that they provided such materials to both parents and students. Ten of these schools were in the group IV enrollment category.

#### CLASS PERIODS, UNITS, AND SOLIDS

In order to establish a common base, the terms "unit" and "solid" were defined in the questionnaire. A unit was defined as: the measure whereby a course meets five periods weekly throughout an academic year. A solid was given as: a subject in which the class meets five times a week, and usually requires preparation in addition to the class hour, and grants full credit. The number of class periods was found to be either six, seven, or eight. As shown in Table III: group I schools used the six period schedule most often; groups II and IV used the seven period schedule most frequently; and, groups III and V utilized the eight period schedule most. The generality may be offered that as the size of the school decreases, the greater the tendency becomes to use an eight period daily schedule.

The number of units required for graduation was found

TABLE III

NUMBER OF DAILY CLASS PERIODS AND THE NUMBER OF UNITS AND SOLIDS REQUIRED  
FOR HIGH SCHOOL GRADUATION, WITH INDICATION OF THE NUMBER  
OF SOLIDS CONSTITUTING A NORMAL LOAD FOR STUDENTS

	Enrollment Groups										Total all Groups
	over 350	I	II	III	IV	V	VI	VII	VIII	IX	
DAILY CLASS PERIODS											
6	13	82	11	33	13	33	5	12	7	21	49
7	2	12	14	43	11	27	19	45	5	15	51
8	1	6	8	24	16	40	18	43	21	64	64
UNITS FOR GRADUATION											
15			1	3			1	2			1
15½			30	91	37	93	41	98	30	91	152
16	14	88	1	3							1
16½	1	6	1	3							1
17	1	6	1	3	3	7			3	9	8
SOLIDS FOR GRADUATION											
12					1	2					1
13	2	12	1	3	2	5	1	2			6
14	3	19	1	3	2	5	1	2	5	15	12
14½			1	3							1
15	7	44	22	67	25	63	27	65	11	33	92
15½					1	2					1
16	2	12	8	24	9	23	13	31	16	49	48
No requirement	2	12									2
SOLIDS FOR NORMAL LOAD											
4	15	94	33	100	40	100	42	100	33	100	163
4 or 5	1	6									1

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to be constant, with 93 per cent of the schools requiring sixteen units.

A spread between fifteen and sixteen occurred on the matter of the number of solids required for graduation. A majority (56 per cent) of the schools required fifteen solids, and 29 per cent had a requirement of sixteen solids. Two schools, both in group I, did not require any given number of solids for graduation.

Another factor which was found to be quite constant was that of the number of solids constituting a normal student load, as 99 per cent of all schools indicated that the normal load was four solids.

#### STUDENTS PERMITTED TO CARRY MORE THAN NORMAL NUMBER OF SOLIDS

Situations which permit students to take more than the normal number of solids during any given reporting period centered around four possibilities. Replies indicated that 79 per cent of all the schools allowed any student who had maintained above average grades during the preceding reporting period, to carry more than a normal load of solids. As shown in Table IV, 62 per cent of the schools permitted senior students needing additional credits for graduation to pursue more than a normal subject load. Also, 31 per cent of the schools indicated that a transfer student needing additional credits to satisfy local requirements could enroll

TABLE IV  
STUDENTS PERMITTED TO CARRY MORE THAN THE NORMAL LOAD OF SOLIDS

	Enrollment Groups											
	over 350		151 to 350		76 to 150		41 to 75		12 to 40		Total all Groups	
	I		II		III		IV		V			
	#	%	#	%	#	%	#	%	#	%	#	%
Any student upon request									1	3	1	.6
Senior needing additional credits for graduation	12	75	20	61	26	65	26	62	18	55	102	62
Any student having maintained above average grades	15	94	27	82	35	88	30	71	23	70	130	79
Transfer student needing to satisfy local requirements	6	38	6	18	11	28	17	41	11	33	51	31
Individual case	2	12	7	21	4	13	4	10	2	6	19	12
Junior or senior ranking in upper 25% of class	1	6	1	3			3	7	2	6	7	4
Students repeating a course			1	3			1	2			2	1
Commercial students									1	3	1	.6
All students encouraged to take five solids									1	3	1	.6



for more than the normal load of solids. Twelve schools reported that they did not have any set rules regarding additional subject load. These schools indicated that each request for taking extra courses was considered on an individual basis.

An interesting finding was that one school encouraged all students to carry five solids throughout the entire four years of high school.

#### SPECIFIC SUBJECT REQUIREMENTS

The specific subject requirements will be analyzed on the following basis: (1) the number of units required, and of these required units, how many may be elective? (2) the specific subjects that must be taken by all students, and (3) the subjects that may be taken to complete the requirement of a specific course. Major courses that will be considered are English, social studies, mathematics, science, and physical education.

