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*A Study of the Facts and Conditions Involved in
the Problem of College Admissions*

BY

EDWIN J. BROWN



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A Study of the Facts and Conditions Involved in the Problem of College Admissions

BY

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FOREWORD.

There are more than 600 colleges and universities in the United States which have been recognized by some accrediting agency. Some one of these institutions may be found in each of the forty-eight states, the District of Columbia, and in the territory of Hawaii. They are alike in many essentials, but primarily, in that each has for its immediate purpose, the serving of the youth, who come to its doors demanding entrance. No one doubts the sincerity of purpose, the willingness to serve, the high ideals, which dominate the men and women who represent the citizens of the United States in the management of these institutions of higher learning.

When consideration is given to the facts, that many of these institutions are tax supported; that many of these institutions have been endowed by generous philanthropists; that many have been created by a comparatively small group for the purpose, specifically, of serving to the best of their abilities the interests of that creating group; that our population is not evenly distributed; that the wealth of this country, like the population, is unevenly apportioned; and finally, the fact that the secondary schools of the country, with an enrollment that approaches the five million mark, are pouring a steadily increasing volume of students at the doors of the college, demanding entrance, these facts have, individually and collectively, created problems which are challenging the best minds in the educational field to-day.

Some appreciation of the difficulties as well as the multitudinous phases of the college-admissions problem led the writer to attempt a program of study dealing with the situation in the United States.

That the general problem is of national importance is shown by the fact that at the Dallas meeting of the Department of Superintendence of the National Education Association, in 1927, a resolution was passed requesting the Research Division of the Association to prepare a study or to aid in the preparation of a study on the general topic, "College Admission Requirements in Relation to Curriculum Revision in Secondary Schools"; that the Bureau of Education had offered to give financial and clerical assistance to any study that would tend to aid in the solution of the problem, and, that educators the country over had expressed their willingness to give their time and efforts to any attempt which would tend to greater unity between the two parts of the same system, viz., the high school and the college.

This bulletin represents but a part of the entire study, a part previously unpublished. Other parts of the study have been published under the following titles and authorship: *Methods of Admission and Matriculation Requirements in Three Hundred Thirty-one Colleges and Universities*; *College Admission Requirements in Relation to Curriculum Revision in Secondary Schools*; and, *Is a Uniform Plan of College Admission Either Feasible or Desirable?* The studies are all from the same authorship, Edwin J. Brown and William M. Proctor. The first two may be found in the sixth and seventh yearbooks of the Department of Superintendence of the National Education Association, 1928 and 1929. The last-named phase of the study was published in an abstract form in *School Life*, Vol. XIV, No. 8, April, 1929.

CHAPTER I.

INTRODUCTION.

In a recent study of the problem of the relation of college admission requirements to efforts to revise high-school curricula the author received reports from 331 colleges and universities and 977 high schools. The colleges and universities were a representative group, as is attested by the following figures: State universities, 41; agricultural colleges, schools of applied science and technology, 31; women's colleges, 51; institutions with an annual income exceeding a million dollars, 16; institutions with an annual income between a half million and a million, 20; institutions with an annual income between a quarter million and a half million, 31; institutions with a total annual income of less than a quarter million dollars, 141. The present specific requirements of the colleges were reported, as well as their reactions to proposals that they accept more than three units of practical or vocational work as part of the 15 admission units.¹

Both college and high-school officials were asked to react to a proposed plan of admissions designed to secure to the college a selected group of students, without insistence upon a specific pattern of subjects to be taken in the secondary schools.² The plan was not submitted with the idea that it was an acceptable plan for all colleges, but with the idea of getting reactions to the various items with a view to discovering those most acceptable to secondary people and college authorities.

The reaction of both types of schoolmen to the proposed plan will be better appreciated if a brief summary is given of the findings (previously published in the Department of Superintendence, Sixth and Seventh Yearbooks, 1928 and 1929) regarding admission requirements in the five subject fields of English, foreign language, mathematics, social science, and laboratory science. This summary follows:

EXISTING REQUIREMENTS FOR COLLEGE ADMISSION.

1. *English.* Required by 100 per cent of the colleges reporting. Two units specified by 2 per cent of the colleges; 3 units by 75 per cent; 4 units by 18 per cent; and 4 units required but only 3 units out of the 15 credited to English by 2 per cent.

2. *Foreign Languages.* Required by 75 per cent of the colleges reporting. Latin or Greek, or both, are required by 9 per cent; Latin or modern language by 49 per cent; and modern language only by 17 per cent.

Forty, or 74 per cent, of the women's colleges require Latin as one of the foreign languages to be offered. Some of them require from 5 to 7 units of foreign language as a prerequisite for admission.

3. *Mathematics.* Required by 96 per cent of the colleges reporting. Re-

1. William Martin Proctor and Edwin J. Brown: College Admission Requirements in Relation to Curriculum Revision in Secondary Schools. In Department of Superintendence, Sixth Yearbook, 1928.

2. Edwin J. Brown and William Martin Proctor: Methods of Admission and Matriculation Requirements in Three Hundred Thirty-one Colleges and Universities. In Department of Superintendence, Seventh Yearbook, 1929.

quiring 1 unit only, 2 per cent; 2 or 2½ units, 69 per cent; 3 units, 26 per cent; more than 3 units, 3 per cent.

Four state universities, and four mechanical and technical colleges require no mathematics for admission, but only one out of fifty-one women's colleges has no mathematics requirements. Three or more units of mathematics are required by 52 per cent of the women's colleges.

4. *Social Science.* Required by 77 per cent of the colleges reporting. One unit is required by 52 per cent; 1½ units by 3 per cent; 2 units by 19 per cent; 3 or more units by 3 per cent.

5. *Laboratory Science.* Required by 54 per cent of the colleges reporting. One unit is required by 46 per cent; 2 units by 7 per cent; 3 units by 1 per cent.

Only 25 per cent of the women's colleges require science for admission, while 64 per cent of the mechanical and technical colleges require it.

6. *Typical Admission Prescriptions.* Following are the requirements in the academic subjects, which may be said to be characteristic of from 50 to 75 per cent of American colleges: (a) English, 3 units; (b) foreign language, 2 units; (c) mathematics, 2 units; (d) laboratory science, 1 unit; (e) social science, 1 unit; making a total of 9 prescribed and 6 elective units. This might be termed the median college admissions requirement. Attention should be called to the fact that the "elective" is rarely a free elective, but is generally a "group" elective, a more generalized requirement which increases the size of the offering which is acceptable without allowing complete freedom. This elective plan tends to keep out credit for music, art, industrial work, vocational studies, and anything in the commercial field, unless, as is rarely done, these should be specified as one of the groups.

7. *Status of Practical and Vocational Subjects.* When asked whether they were willing to accept practical and vocational subjects for admission to the extent of 4 or more units out of the 15, 34 per cent of the institutions reporting stated that they were willing to do so; but 66 per cent stated that they could not accept more than 3 such units among the 15, some of them not being willing to accept any at all.

In willingness to accept practical and vocational subjects the New England states were the most conservative, and the Western states most liberal. As to types of colleges, the state universities and agricultural and mechanical colleges were the most liberal, and the women's colleges least liberal.

From the foregoing summary it appears that the heaviest prescriptions are still in the two fields of foreign language and mathematics. In some extreme instances, found among the colleges for women, as many as 10 units are prescribed in these two fields. In a great majority of the colleges to-day the prescription in these two fields outweigh the prescriptions in social science and laboratory science two to one. These facts illustrate how slowly college admission requirements and college courses, for that matter, change to meet the changing requirements of present-day life. The colleges which make these prescriptions are supposed to be liberal arts colleges, but most of them teach no arts courses, and many of them are far from liberal, especially as regards their requirements for admission.