English: All the schools participating in this study required four units of English. Of these four units, 48 per cent of the schools indicated that their programs were offered to complete the basic requirement. As shown in Table V, schools in groups III, IV, and V comprised most of the schools not offering electives. One school in group I and nine schools in group II did not offer electives to

TABLE V  
NUMBER OF UNITS OF ELECTIVE SUBJECTS THAT MAY BE  
USED TO SATISFY THE ENGLISH REQUIREMENT

Enrollment Groups											
over 350			151 to 350			76 to 150			41 to 75		
I			II			III			IV		
#	%		#	%		#	%		#	%	
ELECTIVES THAT MAY BE USED TO SATISFY REQUIREMENT			12 to 40			V			Total all Groups		
0	1	6	9	27	18	45	28	67	22	67	78
1	1	6	2	6	2	1	1	2	5	15	9
1	14	88	19	58	22	55	13	31	6	18	74
2			3	9					3		3

satisfy the English requirement. Seventy-four schools allowed the student to take electives to satisfy one unit of the English requirement. Nine schools allowed one-half unit to be elective, and three schools permitted two units to be composed of elective subjects.

Specific subjects that must be taken in the field of English, as shown in Table VI, were freshman, sophomore, junior, and senior English, speech, and journalism. All of the schools required freshman and sophomore English to be taken by their students. Three schools did not require junior English, and seventy-six schools did require senior English. Nine schools required their students to complete one-half year of senior English. Speech and journalism were required by only two schools. A study of Table VI reveals that 54 per cent of the schools permitted a student to select the subject or subjects needed to complete his fourth year of English.

The subjects offered as electives to complete the English requirement were ranked by frequency in the following order: senior English, 49 per cent; journalism, 43 per cent; speech, 37 per cent; drama, 9 per cent; business English, 3 per cent; library, 2 per cent; debate, junior English and foreign language, 1 per cent; and, communications, creative writing and word clues, .6 per cent. School groups I, II, III, and IV, in that order, had the greatest number of elective offerings. A general statement may be made therefor:

ENGLISH SUBJECTS REQUIRED FOR GRADUATION, AND ELECTIVE SUBJECTS THAT MAY BE USED TO SATISFY THE ENGLISH REQUIREMENT

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that the greater the enrollment size of a school, the greater the number of elective offerings in English that are available.

Social science: As indicated in Table VII, the number of units required in the social science area varied from one to four. Requirements of two and three units were the most prevalent. Fifty-five schools required two units and fifty-three schools required three units. Next in ranking was the requirement of one and one-half units, with thirty schools using this category. Three schools had a requirement of one unit, and seven schools required four units.

Table VII also indicates that 72 per cent of the schools did not offer any electives to complete the social science requirement. The implication being that nearly three-fourths of the schools have set definite social science subject requirements that all students must meet. Only 18 per cent of the schools permitted the student to elect one or more units of social science subjects to be applied toward completing his requirements.

A wide range of subjects was found to exist relative to the required courses in the social science field. As shown in Table VIII, American history, civics (government), world history, and problems of American Democracy were the subjects required most frequently. American history was required by 100 per cent of the schools, while civics was required by 70 per cent of the high schools. World history

NUMBER OF UNITS OF SOCIAL SCIENCE REQUIRED FOR GRADUATION, AND INDICATION OF THE NUMBER OF UNITS OF ELECTIVES THAT MAY BE USED TO SATISFY THE SOCIAL SCIENCE REQUIREMENT

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TABLE VIII

## SOCIAL SCIENCE SUBJECTS REQUIRED FOR GRADUATION

	Enrollment Groups										Total all Groups
	I	II	III	IV	V	over 350	151 to 350	76 to 150	41 to 75	12 to 40	
	#	%	#	%	#	%	#	%	#	%	#
American (U.S.) History	16	100	33	100	40	100	42	100	33	100	164
Citizenship							1	2	1	3	2
Civics (Government)	7	44	26	79	27	67	31	74	24	73	115
Consumer Education							1	2	1	3	2
Economics			1	3	1	2	1	2	1	3	4
Guidance and Vocations			1	3	1	2	3	7			5
Modern History					1	2					1
Montana Government											3
Problems of American Democracy	3	19	4	12	13	33	8	19	1	3	1
Social Problems			1	3	2	5			4	12	1
Social Studies (9th Grade)	1	6	7	21	5	13	2	5	3	9	20
Social Studies (12th Grade)	3	19	2	6	1	2	2	5			3
Sociology					2	5			2	6	18
World Geography			1	3	1	2	1	2	2		4
World History	1	6	8	24	17	43	12	29	12	36	8
											2
											50
											31

was required by 31 per cent, and problems of American Democracy was required by 20 per cent of the secondary schools.

Electives that could be taken to satisfy the social studies requirement grouped mainly around four subjects, as shown in Table IX. These subjects, listed in order of frequency were: (1) world history, (2) sociology, (3) economics, and (4) problems of American Democracy.

Mathematics: The area of mathematics is the first area considered whereby a number of schools did not require any units for graduation. As revealed in Table X, thirty-one schools did not have a mathematics requirement. However, 49 per cent of the schools did require two units of mathematics. Over half of these schools requiring two units, came from groups IV and V. One unit of mathematics was required by 31 per cent of the schools, with the schools from groups I, II, and III providing the greatest number of entries.