CHAPTER II.

THE PROBLEM OF COLLEGE ADMISSIONS.

"College entrance requirements are the complex results of many factors, intricately related (41)."* This statement from the secretary of the College Entrance Examination Board is significant. A few of the major factors which it includes are summed up in the following paragraphs.

The Problem of Democracy and Education. Here we find the most important aspect of the whole matter. Is college training a right or a privilege? On this question we have two schools of thought, each sincere, thoughtful, and scholarly in its argument (1, 3, 9, 13, 19, 20, 36, 38, 51, 64). Is college training to be for the son and daughter of any citizen or for those who can admittedly gain most from it? A natural process of selection has been going on from the first grade to the twelfth. Is it proper that a distinctly different process should be introduced at the close of high school?

The Second Great Problem is that of Social Justice: "The selection of those who shall be admitted to the privilege of a fine education at far less than cost is fundamentally a study in social justice (90)." This at once gives rise to the question of finances (49, 89, 93); the rights of faculty members (90); the rights of generous philanthropists; the rights of hard-working taxpayers (93, 90); the rights of earnest, sincere, well-trained students (49); the rights of those denied entrance (9, 13, 19); the rights of those who withdraw (36); and, the rights of any institution to select its own membership.

A third phase of the problem is that bound up in the *maintenance of standards and ideals in the higher institutions* (49, 90). There can be little doubt but that selection determines the type of colleges we shall have and that our college ideals in turn make our standards. The director of admissions and his committee, by their selection, create the type the institution turns out, and they in turn influence the standards of the preparatory schools (76).

A fourth problem, which is steadily forcing the issue of college admissions before the public, is that of the *conflicting demands being made upon that general school of the people, the high school*. This institution faces the problem of trying to meet the demands of the complex society it serves—that is, to prepare its output for immediate service, and that other demand from a group smaller in number, but frequently more powerful in its influence, the group demanding that the high school prepare every individual, who cares to enter, for college. To prepare for college; to prepare for vocational efficiency; to give cultural training to those desiring it but not college bound; and, to develop a curriculum that meets the demands of all concerned, are some of the high school's immediate problems (14, 60, 79).

The colleges, which but a few years ago were vying with each other for numbers, are now finding those same *numbers one of their biggest problems* (5, 67, 78, 89). While there is a possibility that the best use is not being made of the space available, yet there can be little doubt that many institu-

* Numbers in parentheses refer to the corresponding number in the bibliography. When a quotation is used, followed by several numbers, the quotation is from the first-named reference. Other references support the viewpoint.

tions are crowding every classroom, every class roll, and the actual teaching time of their faculty members to the limit.

Two other phases of the same general problem, intricately bound together, are *those of methods of admission and the tremendous mortality in the first year*. The first is to a great degree the general theme of this study. The second is a by-product of the first. About 300,000 freshmen entered our colleges last fall. Approximately 20 per cent will drop out during or at the end of the freshman year. Approximately 20 per cent more will be gone at the end of the sophomore year. Perhaps 10 per cent more will leave before graduation. Here we have but a half of our entrance group remaining until graduation. The class which entered last fall had its three groups of students: (a) Those who will succeed and ultimately be graduated; (b) those who for personal considerations will be forced into withdrawal; and (c) those who cannot or will not do the work they have started (90). This latter group includes those whose preparation was inadequate, whose mental, moral or physical make-up cannot meet the strain put upon it; those who are financially unable to meet the heavy strain; and those who are disinclined to meet the heavy sacrifice. To what extent, if any, have these entrants who leave before graduation profited by their being in college? Can this gain be increased were colleges to give attention to it? Should there not be terminal facilities provided at least at the end of the second year?

Consideration of the foregoing paragraphs makes evident the fact that the real problem is to find a procedure which shall be searchingly informative as to the worth of the candidate, and accurately predictive as to his probable success in college. Undoubtedly no single device will serve. School records, intelligence tests, examinations, personal recommendations, class distributions, all have predictive value, without a doubt, but the institution relying upon one only must expect a high mortality rate. Probably the outstanding contributions which the last five years have made to the admissions problem is in the development of the intelligence or aptitude tests, the use of the personal interview, and a close, comparative study of each individual who presents himself for entrance (24, 41, 91).

That there is little agreement in colleges as to the relative merits of these selective devices is indicated by the results which the writer found when he tried to group all titles under one heading, which agreed upon some one procedure as being best, in his reading of over 400 articles on the subject of college admission. Practically all of the articles were written within the last twenty years, yet in no instance did he find agreement on any single device in more than twenty cases. All methods are fallible, and decisions based upon any one source are open to question.

The colleges which employ the method of certification, supplement school records by personal-rating blanks and aptitude tests. Those employing examinations are inclined to combine examination results and school records with intelligence tests. Both groups say they give more weight to personal factors than to purely intellectual ones; both also say they consider quality in school record as paramount to quantity.

A previously published part of this general survey has tried to throw light

upon these questions.³ What are the prevailing methods of admission? What changes in the liberalization or in the direction of liberalization of these requirements have the colleges made in the last five years? What specific subject matter is being required by the colleges for admission? What is the present attitude of the colleges to vocational subjects and the other newer subjects of the high-school program of studies? Colleges were asked whether they would favor admitting to college on a basis of twelve units earned in the tenth, eleventh, and twelfth grades. The replies to this last query are summarized on page 25.

Another phase, previously published, presented information from 977 high-school principals on their graduation requirements;⁴ whether they had made an effort within the last five years to reorganize their programs of study along lines recommended by the Commission on Reorganization of Secondary Education; if so, what success they have had, and what obstacles they have encountered; if not, what causes have operated to discourage efforts at reorganization. Information was also presented upon the extent to which the vocational and newer subjects are offered, and are being elected by the students; and, the influences at work which encourage or discourage this election.

The data from these two sources, part of which is summarized in the introductory chapter, will be presented again briefly later in this part of the study. It is upon these data, and upon the combined reactions from both the colleges and high schools to a plan proposed for college entrance, that the principles which should be taken into account by colleges in setting up their admission requirements are to be formulated.

As has been previously mentioned, the basis of selection is the point at issue between the colleges and the high schools. The past has developed two methods: the entrance examination and the accrediting or certification plan. Each, in recent years, has been supplemented, nominally at least, by intelligence tests and the scholarship record. Personal information concerning the candidate has been secured, although the personal-rating blanks commonly used appear to be unreliable, and must be improved if they are to find a permanent place in admissions procedure.

The examination method, best exemplified by the College Entrance Examination Board, is the simplest to administer and apparently entails the least effort and responsibility on the part of the college. With certain exceptions and modifications it has been the prevailing method in the Eastern states. The disadvantage of the method is that it limits the curriculum of those who plan to go to college to the lists of subjects in which the board or other examining agency offers examinations, and tends to turn public high schools into coaching schools in which the greater part of the attention is given to the candidates for college. It also bars many a splendid student who has failed to meet the specific subject requirements from entrance to advanced study. The increasingly small proportion of public high-school grad-

3. Edwin J. Brown and William Martin Proctor: *Methods of Admission and Matriculation Requirements in Three Hundred Thirty-one Colleges and Universities*. Department of Superintendence, Seventh Yearbook, 1929.

4. William Martin Proctor and Edwin J. Brown: *College Admission Requirements in Relation to Curriculum Revision in Secondary Schools*. Department of Superintendence, Sixth Yearbook, 1928.

uates entering college by the examination route alone indicates its decline for general admission purposes. It has served the public well. Through it something in the way of national uniformity has come about. It has developed the college entrance unit, it has aided in setting up national standards, and to a great extent it has been the deciding influence tending to unite the college and the high school to a common purpose. Modifications of the examining plan have appeared in recent years, two of which have gained considerable approval. The first, known as the "new plan" to distinguish it from the "old plan" (*i. e.*, examination in fifteen units), provides for graduation from an approved or accredited secondary school, plus comprehensive examinations in four fields of study. The second, sometimes spoken of as the "latest plan" is the same as the "new plan" but adds "a satisfactory score in a college aptitude test" to the requirements. Both have merit but are limited in their use at the present time to some twelve or fifteen endowed institutions, largely in the East.

The various certification or accrediting plans have been most prevalent in the central states and in the western and Pacific coast groups. Such plans have aided in a considerable liberalization of college entrance requirements and the acceptance of a large number of new subjects as a part of the fifteen required secondary-school units. As will be shown later, there still remains, however, on the part of college officials a very strong prejudice, for which little experimental justification can be found, against the newer subjects of the curriculum. This results in the setting up of departmental prerequisites and specific-subject prescriptions which tend to nullify the apparently liberal general admission requirements set down in the catalogues of the various colleges.

Apparently what is needed and desired by all the institutions, for few institutions express complete satisfaction with the plan they are now using, is a basis of selection which will provide the college with students having superior ability and possessing such habits of industry, attitude toward life, and basic training, that the college can afford to spend its resources on them with some assurance of benefit to the individual and to society in general.

What the high school demands is freedom to develop its program of studies in such a way as to provide the greatest good to the greatest number and the best possible returns to the community and to the state in which the high school is located. Previously published phases of the research have shown that high-school principals expect the college to select its own entrants and that very few high-school principals care to accept the responsibility of having their recommendations accepted as the only requisite for college entrance.⁵ It would seem that the development of a plan of admission which would meet the needs of both the college as a center of research, higher learning, and leadership training, and of the high school as an institution primarily devoted to the individual needs of the pupils and the social and educational needs of its community, is possible of development.

The number of colleges that have gone far in the development of a plan which serves this dual function is limited, but the number of colleges whose admission boards feel the need of such a plan is apparently large.

5. *Ibid.*

THE BASIS OF DEVELOPMENT OF THE PROPOSED PLAN.

With a view to determining the approval or disapproval that might be given to a plan of admission which avowedly seeks to meet both of the aforementioned needs, a plan was drawn up which was presented to the high-school principals and the college officials of the country for their consideration. The plan was based to a certain extent on that used by Stanford University, where no set pattern of high-school subjects is required for admission; where selection is made on a competitive basis; and where any graduate of a senior high school may be admitted to competition on a basis of twelve units earned during the last three years of high school.

That the Stanford plan in itself has merit is shown by the report of the director of personnel, who states that there has been a distinct gain in the quality of the students secured by the use of this plan since its inauguration in October, 1924 (79). In 1921-'22, 30.2 per cent of the students were placed on probation or were disqualified on account of poor scholarship. In 1924-'25, the first year under the new plan, this percentage dropped to 21.8 per cent. Another indication of the superior quality of the students selected under the new plan is found in the fact that the freshmen who entered in October, 1921, under the old plan showed a shrinkage of 47 per cent when they entered as sophomores in October, 1922, while the freshmen entering in October, 1924, showed a shrinkage of only 21 per cent, when they returned in October, 1925 (79).

Of the three items in the Stanford plan, which served as a basis for the plan submitted to high school and college officials, the total high-school scholarship rating, regardless of the combination of subjects, has been found to have the greatest predictive value; the score on the aptitude test ranks second; and the judgment of the committee on admission ranks last in its predictive worth. When all three are combined, however, the result is apparently a much more reliable basis of selection than the plan formerly employed (79).

The plan of admitting on the basis of their total high-school record, without insisting on any particular pattern of subjects, has made possible a comparison between the success of students who enter with a straight academic high-school record and those who enter with three or more units of the practical or vocational work. Stanford has admitted students presenting seven units of vocational work, who have done satisfactory work in college. The classes entering in 1921 and in 1922 were followed through their entire college course (14). It was found that the average scholarship rating of the academic-type student was 1.11 and that the vocational-type had an average scholarship rating of 1.09. While the intelligence-test scores correlate more highly with college success in the case of the academic students than in the case of the vocational students, it was found that the total high-school record was a better indication of success for the vocational-type students than for the academic-type group. In other words, "the assumed superiority of the academic pattern of high-school subjects over the vocational pattern did not appear (79, 14)." The conclusion, that as many as five vocational units does not affect a student's preparation for college unfavorably, provided his total high-school record reveals a high grade of scholarship, seems justified.

"In spite of steadily rising standards of scholarship, which have made it

increasingly difficult for inferior students to remain in the university, the percentage of failure and elimination has steadily decreased, and the average scores of entering students on the Thorndike test have increased more than ten points. Where the competition is keenest the showing is best. Of the 500 women in residence in October, 1926, only one was dropped at the end of the autumn quarter on account of poor scholarship (79)."

DEVELOPMENT AND OFFICIAL CHARACTER OF THE INQUIRY.

Recognizing that the reliability of data taken from any form of inquiry is only as reliable as the questioning instrument, every precaution was taken to secure a report form which would meet every criteria agreed upon by research workers using this instrument. A few of the elements considered were: brevity, organization to allow for answering by checks, adequate spacing to allow for answers, relevancy of material sought to the purpose of the study, elimination of ambiguity of meaning in questions, questions so arranged that one checks another, and an inquiry that is, to as great an extent as possible, factual.

The preliminary form was made up by the writer in conference with Dr. Arthur J. Jones (professor, secondary education, University of Pennsylvania), Dr. Wm. M. Proctor, and Dr. Karl M. Cowdery of Stanford University. This first draft was mimeographed and was first tried out on a number of trial institutions and their comments on its form requested. The draft was then sent to recognized leaders in the field of college and secondary administration. Among the many persons who checked, revised, commented on, or approved this first draft of the report form were: Dr. J. Pearce Mitchell (registrar, Stanford University); Dr. Ira M. Smith (registrar, University of Michigan); Drs. John K. Norton and Margaret Alltucker Norton (research division of the N. E. A.); A. L. Threlkeld (city superintendent of Denver); Dr. George S. Counts (University of Chicago); Dr. W. C. Reavis (University of Chicago); E. E. Windes (secretary, National Committee on Research in Secondary Education); Dr. L. V. Koos (University of Minnesota); F. L. Bacon (president, 1928, National Association of Secondary School Principals); A. C. Argo (principal, Sequoia high school, Redwood City, Cal.); and Principal Oscar A. Anderson (Mexico, Tex.). In addition the mimeographed questionnaire forms were taken to the national convention of secondary school principals at St. Louis in February, 1927, and were there distributed, discussed, and the comments noted. A revision, based on the general comment and criticism and on the weaknesses noted by the trial institutions filling out the original form, was then made and the revised copy was then resubmitted. The final approval completed this phase of the work.