The number of electives that could be used to help satisfy the mathematics requirement ranged from zero to two units. Eighty-five schools permitted the use of one elective, nineteen schools permitted using two electives, and sixty schools did not offer any mathematics electives.

Algebra, as shown in Table XI, was the subject most often required in the schools. Sixty-seven schools required elementary algebra. Of these sixty-seven schools, fifty of



TABLE IX  
SOCIAL SCIENCE SUBJECT ELECTIVES THAT MAY BE USED TO  
SATISFY THE SOCIAL SCIENCE REQUIREMENT

	Enrollment Groups												Total all Groups
	over 350		151 to 350		76 to 150		41 to 75		12 to 40				
	I		II		III		IV		V				
	#	%	#	%	#	%	#	%	#	%	#	%	
Air Age Education			1	3							1	.6	
Business Law			1	3							1	.6	
Citizenship	1	6			1	2				1	3	2	
Civics (Government)	2	13	2	6	1	2	2	5	2	6	9	6	
Conservation							1	2			1	.6	
Economics	1	6	5	15	4	10	10	24	5	15	25	15	
Foreign Language			1	3							1	.6	
Guidance and Vocations			1	3			1	2			2	1	
Modern History			1	3					1	3	2	1	
Montana History							1	2	1	3	2	1	
Problems of American Democracy	2	13	3	9	2	5	5	12	4	12	16	10	
Psychology	1	6	1	3			2	5			4	2	
Social Studies (9th Grade)	3	19	2	6	1	2	3	7	3	9	12	7	
Social Studies (12th Grade)	2	13			1	2					3	2	
Sociology	1	6	4	12	4	10	11	26	6	18	26	16	
World Geography			3	9	2	5	3	7	3	9	11	7	
World History	2	13	5	15	4	10	11	26	4	12	26	16	

**TABLE X**  
**NUMBER OF UNITS OF MATHEMATICS REQUIRED FOR GRADUATION, AND INDICATION OF THE**  
**NUMBER OF UNITS OF ELECTIVES THAT MAY BE USED TO**  
**SATISFY THE MATHEMATICS REQUIREMENT**

		Enrollment Groups												Total all Groups	
		over 350		I		II		III		IV		V			
		#	%	#	%	#	%	#	%	#	%	#	%	#	%
REQUIRED	0	5	31	8	24	6	15	7	17	5	15	31	19		
	1	10	63	13	40	16	40	9	21	4	12	52	31		
	2	1	6	12	36	18	45	26	62	23	70	80	49		
	2½									1	3	1	6		
ELECTIVES THAT MAY BE USED TO SATISFY REQUIREMENT															
0		6	37	9	27	15	38	14	33	16	49	60	37		
1		10	63	18	55	16	40	26	62	15	45	85	52		
2				6	18	9	22	2	5	2	6	19	11		

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**MATHEMATICS SUBJECTS REQUIRED FOR GRADUATION, AND ELECTIVE SUBJECTS THAT MAY BE USED TO SATISFY THE MATHEMATICS REQUIREMENT**

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them were in groups III, IV, and V. Twenty-four schools required plane geometry, and one school required general mathematics.

The subject most often designated as an elective to complete the mathematics requirement was general mathematics. This subject was offered by 62 per cent of the schools. Elementary algebra was offered by 42 per cent of the schools and plane geometry was indicated by 35 per cent of the high schools. Other subjects listed according to their frequency were advanced algebra, trigonometry, business mathematics, solid geometry, and advanced mathematics. One school allowed bookkeeping to satisfy one unit of mathematics and one school allowed foreign language to be substituted for a mathematics unit.

Science: Nearly one-fourth (23 per cent) of the schools did not require any science for graduation. As indicated in Table XII, ninety-seven schools required two units of science, and twenty-seven schools required one unit. One school required three units, another school required three units for girls only, and still another school required four units of science. The number of schools requiring two units of science increased from 19 per cent of group I up to 76 per cent of group V. The percentage of schools not requiring any science decreased from 50 per cent of the group I schools down to 12 per cent of the group V schools.

TABLE XII

NUMBER OF UNITS OF SCIENCE REQUIRED FOR GRADUATION, AND INDICATION OF THE NUMBER  
OF UNITS OF ELECTIVES THAT MAY BE USED TO SATISFY THE SCIENCE REQUIREMENT

Enrollment Groups														Total all Groups	
		over 350		I	II		III		IV		V				
		151 to 350		76 to 150	41 to 75		12 to 40								
		#	%	#	%	#	%	#	%	#	%	#	%	#	%
REQUIRED															
0	8	50	11	33	8	20	7	17	4	12	38	23			
1	5	31	7	21	7	17	6	14	2	6	27	17			
2	3	19	15	46	25	63	29	69	25	76	97	59			
3			1 <sup>a</sup>	3					1	3	1	.6			
4									1	3	1	.6			
ELECTIVES THAT MAY BE USED TO SATISFY REQUIREMENT															
0	10	63	17	52	23	58	21	50	16	49	87	53			
1	4	25	9	27	8	20	7	17	13	39	41	25			
2	2	12	7	21	9	22	14	23	4	12	36	22			

<sup>a</sup>Girls only.