Due to the big expense entailed on clerical help and in mailing more than 6,000 of the forms which were to be distributed, the Bureau of Education, Washington, D. C., was asked to assist in this undertaking. This aid was graciously granted by Commissioner John J. Tigert through the assistance of Associate Commissioner Kolbach, of the Bureau.

Permission was also secured from the National Committee on Research in Secondary Education to list their coöperating organizations on the report forms.

Commissioner John J. Tigert dictated a letter, a copy of which was inclosed with the inquiry form mailed to each principal and college official. This letter officially requested their collaboration in the study.*

THE PLAN PRESENTED TO COLLEGES AND HIGH SCHOOLS.

The plan presented to the colleges and to the high schools was the same in every detail. It had been prepared with the aid and advice of the persons who had acted as assistants in the attempt to secure as highly a reliable inquiry form as possible. Dr. W. M. Proctor and Dr. Karl M. Cowdery, of the Stanford faculty, especially aided in preparing the plan on admission which was presented for consideration. The plan, which is reproduced in full in the text of this study, carries six major provisions. They are:

1. Candidates must have passed at least fifteen units of work in a satisfactory manner; provided, that those who have completed twelve units in the senior high school, *i. e.*, tenth, eleventh and twelfth grades, based on a junior high-school course where full work was carried in the ninth grade, may be granted three additional units to make up the necessary fifteen.
2. Candidates must accomplish their high-school work with an average scholarship which places them in the top half of their high-school graduating class. (It is assumed that the marking system in an accredited high school shall involve a plan of assigning "passing" marks to at least an approximation of a normal curve, and that the number in the graduating class is large enough to be amenable to such a distribution.)
3. Candidates to be rated by at least three of their high-school teachers on such personality traits as industry, reliability, judgment, coöperativeness, initiative, leadership, physical vitality, etc., and should be found in the top half of their graduating class in such traits.
4. Candidates shall stand in the top half of their graduating class in the distribution of scores made on one or more standardized intelligence tests or aptitude tests.
5. Candidates should complete at least ten of the fifteen secondary units in the fields of English, social sciences, natural sciences, mathematics, or foreign language, with at least two sequences of three units each selected within these five fields. The remaining five units may be chosen from any subject for which credit is given toward graduation by the high school recommending the candidate.
6. Candidates must submit to the colleges to which they seek admission evidence of seriousness of purpose, capacity for self-direction, and sustained effort, and their reason for desiring to secure a college education. This information to be transmitted by means of a personal letter, a formal application blank, recommendations of those who know them best, or by interview with representatives of the college concerned, or by all these methods combined.

INSTRUCTIONS FOR VOTING ON PROPOSED PLAN.

Officials were asked to indicate their reaction to the college admission plan proposed under the following instructions:

CAUTION: Read all the items carefully (a) to (h) before "checking" your preference.

* Inquiry form as a whole is not included, due to its length and to the fact that the text of this study is self-explanatory. Those interested in the inquiry form may find a copy of same in the Department of Superintendence, Sixth Yearbook, 1928, p. 191 ff.

Check
here.

-(a) I approve all six items in the proposed plan.
-(b) I approve all six items in the proposed plan, but would like to propose the following additional items:
-(c) I approve only those items, the numbers of which I have encircled:
 one two three four five six
-(d) I would substitute for the proposed plan the examinations of the College Entrance Examination Board, as indicated by the following underscored statement:
1. Old plan, *i. e.*, examination in fifteen units.
 2. New plan, *i. e.*, graduation from accredited secondary school, plus Comprehensive Examinations in four fields.
 3. Latest plan, *i. e.*, same as (2) plus satisfactory score in college aptitude test.
-(e) I would substitute for the proposed plan the New England College Entrance Certificate Board plan.
-(f) I would substitute for the proposed plan the North Central Association of Colleges and Secondary Schools plan.
-(g) I would substitute for the proposed plan that of admitting to college all secondary-school graduates, without reference to pattern of high-school subjects taken, who stand in the percentile of their graduating class indicated by the percentile group which I have underscored below:
 In the top 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70 per cent.
-(h) I would substitute for the proposed plan that of admitting to college any graduate of an accredited high school, without reference to pattern of subject taken, on the recommendation of the secondary-school principal.

Consideration of the foregoing brings out these points: The proposed plan was presented in detail; officials were cautioned to read all items, not only in the proposed plan, but in substitute plans, before checking; provision was made for approval of all six items; for the approval of all six items but with additions; for the approval of one or more separate items of the plan; for the substitution of any of the different plans now in use; and, (g) and (h), for the approval of two plans frequently suggested but rarely used.

VOTE OF THE HIGH-SCHOOL PRINCIPALS ON PROPOSED PLAN.

Table I, on page 17, shows that 416 of the 977 principals approved all six items of the proposed plan. This is 42.5 per cent. The table shows that 55 more approved all six items but added other items. This is slightly less than 6 per cent. From this it is evident that 48.5 per cent of the high-school principals from the five regional associations favor the proposed plan. From the New England Association the percentage is 51. From the Middle states and Maryland the percentage is 55. The North Central Association approves in 46 per cent of the cases. The Southern Association principals approve all the items in 48 per cent of the votes cast, while the principals of the Northwest Association (including California and Nevada) vote "yes" in 46 per cent of the votes cast. For the United States as a whole the approval given to all six items by the principals of 977 high schools, whose average enrollment was 373, was 48.5 per cent.

TABLE I.—Vote of 977 principals of high schools in five regional associations of colleges and secondary schools on proposed college admission plan.¹

REACTION TO PROPOSED COLLEGE ADMISSION PLAN.	Associations of colleges and secondary schools.					
	United States.	New England.	Middle states and Maryland.	North Central.	South-ern.	North-west (includes California and Nevada).
I approve all six items in proposed plan	416	25	86	191	75	39
I approve all six items in proposed plan, but would like to propose additional items	55	6	7	22	9	11
I approve one or more, but not all six items in proposed plan	363	25	59	171	63	45
Frequency of mention of those approving one or more, but not all six items in proposed plan:						
Item one	270	17	49	126	43	35
Item two	188	12	32	96	29	19
Item three	163	18	26	84	21	14
Item four	107	11	24	43	16	13
Item five	245	17	44	118	40	26
Item six	271	20	47	129	43	32
I would substitute for proposed plan the examinations of the College Entrance Examination Board, as indicated by: Old plan, i. e., examination in fifteen units	3	0	0	2	1	0
New plan, i. e., graduation from accredited secondary school, plus comprehensive examinations in four fields	4	0	0	2	1	1
Latest plan, i. e., graduation from accredited secondary school, plus comprehensive examinations in four fields, plus satisfactory score in college aptitude test	18	3	5	4	5	1
I would substitute for the proposed plan the New England College Entrance Certificate Board plan,	2	2	0	0	0	0
I would substitute for the proposed plan the North Central Association of Colleges and Secondary Schools plan	30	0	1	24	4	1
I would substitute for the proposed plan that of admitting to college all secondary school graduates without reference to pattern of school subjects taken, who stand in the following percentile of their graduating class:						
25 per cent	2	0	1	1	0	0
30 per cent	2	0	0	2	0	0
35 per cent	0	0	0	0	0	0
40 per cent	0	0	0	0	0	0
45 per cent	1	0	0	1	0	0
50 per cent	8	0	1	6	1	0
55 per cent	1	0	0	1	0	0
60 per cent	1	0	0	1	0	0
65 per cent	1	0	0	1	0	0
70 per cent	2	0	0	1	0	1
100 per cent	1	0	0	1	0	0
I would substitute for the proposed plan that of admitting to college any graduate of an accredited high school, without reference to pattern of subjects taken on the recommendation of the secondary-school principal	67	0	7	34	16	10
Totals	977	61	167	465	175	109

1. See page 15 for copy of proposed plan.

Of the 506 principals who did not approve all six items of the proposed plan, 270 or 53 per cent approve item one. This item provides for freeing the junior high school from college admission requirements. The total number of high-school principals approving this item was 741. This is 76 per cent of the total.

Seventy-eight per cent of the principals in the New England group favored item one; 85 per cent of the Middle states and Maryland principals approved this item; the North Central Association approved in 72.5 per cent of the votes; and the Northwest Association principals (includes California and Nevada) approved in 78 per cent of the cases. We are safe in saying that well over three-fourths of the principals replying to the inquiry favor freeing the ninth grade of the junior high school from college entrance restrictions. Item six—"candidates must submit to the colleges to which they seek admission evidence of seriousness of purpose, etc."—was approved in total and by all the groups in practically the same number of instances, as was item one.

Item four, which provided for candidates standing in the top half of their graduating classes in the distribution of scores made on one or more mental tests or college aptitude tests was least approved, a total of 59 per cent of the principals approving it. New England approved item four in 69 per cent of the votes; the Middle states and Maryland in 70 per cent; the North Central Association in 55 per cent; the Southern Association in 57 per cent; and the Northwest in 58 per cent. While the numbers and differences may be too small for significance, there is at least an indication that the eastern principals put more faith in the predictive value of the intelligence test for college success than do their western and southern neighbors.

But 143 of the principals, 14 per cent, would substitute any plan now in use or that was suggested for that of the proposed one. Of these, 67 or less than 7 per cent favored the plan of "admitting to college any graduate of an accredited high school, without reference to pattern of subjects taken, on the recommendation of the high-school principal." This indicates that the principals recognize the right of the college to pick its own students. It also predicates that the principals would not care to assume the entire responsibility of determining which members of their graduating classes should go to college. It is worthy of note that no one of the 61 New England principals favored substitute plan (h), which is quoted above. From no regional group is approval of the plan given by more than 10 per cent of the principals, however.

Among the items proposed by the 55 principals, who approved all six items in the proposed plan, but wished to propose additional items, were these:

1. All candidates for high-school graduation should pass an examination prepared by the state department of education.
2. Candidate must submit evidence of having earned at least 25 per cent of the funds estimated as needed to complete the first year's college work.
3. Students who have fallen below the upper 50 per cent of their class in scholarship should be permitted to take college entrance examination and, if successful, be admitted. A pupil who did not keep up to standard the first year of high school, but who works up during the last two years, should be given opportunity to enter college.

4. Some provision should be made for vocational students. Item five does not allow for the pupil who does vocational work in high school and who desires to pursue this line of work in college. "If we use public funds for college support we must care for all."
5. These provisions should not be made ironclad rules, as there is often a person who will fall in the lower half of his class who should go to college.
6. Every student going to college ought to be placed on probation for at least a half semester before being admitted to the freshman class. "This would end nearly all the failures during the first year in college."

TABLE II.—Vote of 977 principals of high schools varying from 100 pupils or less to over 1,000 on proposed college admission plan.

REACTION TO PROPOSED COLLEGE ADMISSION PLAN.	Size of high-school enrollment.						Enrollment not given.
	All sizes combined.	100 or less.	101 to 250.	251 to 500.	501 to 1,000.	Over 1,000.	
I approve all six items in proposed plan . . .	416	199	93	32	30	20	42
I approve all six items in proposed plan, but would like to propose additional items . . .	55	20	17	6	3	4	5
I approve one or more, but not all six items in proposed plan	363	159	70	30	30	33	41
Frequency of mention of those approving one or more, but not all six items in proposed plan:							
Item one	270	111	54	24	21	28	32
Item two	188	70	46	17	18	19	18
Item three	163	74	34	12	12	8	23
Item four	107	50	22	7	7	9	12
Item five	245	110	49	18	13	27	28
Item six	271	123	47	25	27	21	28
would substitute for proposed plan the examinations of the College Entrance Examination Board, as indicated by:							
Old plan, i. e., examination in fifteen units	3	2	0	1	0	0	
New plan, i. e., graduation from accredited secondary school, plus comprehensive examinations in four fields	4	1	1	1	1	0	0
Latest plan, i. e., graduation from accredited secondary school, plus comprehensive examinations in four fields, plus satisfactory score in college aptitude test	18	8	1	4	2	2	1
I would substitute for the proposed plan the New England College Entrance Certificate Board plan	2	0	0	1	0	0	1
I would substitute for the proposed plan the North Central Association of College and Secondary Schools plan	30	7	8	4	4	4	3
would substitute for the proposed plan that of admitting to college all secondary school graduates without reference to pattern of school subjects taken, who stand in the following percentile of their graduating class:							
25 per cent	2	1	0	0	0	1	0
30 per cent	2	0	1	0	0	0	1
35 per cent	0	0	0	0	0	0	0
40 per cent	0	0	0	0	0	0	0
45 per cent	1	1	0	0	0	0	0
50 per cent	8	2	4	2	0	0	0
55 per cent	1	1	0	0	0	0	0
60 per cent	1	0	1	0	0	0	0
65 per cent	1	0	0	0	0	1	0
70 per cent	2	1	1	0	0	0	0
100 per cent	1	0	1	0	0	0	0
I would substitute for the proposed plan that of admitting to college any graduate of an accredited high school, without reference to pattern of subjects taken, on the recommendation of the secondary-school principal	67	39	14	3	2	5	4
Totals	977	441	212	84	72	70	98

Table II on a preceding page, presenting the votes of 977 high-school principals distributed by size of enrollment in their high schools, shows that more than 48 per cent of the total approved the plan in its entirety, and that there is almost perfect agreement in the different-sized enrollments except for those principals representing the very large high schools (1,000 or over). The per cent approving for the different groups is as follows: (1) One hundred or less, 50 per cent; (2) 101 to 250, 52 per cent; (3) 251 to 500, 45 per cent; (4) 501 to 1,000, 46 per cent; (5) enrollment not given, 48 per cent; over 1,000, 34 per cent.

The approval given to the different items in the proposed plan by the principals of these large high schools (1,000 students or more) is given below, as with this group omitted the deviation from the average (48 per cent) by the other groups is never more than 4 per cent. The comparisons given show that while but 34 per cent of these large high-school principals approved the plan in its entirety, the approval given to individual items is considerably greater. Item one was approved by 74 per cent of the principals of the high schools with an enrollment exceeding 1,000 students. This is but 2 per cent less than the total approving the same item (76 per cent); item two by 61 per cent as opposed to 67 per cent by the total; item three (personality ratings) by 46 per cent as opposed to 65 per cent by the total; item four (top half of graduating class) is also more unpopular with this group than with principals representing smaller schools, 46 per cent of the principals of the larger high schools favoring this item as opposed by 59 per cent, when the total 977 principals are considered. Item five was approved by 73 per cent of this group, and item six by 64 per cent. The approval given to the last two items differs little from the totals.

Approval of substitute (*h*), which provides for the principal's recommendation being the deciding factor, is approved to about the same extent by the principals of the different-sized enrollments. No group favors it to any great extent, the greatest approval coming from the high schools with enrollments under 100, who favor it in about 9 per cent of the cases. The argument for this may be that in this size of high school the principal knows each student rather intimately, and his opinion should have considerable predictive value.