Regarding the number of units that could be elected to help complete the science requirement, 53 per cent of the schools did not utilize any electives. The remaining schools were about equally divided between one and two units. Forty-one schools allowed one unit of electives and thirty-six schools allowed two units of electives.

Biology and general science were the subjects most often required. As shown in Table XIII, biology was required in 38 per cent of the schools, and general science was required in 31 per cent of the schools. Twelve schools required the girls to complete a course in home economics. Two schools required the boys to take vocational agriculture. Two schools required chemistry, and one school required physics.

The elective subjects that could be taken to complete the science requirement were equally distributed. Following is the order of these subjects according to frequency: chemistry, 38 per cent; biology, 32 per cent; physics, 30 per cent; home economics (girls), 26 per cent; vocational agriculture (boys), 12 per cent; shop (boys), aeronautics, and senior science, 1 per cent; and, mechanical drawing (boys), and auto mechanics (boys), .6 per cent.

Physical education: As indicated in Table XIV, 85 per cent of the schools required two years of physical education. Fourteen schools required four years participation in physical education, while six schools had the requirement of one year.

TABLE XIII

SCIENCE SUBJECTS REQUIRED FOR GRADUATION, AND ELECTIVE SUBJECTS  
THAT MAY BE USED TO SATISFY THE SCIENCE REQUIREMENT

	Enrollment Groups														Total all Groups
	over 350		I		II		III		IV		V		Total all Groups		
	#	%	#	%	#	%	#	%	#	%	#	%			
REQUIRED															
General Science	1	6	7	21	13	33	16	38	14	42	51	31			
Biology	2	13	9	27	16	40	14	33	21	64	62	38			
Home Economics <sup>a</sup>			3	9	7	18	1	2	1	3	12	7			
Vocational Agriculture <sup>b</sup>			1	3	1	2			2	6	2	1			
Chemistry									1	3	1	.6			
Physics															
ELECTIVE															
General Science	5	31	10	30	11	28	15	36	15	45	56	34			
Biology	6	38	8	24	13	33	18	43	7	21	52	32			
Home Economics <sup>a</sup>	5	31	9	27	10	25	14	33	5	15	43	26			
Vocational Agriculture <sup>b</sup>	1	6	6	18	7	18	4	10	1	3	19	12			
Chemistry	4	25	11	33	15	38	18	43	14	42	62	38			
Physics	3	19	11	33	14	35	12	27	9	27	49	30			
Shop					1	2	1	2			2	1			
Mechanical Drawing <sup>b</sup>					1	2					1	.6			
Aeronautics											2	1			
Senior Science <sup>b</sup>	1	6	1	3			2	5			2	1			
Auto Mechanics <sup>b</sup>							1	2			1	.6			

<sup>a</sup>Girls only.<sup>b</sup>Boys only.

TABLE XIV

NUMBER OF YEARS OF PHYSICAL EDUCATION REQUIRED FOR GRADUATION, WITH INDICATION  
OF THE DISPOSITION OF PUPILS WHO ARE UNABLE TO PARTICIPATE  
IN REGULAR PHYSICAL EDUCATION CLASSES

	Enrollment Groups										Total all Groups	
	over 350	I	II	III	IV	V						
	#	%	#	%	#	%	#	%	#	%	#	
			151 to 350	76 to 150	41 to 75	12 to 40						
				</								

<sup>a</sup>Girls only.

<sup>b</sup>Boys only.



Two schools did not require any physical education and two others required three years. One school required two and one-half years of physical education.

Concerning the matter of the student who was physically unable to participate in the regular physical education classes, no constant response was given by the high school principals. Ninety-four schools stated that such students attended only the health sections of the physical education program. Thirty-seven schools stated that these students were excused from all health and physical education activities. Twenty-six schools reported that the student would participate in a limited degree in the regular classes. Three schools stated that a special adaptive program was available to such students.

#### SUBJECT REQUIREMENTS NOT DESIGNATED UNDER SPECIFIC SUBJECT REQUIREMENTS

A section was provided on the questionnaire for principals to indicate subject requirements that they did not designate under the specific subject requirements section. The following summary of the above described section of the questionnaire, as indicated in Table XV, is as follows:

- (1) One school required one unit of band and glee club.
- (2) One school required one unit of bookkeeping.
- (3) Five schools required a course in driver's training.
- (4) One school required one unit in general business.
- (5) Four schools required one unit in typing.

TABLE XV  
ADDITIONAL SUBJECT REQUIREMENTS FOR GRADUATION NOT SHOWN UNDER SUBJECT FIELDS

Enrollment Groups													
	over 350		151 to 350		76 to 150		41 to 75		12 to 40		Total all Groups		
	I		II		III		IV		V				
	#	%	#	%	#	%	#	%	#	%	#	%	
Band-Glee Club							1	2			1	.6	
Bookkeeping							1	2			1	.6	
Driver's Training			1	3	2	5	1	2	1	3	5	3	
General Business					1	2					1	.6	
Typing					1	2	1	2	2	6	4	2	

## GRADUATION REQUIREMENTS AND THE TRANSFER STUDENT

The question, "How are the graduation requirements applied to a student who transfers to your school and does not meet the specific course or subject requirements for graduation from your school?" was asked the high school principals. As shown in Table XVI, eighty-eight schools replied that the requirements were modified to permit the student to graduate in four years. Thirty-eight schools stated that the student must complete all local requirements. Twenty-three schools indicated that the requirements of the student's prior school would be followed. Fifteen schools reported that each case would be handled individually. Five schools stated that the student would be urged to enroll in extra courses from the State Correspondence School.

### SUB-STANDARD DIPLOMA

Ten schools indicated that they offered a sub-standard diploma or certificate of completion. Of these ten schools, one reported that even though such a diploma was offered, it had not been utilized in the past five years. Another of these ten schools stated that they were discontinuing the use of such a diploma. Additional discussion of this topic will be found in the next section entitled, "Comments by Principals."

TABLE XVI

HOW GRADUATION REQUIREMENTS ARE APPLIED TO THE TRANSFER STUDENT NOT  
MEETING LOCAL GRADUATION REQUIREMENTS, WITH INDICATION  
OF EMPLOYMENT OF SUB-STANDARD DIPLOMA

	Enrollment Groups										Total all Groups
	over 350	I	II	III	IV	V					
	151 to 350		76 to 150	41 to 75	12 to 40						
	#	%	#	%	#	%	#	%	#	%	#
TRANSFER STUDENT											
Requirements modified to per- mit graduation in four years	13	81	15	26	22	55	21	50	17	52	88
Requirements based on those of former school	4	25	2	6	6	18	4	10	7	21	23
Must complete local requirements	3	19	6	18	12	30	11	26	6	18	38
Individual case	1	6	7	21	1	2	6	14	2	6	15
Meet minimum state requirements			3	9			1	2			6
Enroll in courses from State			2	6			1	2	2	6	5
Correspondence School											3
SUB-STANDARD DIPLOMA											
Offered	1	6	4	12	4	10	1	2			10
Not offered	15	94	29	88	36	90	41	98	33	100	154

COMMENTS BY PRINCIPALS

Most of the comments reported by the high school principals were on the subject of the sub-standard diploma or certificate of completion. Fourteen principals indicated that they were in favor of a sub-standard diploma. Five principals stated that they would probably adopt the use of such a diploma. Three administrators took the opposite viewpoint, and indicated that they were not in favor of having more than the one type, standard diploma. One principal, whose school used a sub-standard diploma, reported that his school was trying to eliminate the use of such a diploma. Another principal recommended that the State adopt the use of a sub-standard diploma.

Following is a summary of additional comments made by the high school principals:

- (1) Two principals stated that unsigned diplomas were given to students having academic deficiencies. These deficiencies could be made up through correspondence work.
- (2) Two principals reported that a social promotion was given to academic deficient students, and that this promotion did not recommend the student for college entrance.
- (3) Three principals indicated that the transcripts were clear enough, and that the issuance of a sub-standard

diploma was not necessary.

- (4) Two principals recommended that the student be required to complete twenty credits for graduation. This requirement would be designed to keep the student busy and eliminate study halls.
- (5) One principal reported that his school may require twenty credits for graduation, with four credits to be secured from extra-curricular activities.
- (6) One principal reported that the fall issue of the school paper explained the school's graduation requirements, and set forth the various college entrance requirements.
- (7) One principal stated that he believed the schools have too many subject requirements.

## CHAPTER V

### SUMMARY AND RECOMMENDATIONS

The purpose of this study, as previously stated in Chapter I, was to find out what requirements must be completed by all graduating students of the Montana Public High Schools. These requirements are determined by three sources: (1) the Montana State Board of Education, (2) the Northwest Accrediting Association, and (3) the local boards of education. The requirements stipulated by the State and by the Northwest Association are constant throughout the secondary schools of Montana. With the local boards of education establishing additional graduation requirements, the factor of variation comes into existence. This study had as its purpose to determine the requirements which composed the aforementioned variation. Data were collected on the basis of "what requirements must be met by all graduating students." No attempt was made to present a historical account of graduation requirements, nor to determine what course offerings were available to Montana High School students. The material presented in this study is to furnish information to school administrators and boards of education relative to the high school graduation requirements that are in existence within the public high schools of Montana. Also, persons interested in curriculum improvement and high school personnel research should find the data of value.

Data utilized in the study were obtained through the use of questionnaires which were completed by high school principals. Questionnaires were sent to 172 schools, and replies were received from 164 of these inquiries for a response of 95.4 per cent. In analyzing the data the schools were divided into five groups according to enrollment size. These categories were: group I, over 350; group II, 151 to 350; group III, 76 to 150; group IV, 41 to 75; and, group V, 12 to 40. Tabulation was made on a master sheet, and the material contained in the tables throughout the thesis are taken directly from the master sheet.

#### SUMMARY OF FINDINGS

1. How the student is informed of high school graduation requirements:
  - a. Nineteen per cent of the schools issue a student's handbook, which contains explanation of the high school graduation requirements.
  - b. Forty-six per cent of the schools prepare and make available to students specific mimeographed or printed materials that explain high school graduation requirements. Seventeen schools furnish both parents and students with the above described mimeographed or printed materials.
  - c. Nearly three-fourths of the schools provide both individual and group verbal explanation of high school



requirements.