SUMMARY OF THE REACTIONS OF THE HIGH-SCHOOL PRINCIPALS TO THE PROPOSED PLAN.

A summary of the vote of the high-school principals to the proposed plan for selecting candidates for recommendation to college shows a rather surprisingly conservative attitude.

About 50 per cent of the principals approved in its entirety a plan which is essentially conservative and if rigidly enforced would probably result in a much smaller number being recommended to college than are now recommended. It is apparently a recognition on the part of the principals of the right of the colleges to apply a rather severe selective process to the admission of candidates, provided this selective process is directed at the discovery of the mental, social, and educational fitness of the candidate and does not minutely prescribe the subjects which he is to take in high school.

The proposed plan allows a margin of as many as five units of credit (item five) which might be taken in the fields of vocational-industrial-commercial

courses, whereas, at present, many colleges do not care to accept any such units, and but 27 per cent of the colleges in the study will accept as much as five units of this type of work. A comparison of the present study with previous studies which have dealt with this topic to a lesser extent (47, 66) indicates a steady increase in the number of institutions willing to accept the newer subjects in considerable amount, however. Almost a half of the state universities will accept five units of vocational-industrial-commercial credit. A total of twenty-three institutions which are unwilling to accept five units will accept four such units. This is 7 per cent of the total. The number willing to accept three free units would undoubtedly be a large one. Seventy-six per cent of the principals approve the idea of five free units.

It would seem to be significant that only twenty-five principals of the 977 answering this part of the inquiry favored any form of a college entrance examination. This is less than 3 per cent of the total. The unwillingness of the principals to accept full responsibility for admission to college of their high-school graduates is emphasized by the small vote given to the substitute plan (*h*), which provides for admitting to college any graduate of an approved high school, without reference to pattern of subject taken, on the recommendation of the secondary-school principal. This unwillingness may have been influenced, as was probably true with college officials, by the phrase, "without reference to pattern of subjects taken," although it would be reasonable to believe that principals especially would favor this freedom of election.

Table III, on page 22, presents the reactions of 331 college officials to the proposed plan. While a small number refused to express their opinion on the plan by checking, as was required, these usually explained their reasons for not voting in such a comprehensive way that something was added to the findings.

From the reactions to the plan by the two groups, principals and college officials, it is evident that certain common elements appear, which may have value as prime considerations to be taken into account by colleges in setting up their entrance requirements. If a few fundamental elements on which there is found to be quite general agreement can be set forth, minor elements may well be left to the individual colleges and their natural secondary constituencies. The conclusion seems justifiable that at the present time, it would be both undesirable and impracticable to attempt to secure entire uniformity in the matter of college admissions. The proposed plan was submitted, not with the idea of arriving at a uniform plan of rigidly administered admission procedures, but with a view to discovering the existing attitudes and opinions of secondary men and college officials on some of the more outstanding problems. From a widespread expression of these attitudes and opinions it was hoped that the basic principles underlying a new approach to the college admission problem might be found.

Classification	Group I.*	Group II.*	Group III.*	Group IV.*	Group V.*	Group VI.*	Group VII.*	Total.
40 per cent.....
45 per cent.....
50 per cent.....	1	..	..	..	..	..	..	1
55 per cent.....
60 per cent.....	1	..	..	..	1	2
65 per cent.....
70 per cent.....	2	2
100 per cent.....

I would substitute for the proposed plan that of admitting to college any graduate, of any approved high school without reference to pattern of subjects taken on the recommendation of the secondary school principal.

I would substitute for the proposed plan that of admitting to college any graduate, of any approved high school without reference to pattern of subjects taken on the recommendation of the secondary school principal.	4 10%	2 6%	0 ..	0 ..	0 ..	1 3%	12 8%	19 6%
Suggesting a plan differing in some respect from any quoted.	4 10%	0 ..	1 2%	2 12%	0 ..	0 ..	0 ..	7 2%
Approving nothing and offering nothing.	3 7%	6 19%	4 8%	1 5%	0 ..	2 6%	13 9%	20 9%

* Group I, State Universities; Group II, Agricultural Colleges, Applied Science and Technology; Group III, Women's Colleges; Group IV, Institutions with an annual income exceeding one million dollars; Group V, annual income between one-half million and one million; Group VI, annual income between a half-million and a quarter-million dollars; Group VII, annual income less than one-quarter million dollars.

TABLE IV.—Reaction of College Officials to the Proposed College Admission Plan. (Regional Associations Groupings.)

Read table thus: Four institutions in the New England Association (15%) approved all six items in the proposed plan; three (12%) approved all six items but proposed additional items; twelve (46%) approved one or more but not all six items; seven who had not approved all six items, approved Item One.

Classification	New England.*	Middle States & Maryland.*	North Central Ass'n.*	Southern Ass'n.*	Northwest Western.**	Total.
Total number each group.....	26	58	127	90	30	331
I approve all six items in the proposed plan.	4 15%	11 19%	26 22%	20 22%	5 17%	66 20%
Approve all items but would add additional items.	3 12%	5 12%	7 6%	3 3%	1 3%	19 6%
I approve one or more but not all six items.	12 46%	26 45%	65 51%	51 57%	17 57%	171 52%
Frequency of mention of those approving one or more but not all six:						
Item One.....	7 27%	22 38%	57 45%	41 46%	14 47%	141 43%
Item Two.....	6 23%	18 31%	31 24%	19 21%	3 10%	77 23%
Item Three.....	6 23%	16 28%	26 17%	22 24%	7 23%	77 23%
Item Four.....	2 8%	11 19%	14 11%	12 13%	2 7%	40 12%
Item Five.....	4 15%	8 14%	47 37%	31 34%	12 40%	102 31%

Classification	New England.*	Middle States & Maryland.*	North Central Ass'n.*	Southern Ass'n.*	Northwest Western.**	Total.
Item Six.....	10 38%	17 29%	40 31%	37 41%	9 13%	113 34%
I would substitute for the proposed plan the examination of the C. E. E. B. as indicated by:						
Old Plan, i. e., examination in 15 units.	2 8%	1 2%	2 2%	2 2%	1 3%	8 2%
New Plan, i. e., graduation, plus comprehensive examination in four fields.	3 11%	5 12%	3 2%	2 2%	4 13%	17 5%
Latest Plan, i. e., same as New Plan plus satisfactory score in College Aptitude Test.	5 19%	7 12%	2 2%	1 1%	2 7%	17 5%
I would substitute for the proposed plan the New England College Certificate Board Plan.	3 11%	1 2%	0 ..	1 1%	0 ..	5 2%
I would substitute the North Central Association of Colleges and Secondary Schools Plan.	0 ..	1 2%	13 10%	3 3%	1 3%	18 5%
I would substitute that of admitting to college all secondary school graduates without reference to pattern of subjects taken in high school who stand in the following percentile of graduating class:						
10-15-20-30-40 per cent.....	0	0	0	0	0	0
50 per cent.....	0	0	1	0	0	1
60 per cent.....	0	0	1	1	0	2
70 per cent.....	0	1	0	1	0	2
I would substitute for the proposed plan that of admitting to college any graduate of an approved high school without reference to pattern of subjects taken, on recommendation of the secondary school principal.	1 4%	4 7%	9 7%	5 6%	0 ..	19 6%
Suggesting a plan differing in some respect from any quoted.	1 4%	3 5%	1 1%	0 ..	2 7%	7 2%
Approving nothing and offering nothing.	3 11%	1 2%	14 11%	9 10%	2 7%	29 9%

* New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

* Middle States and Maryland: Delaware, D. C., New Jersey, New York, Pennsylvania.