2. Class periods, units, and solids:

- a. Schools are about equally divided as to the number of daily class periods. Forty-nine have six periods daily, fifty-one have seven periods daily, and sixty-four have eight periods daily. The smaller the school the more often an eight period day was utilized.
- b. Ninety-three per cent of the schools required sixteen units for graduation.
- c. Fifty-six per cent of the schools required fifteen solids for graduation, while 29 per cent required sixteen solids, and 7 per cent required fourteen solids.
- d. All but one high school stated that the normal student subject load contained four solids. Over three-fourths of the schools permitted any student who maintained above average grades to carry more than four solids.

3. Subject requirements:

- a. One hundred per cent of the schools required four units of English.
- b. Seventy-eight schools reported that no elective subjects could be taken to complete the English requirement. Seventy-four schools permitted one unit of elective English subjects.
- c. Journalism, speech, and senior English were the subjects most frequently designated as English electives which could be taken to satisfy the four unit requirement.

- d. Two units of social studies were required by fifty-five schools, and three units were required by fifty-three. Thirty schools required one and one-half units of social studies.
- e. Nearly three-fourths of the schools specified the exact subjects that must be taken to complete the social studies requirement.
- f. The ranking of the social science subjects required is as follows: American history, 100 per cent; civics (government), 70 per cent; world history, 31 per cent; problems of American Democracy, 20 per cent; and social studies, ninth grade, 11 per cent.
- g. A mathematics requirement was reported by 81 per cent of the schools. Eighty schools required two units of mathematics, fifty-two schools required one unit, and one school required two and one-half units. The frequency of the requirement for two units increased as the enrollment size of the school decreased.
- h. One unit of mathematics elective was offered by 52 per cent of the schools, and 11 per cent of the schools permitted two units of electives.
- i. Elementary algebra was the subject most frequently required, with plane geometry ranking next in frequency.
- j. The subject offered most often as a mathematics elective was general mathematics.
- k. Two units of science were required by 59 per cent of the

schools. Seventeen per cent required one unit, and 23 per cent did not have a science requirement.

1. Over one-half of the schools did not offer any electives to be taken to complete the science requirement.
- m. Biology and general science were the subjects most often required.
- n. Subjects indicated as science electives which could be used to satisfy the science requirement were ranked as follows: chemistry, general science, biology, physics, home economics (girls), and vocational agriculture (boys).
- o. Eighty-five per cent of the schools required two years of physical education. Fourteen schools required four years of physical education, and two schools did not require any for high school graduation.
- p. Twenty-three per cent of the schools indicated that a student who was physically unable to participate in the regular physical education activities was excused from all health and physical education classes. Fifty-seven per cent of the schools reported that the above pupils would be required to attend only the health sections of the physical education program.
- q. Driver's training was found to be required by five schools, and typing was required by four.
4. Transfer student not meeting local graduation requirements:
  - a. Fifty-four per cent of the schools reported that the

local requirements would be modified to permit the student to graduate in four years.

- b. Twenty-three per cent of the schools indicated that the transfer student must complete all local graduation requirements.
- c. Fourteen per cent of the schools indicated that the requirements of the student's former school would be used.

5. Sub-standard diploma:

- a. Ten schools reported using a sub-standard diploma.
- b. Fourteen principals reported that they were in favor of such a diploma, and five other administrators stated that they would probably adopt the use of the sub-standard diploma.
- c. Three principals did not favor the sub-standard diploma, and one principal reported that his school was trying to eliminate such a document.

6. College--school relations:

- a. The high schools of Montana have a more rigid prescription of requirements than do the State institutions of higher learning.
- b. Units of the greater university system of Montana have a more liberalized policy of entrance requirements than most high schools realize or have taken advantage of, as shown by current high school graduation requirements.

## 7. Carnegie Unit:

All schools have adhered to the use of the Carnegie Unit in measuring their course work.

### RECOMMENDATIONS

Recommendations for further study: Additional research could profitably be conducted in the following areas:

- (1) The planning and construction of a student's handbook.
- (2) Determining which colleges the graduating secondary students of Montana attend, and what relationships exist between the college entrance requirements and the high school graduation requirements.
- (3) Evaluating the strengths and weaknesses of the high school course sequences such as commercial, college entrance, general, and industrial.
- (4) Study of what backgrounds for enrolling students, do the various departments of the institutions of higher learning desire.
- (5) Determining the role of the parent in establishing high school graduation requirements.
- (6) Determining and using means of improving or displacing the Carnegie Unit.

Recommendations from the study: As a result of this study the following recommendations are presented:

- (1) That the high schools examine their graduation

requirements in the light of present college entrance requirements. Such an examination might show that recent liberalization of college entrance requirements has been passed over by the secondary schools.

- (2) That a constant effort be made to improve or displace the Carnegie Unit of measure, whereby less emphasis is placed on the unit and more given to the qualitative types of measure.
- (3) That colleges and high schools strive to improve their cooperative relationship.
- (4) That school administrators, teachers, parents, and students recognize that the secondary school is to assist all youth in preparing for life, and not solely for the preparation of students for college entrance.

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## **APPENDICES**

**APPENDIX A**  
**LETTER OF EXPLANATION AND INSTRUCTIONS**

MONTANA STATE UNIVERSITY

MISSOULA

January 27, 1955

I am conducting a study of the current graduation requirements of Montana Public High Schools. This study will be written up in the form of a Master's thesis which will be available from the School of Education and the Main Library at Montana State University.

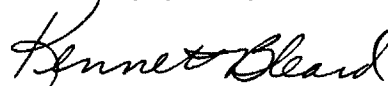
The information provided by this study will aid administrators and local boards of education in evaluating their programs in terms of existing high school graduation requirements and statewide practices.

The enclosed questionnaire requires less than ten minutes to complete. Two copies of the form are provided so that you may retain a copy for your reference. A brief summary of the questionnaire will be sent to you after the data are compiled.

Information that you provide will be treated confidentially, and the names of schools or administrators will not be disclosed either in the study or in the summary of the questionnaire.

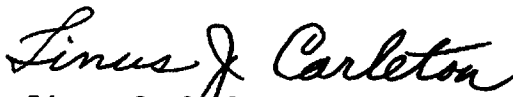
You play an important part in the collecting of the information needed to complete this study and your support will be greatly appreciated.

Cordially yours,



Kenneth B. Card  
Graduate Assistant  
School of Education

This research project has the approval of, and is being sponsored by the School of Education.



Linus J. Carleton  
Dean, School of Education

**APPENDIX B**  
**QUESTIONNAIRE**

QUESTIONNAIRE TO BE COMPLETED BY HIGH SCHOOL PRINCIPALS

---

(name of high school)

SECTION I HOW IS THE STUDENT KEPT INFORMED OF THE REQUIREMENTS THAT HE MUST COMPLETE FOR HIGH SCHOOL GRADUATION?

Check the responses of the statements that describe the current practice within your school. (Please use an "X" to indicate your choices)

- A. A student's "Handbook" containing the high school graduation requirements:
- ☐ 1. Furnished all students
  - ☐ 2. Available to students at a cost
  - ☐ 3. None available
- B. Specific mimeographed or printed materials containing the high school graduation requirements:
- ☐ 1. Furnished all students
  - ☐ 2. Furnished all parents
  - ☐ 3. None available
- C. Verbal explanation of the graduation requirements:
- ☐ 1. Given to all students in group sessions
  - ☐ 2. Given to the individual student by his counselor or advisor
  - ☐ 3. Given both to individuals and to groups
  - ☐ 4. None given

PLEASE ENCLOSE WITH THE COMPLETED QUESTIONNAIRE A COPY OF YOUR STUDENT'S "HANDBOOK" AND ANY MIMEOGRAPHED OR PRINTED MATERIALS SETTING FORTH THE GRADUATION REQUIREMENTS THAT ARE GIVEN TO STUDENTS AND/OR TO PARENTS.

SECTION II CLASS PERIODS, UNITS, AND SOLIDS

DEFINITION OF TERMS

UNIT: The measure whereby a course meets five periods weekly throughout an academic year.

SOLID: A subject in which the class meets five times a week, and usually requires preparation in addition to the class hour, and grants full credit.

Indicate the responses of the questions that describe the current practice within your school.

- A. What is the number of daily class periods conducted in your school?  
(circle correct number)      5      6      7      8      9
- B. What is the total number of "units" required for high school graduation?  
(circle correct number)      14      15      16      17
- C. What is the total number of "solids" required for high school graduation?  
(circle correct number)      13      14      15      16      17
- D. What is the number of "solids" that constitute a normal student load?  
(circle correct number)      3      4      5

- E. Which student may carry more than the normal number of "solids"?
- ☐ 1. Any student upon request
  - ☐ 2. Any senior student that needs additional units for graduation
  - ☐ 3. Any student that has maintained above average grades during the preceding semester or year
  - ☐ 4. Any transfer student needing specific subjects to conform with local graduation requirements
  - ☐ 5. \_\_\_\_\_  
(other, please list)

SECTION III SPECIFIC COURSE AND SUBJECT REQUIREMENTS THAT ALL STUDENTS MUST MEET FOR GRADUATION

A. ENGLISH

1. How many English units are required of all graduates?  
(circle correct number)      0      1      2      3      4

2. Please list the titles of specific subjects required, and the unit or fraction of unit assigned to each.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

3. Please list the titles and the unit or fraction of unit of each of the subjects that may be taken as electives to complete the English requirement.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

B. SOCIAL STUDIES

1. How many social studies units are required of all graduates?  
(circle correct number)      0      1      2      3      4

2. Please list the titles of specific subjects required, and the unit or fraction of unit assigned to each.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

3. Please list the titles and the unit or fraction of unit of each of the subjects that may be taken as electives to complete the social studies requirement.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

C. MATHEMATICS

1. How many mathematics units are required of all graduates?  
(circle correct number)    0    1    2    3    4

2. Please list the titles of specific subjects required, and the unit or fraction of unit assigned to each.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

3. Please list the titles and the unit or fraction of unit of each of the subjects that may be taken as electives to complete the mathematics requirement.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

D. HEALTH AND PHYSICAL EDUCATION

1. How many years of health and physical education are required of all graduates? (circle correct number)    0    1    2    3    4

2. What is the status of students who are unable to participate in the regular physical education classes because of physical reasons?