* North Central: Arizona, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Wisconsin, Wyoming.

* Southern: Alabama, Florida, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Virginia, West Virginia.

* Northwest-Western: Idaho, Montana, Oregon, Washington, California, Utah, Nevada.

** Includes California and Nevada, not members of a regional association.

REACTION OF COLLEGE OFFICIALS TO THE PROPOSED PLAN.

An examination of Table III, which groups the colleges and universities by types and by financial strength, brings out some interesting and suggestive information. The table indicates 66 (20 per cent) of the institutions approved all six items of the plan without any changes or reservations; that another 19 institutions (6 per cent) approved all of the items, but made suggestions. Thus 26 per cent of the institutions, more than one-fourth, favor the plan *in toto*. By groups, the range approving all six items is from 13 to 30 per cent. That is, as low as 13 per cent of one group (II) favored the plan, and as high

as 30 per cent of another group (VII) approved. Nine of the forty-one state universities (group I) approved the plan.

As with the high schools, the greatest approval given to a single item is given to item one. This item provides for leaving out the junior high school from entrance requirements and basing admission upon the work done in the tenth, eleventh and twelfth grades. This single item was approved by 226 of the institutions (66 per cent). Item four, providing for the acceptance of the top half of a graduating class as determined by a rating on one or more intelligence tests, was, as in the case of the high schools, approved by the smallest number of colleges. A total of 40 institutions (12 per cent), exclusive of the 85 institutions (26 per cent) which had approved all of the items, voted favorably on this item. The item was approved by 125 of the 331 institutions (28 per cent of the whole).

That the examination plan is unpopular, even with the institutions now using it, is indicated by the figures. Only eight institutions, or slightly more than 2 per cent, would substitute the "old plan" for the proposed one. Again, 17 institutions (5 per cent) would substitute the "new plan." The "old plan" provides for examinations in fifteen units, and the "new plan" provides for graduation from a four-year high school, plus an examination of the comprehensive type in four fields. Another 5 per cent would favor substitution of the "latest plan," which is the same as the "new plan" with the addition of an aptitude test. When consideration is given to the fact that these plans, especially the "new plan" and the "latest plan," have had a great amount of publicity through their use by a few great universities, it is rather surprising that more institutions did not vote to substitute one of the other plans for a plan which has had no publicity, and is not in use, in its entirety, in any institution. The writer believes that the truth lies close to the statement that the examination plans in general are not acceptable for the mass of institutions; that they are declining steadily in favor on the part of the public secondary schools (see C. E. E. B. report for 1925), and that comparatively few colleges would approve of substituting the examination for the plan they now use, dissatisfied though they may be with the present device. This statement is based on the figures from the table. Only 47 institutions voted to substitute an examination plan for the proposed plan. Whether these institutions are now using an examination plan is not indicated definitely by the report, although the replies to question two of the inquiry, summarized in Table II, page 19, indicate that the answer would be "yes" in the main.

Nineteen of the college officials would favor having the high-school principal's recommendation be the determining factor in the admission of the candidate. This is about 6 per cent of the total number voting, and the reply from the principals to this suggestion is practically the same, 7 per cent of them approving the suggestion.

While there were 127 colleges reporting from the North Central Association alone, there were a total of but 18 institutions, 13 of them from this association, that would substitute the N. C. A. plan for the proposed one. Twenty-eight per cent of the officials reporting in this group would approve the proposed plan, and but 10 per cent would substitute the North Central Association plan for it.

Seven of the colleges offered a plan differing in some detail from the proposed plan. Twenty-nine officials reporting on the study as a whole did not vote on this phase. Were the percentages approving the plan as a whole, and the different items separately, based on the number voting instead of on the whole number in the study, the figures presented would be slightly larger.

A COMPARISON OF THE DIFFERENT GROUPS ON THE PROPOSED PLAN.

The reactions to the proposed plan from the seven different groups of institutions (Table III) differ little. Slightly greater approval is given to the plan as a whole by group VII (income under a quarter million dollars), and the plan is approved least frequently by group II, the agricultural college, applied science, technology group. Item one was approved by 43 per cent of the institutions not approving the whole plan; item two by 23 per cent; item three by 23 per cent; item four by 12 per cent; item five by 31 per cent; and item six by 34 per cent.

Total approval given to the different items—that is, the inclusion of those approving all the plan, with the approval given to separate items—shows that the items were approved as separate items by these percentages of the 331 institutions voting: Item one, 69 per cent; item two, 49 per cent; item three, 49 per cent; item four, 38 per cent; item five, 57 per cent; and item six was approved by 60 per cent of the total institutions.

REACTION BY REGIONAL ASSOCIATIONS TO THE PROPOSED PLAN.

To get information as to whether approval of the proposed plan, or the different items of the plan, might vary from different geographical areas, the institutions were regrouped under the five regional associations of colleges and secondary schools. This grouping is presented in Table IV on page 23. The percentages indicate that the reaction of the officials from different sections of the country varies little. Eighteen per cent of the New England group approved the plan *in toto*. Thirty-one per cent of the Middle States and Maryland approved; 28 per cent of the North Central Association approved the plan; 25 per cent of the Southern Association officials favored all of the plan; and 20 per cent of the Northwest (including California and Nevada) gave their approval to the whole plan as suggested. Approval of item one was about equally distributed, although a smaller percentage of the New England Association officials approved than did any other group. The total figures on this item were: New England, 54 per cent; Middle States and Maryland, 69 per cent; North Central Association, 73 per cent; Southern Association, 71 per cent; and Northwest (including California and Nevada), 67 per cent. Item one provided for accepting twelve units from the senior high school. Approval of item two (scholarship in top half of graduating class) was approved by: New England, 50 per cent; Middle Atlantic and Maryland, 62 per cent; North Central Association, 52 per cent; Southern Association, 46 per cent; and, Northwest, 30 per cent.

Item three (candidates rated by three teachers on personality traits) was approved by the various regional associations as follows: New England, 50 per cent; Middle States and Maryland, 59 per cent; North Central Association, 45 per cent; Southern Association, 49 per cent; Northwest, 43 per cent.

Item four (candidates shall stand in the top half of their graduating class in the distribution of scores on standardized intelligence tests) was the least popular. The votes on it were: New England, 35 per cent; Middle States and Maryland, 40 per cent; North Central Association, 39 per cent; Southern Association, 38 per cent; Northwest (including California and Nevada), 27 per cent. The intelligence test as an instrument of selection for college entrance is very commonly used, but in most cases it is used in a far less positive manner than is suggested in the proposed plan. Many college officials express the feeling that the tests are not sufficiently predictive criteria of college success to warrant their use, although in a number of cases where empirical studies have been carried out the reverse appears to be true.

Item five (ten of the fifteen secondary units to be in the fields of English, social science, science, language, or mathematics) was approved as follows: New England, 42 per cent; Middle States, 45 per cent; North Central, 65 per cent; Southern, 59 per cent; Northwest, 60 per cent. This item would allow five units of credit for college entrance from any subject matter which the high school counts for graduation. This might mean acceptance of as many as five units of vocational or special subject work. In regard to this item, New England is least willing to approve, with the Middle States group next in unwillingness. The North Central Association, the Southern Association, and the Northwest groups favor the plan in approximately three-fifths of the votes cast.