(Mark a correct response)

- ☐ a. Attend only the health sections of the physical education program  
☐ b. Are excused from all health and physical education classes  
☐ c. Attend special adaptive physical education classes  
☐ d. \_\_\_\_\_  
(other, please list)

E. SCIENCE (to include home economics)

1. How many units are required of all graduates?  
(circle correct number)    0    1    2    3    4

2. Please list the titles of specific subjects required, and the unit or fraction of unit assigned to each.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

3. Please list the titles and the unit or fractions of unit of each of the subjects that may be taken as electives to complete the science requirement.

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____



F. REQUIRED COURSES OR SUBJECTS NOT PREVIOUSLY LISTED

Please list the titles and the unit or fraction of unit of each of the subjects not previously listed that are required of all graduates.  
(example: psychology and vocational guidance)

<u>Course</u>	<u>Unit</u>	<u>Course</u>	<u>Unit</u>
_____	_____	_____	_____
_____	_____	_____	_____

SECTION IV COMPLETION OF HIGH SCHOOL

Check the responses of the questions that describe the current practice within your school. (Please use an "X" to indicate your choices)

A. How are the graduation requirements applied to a student who transfers to your school and does not meet the specific course or subject requirements for graduation from your school?

- ☐ 1. Requirements are modified so as to permit the student to complete high school in four years
- ☐ 2. The student's graduation requirements are based on those of his previous high school
- ☐ 3. The student must complete all the local requirements even though it might mean his attending high school more than four years
- ☐ 4. \_\_\_\_\_  
(other, please list)

B. Some schools offer a sub-standard diploma or "Certificate of completion" which indicates that a student has completed four years of high school; but that his academic ability and level of work do not entitle him to a standard diploma. Does your school offer such a certificate?

- ☐ 1. Yes
- ☐ 2. No

COMMENTS:

Would you like to receive a summary of this questionnaire?

- ☐ 1. Yes
- ☐ 2. No

Please return this completed questionnaire to:

The School of Education  
Montana State University  
Missoula, Montana

**APPENDIX C**  
**FIRST FOLLOW-UP**

Dear Mr.

2/12/55

Just a note concerning the study that I am conducting on Montana High School graduation requirements.

Statewide interest seems to be quite high on this project as I have received returns on over 65% of the questionnaires sent out.

Your help in making this study a success will be greatly appreciated, and I am looking forward to receiving your response. Less than ten minutes of your time is required to complete the questionnaire.

Sincerely yours,

Kenneth B. Card

**APPENDIX D**  
**SECOND FOLLOW-UP**

MONTANA STATE UNIVERSITY

MISSOULA

February 23, 1955

The following is a summary of the replies that I have received as of this date, on the study of Montana High School graduation requirements:

<u>DISTRICTS</u>	<u>TOTAL NUMBER</u>	<u>NUMBER OF REPLIES REC'D</u>	<u>PERCENTAGE</u>
First Class	5	5	100
Second Class	64	57	88.9
Third Class	86	59	68.6
County High Schools	<u>17</u>	<u>15</u>	<u>88.2</u>
TOTALS	172	136	79

I have not yet received a reply from you. Possibly the original questionnaires have been misplaced, therefore I am sending you another copy of the form with a stamped self addressed envelope for your convenience.

Your reply is of great value to the study, and I sincerely hope that you will be able to take ten minutes from your busy schedule and complete the enclosed questionnaire.

Yours very truly,

Kenneth B. Card  
Graduate Assistant  
School of Education

**APPENDIX E**  
**THIRD FOLLOW-UP**

MONTANA STATE UNIVERSITY

MISSOULA

March 7, 1955

This study on Montana High School graduation requirements must be completed by May 1st to permit me to receive a Master's Degree in June. Therefore, this will be the last letter to you requesting the completion of the questionnaire previously distributed to all Montana High School Principals.

Following is a summary of the replies received as of this date:

<u>DISTRICTS</u>	<u>TOTAL NUMBER</u>	<u>NUMBER OF REPLIES REC'D</u>	<u>PERCENTAGE</u>	<u>NUMBER YET TO RECEIVE</u>
COUNTY	17	17	100	0
FIRST	5	5	100	0
SECOND	64	64	100	0
THIRD	86	72	83.7	14
TOTALS	<u>172</u>	<u>158</u>	<u>91.9</u>	<u>14</u>

As shown by the above summary, statewide interest has been excellent. Your participation in the study would add greatly to its value, and I am waiting anxiously to hear from you.

Sincere best wishes for the remaining school year.

Cordially yours,

Kenneth B. Card  
Graduate Assistant  
School of Education