Item six (evidence of seriousness of purpose) is approved as follows: New England, 65 per cent; Middle States and Maryland, 60 per cent; North Central, 59 per cent; Southern, 66 per cent; Northwest (including California and Nevada), 33 per cent. The last group—that is, Northwest—is least favorable to item six, since only one-third of the 30 institutions represented approved it.

COMMENTS ON THE PROPOSED PLAN FROM THE DIFFERENT INSTITUTIONS.

The policy has been followed throughout this study that whatever was stated in the replies from the high schools and colleges should be made a part of the summary. This has made for a certain amount of repetition, but it was believed that the repetition would aid the reader to keep the many details in mind.

In the previously published parts of the study (see footnotes page 7) the opinions of high-school principals were grouped and were presented at some length. It was felt that the replies tended to throw light upon the attitude of high-school officials the country over, and their opinions might be utilized in deriving the principles upon which to formulate college admission requirements.

The same policy has been carried out in considering the reaction of the college officials to the proposed plan of admission. A large number of these officials commented at some length, and with excellent thought, on the proposed plan and on the separate items in particular. These comments have been included in the study and are summarized on the following pages. No comments are omitted. Many are pertinent and have been weighed carefully in drawing the conclusions. Others are, perhaps, only indirectly usable.

The following pages present the opinions of college officials on the entire plan or particular items. Each institution is credited with the comment of

the official reporting for it, *but these comments represent the personal opinions of the reporting officials and were not intended to be taken as authorized pronouncements for their colleges.* Also, the statements were entirely voluntary, as no comments were called for on the inquiry form.

COMMENTS ON THE GENERAL PLAN PROPOSED FOR COLLEGE ADMISSION.

GROUP I—STATE UNIVERSITIES.

MICHIGAN: "I approve all six items in the proposed plan with changes as noted, but believe the N. C. A. plan would probably work out better. Believe that item (h) is dangerous from thousands of weak-kneed principals."

MARYLAND: "The procedures specified in two, three and four are not sufficiently exact to warrant automatic exclusion of a student who fails to reach the top half in any one or all three of these categories."

NEW HAMPSHIRE: "Methods of admission inclosed; (h) comes nearest to our method, but we require special subjects for special courses."

PENNSYLVANIA: "Latest plan (qualified) goes into effect September, 1928."

MINNESOTA: "I inclose a copy of a plan which we have adopted for 1928-'29, which from our standpoint is preferable to any of the above plans."

ARKANSAS: (Checks one and five as approved.) Says: "The other items are good, but can hardly be insisted on in a state university. We require an entrance examination of all who are not recommended by the high-school authorities."

DELAWARE: "Everything in the proposed plan is good, but such a plan cannot, at present, be put into effect in most of the state universities."

NEVADA: "The University of Nevada is well satisfied with its own plan of admission, which varies from any of the above."

MAINE: "I approve all six items, but I consider the plan now used by us as more practicable at present for state of Maine students."

MISSISSIPPI: "I think the six points are too restrictive for our present needs."

WISCONSIN: "I should not approve any of the plans as worded."

TEXAS: "The quality element is very important but exceedingly difficult to inject into a *state-supported* institution."

WASHINGTON: "I would substitute for the proposed plan the *revised* entrance requirements of the University of Washington, which are based upon the tenth, eleventh and twelve grades (item one), upon quality, grades, and upon a fair proportion of work done in academic subjects noted in item five."

VIRGINIA: "In general, I approve the six items proposed. But we need evidence (experimental) in determining plans for admission."

OHIO STATE: "With regard to admissions we are governed by statute, but if we were to change our system I would like to see plan (2) or the new plan put into force."

NORTH CAROLINA: "Number five is not quite in line with our desires."

GEORGIA: "The University of Georgia is studying these plans. I would not care to express my individual opinion. It is clear that some forward step should be taken in addition to the present (high) requirement of fifteen units and graduation from an accredited school."

ILLINOIS: "I do not have authority to commit the University of Illinois on such a matter as this. Personally, I think items 1, 2 and 5 are good. I should not wish to deny admission to a student failing on items 3 and 4."

WEST VIRGINIA: "Private or endowed colleges might very well restrict their attendance by adopting in its entirety the proposed plan of selecting candidates for admission. State universities, however, are public institutions supported by taxation, and their doors should be open to all graduates of properly accredited high schools or other preparatory schools who have completed courses including fifteen units of work properly grouped. For state universities the following modification of the proposed plan of selecting candidates for admission is suggested: Adopt item one; reject item two; accept first part of item three, reject 'top half' part; reject 'top half' provision of item four, accept remainder; adopt item five and item six."

VERMONT: "I approve 'one' literally, and the others in substance."

CALIFORNIA: "I can only state the present policy of the University of California. There should be a definite high-school program. The applicant should have given evidence of superior quality as a student."

GROUP II—TECHNOLOGY, APPLIED SCIENCE, AND AGRICULTURE.

NEW MEXICO COLLEGE OF A. AND M.: "Too few high-school graduates in this state attend college. We need more of them rather than devising schemes to limit them. Devices set up in 2 and 6 under 15 have not been sufficiently proved to be made rules of procedure. Keep in mind public support of education and the possibility of regulation by the legislature—*e. g.* In Kansas a law compels state institutions to take graduates of accredited high schools with only an English requirement. May I suggest that too much of your proposed standards, even the language requirement (foreign), has no scientific basis. Why clutter up the field?"

VIRGINIA POLYTECHNIC INSTITUTE: "I approve (*h*). Better still: would substitute for the proposed plan that of admitting to college (any curriculum) any graduate of an accredited high school, without reference to pattern of subjects taken, excepting English and mathematics, on the recommendation of the secondary-school principal."

GEORGIA SCHOOL OF TECHNOLOGY: "It is not for me to say what a high school should require for graduation. What a college should require for admission is another question." (Approved one, two, three, five (modified) and six.)

CONNECTICUT AGRICULTURAL COLLEGE: "I approve all six items. Discretion to be used in admitting mature students who apply after a year or more of work away from school, or whose graduating classes are so small as to make the rank distribution too artificial, substituting for deficiencies on other points, superior ratings on point six."

GROUP III—WOMEN'S COLLEGES.

HOOD: "I should vote for approval of all six for a period of say five years, to be followed by 'latest plan.'"

WHITWORTH: "New plan would be good, but the proposed plan is O. K."

INDUSTRIAL ARTS (TEX.): "Candidly, it has been the experience of this college that there is but little relation between grades made in high school and those made in college."

GREENVILLE WOMAN'S (S. C.): "My preference would be a combination of five and six."

CONNECTICUT: "The general scheme is good, but the detail would need ironing out. I think the proposed plan with modifications is preferable to any individual one of the later group (now in use in different institutions). One, two and three are good supplementary devices for border-line cases. Three is particularly good."

GROUP IV—TOTAL ANNUAL INCOME A MILLION OR MORE DOLLARS.

WESTERN RESERVE: "I approve all six items in the proposed plan, but would like to propose the following preamble: Candidates may be considered for admission to college provided that they—(1, 2, 3, 4, 5, 6)."

WASHINGTON (St. Louis): "Those in the lower half in any of the designated groups may be admitted by successfully passing the entrance examinations."

PITTSBURG: "I would substitute for the proposed plan: Admission of all graduates of first grade, accredited high schools, graduating in upper two-thirds of class, receiving recommendation of high-school principal, and satisfying without condition, the specific entrance requirements of the school or college."

PRINCETON: "My committee believes that the best admission data at present can be gained by combining four requirements: (1) The school certificate. Four years must be covered carefully with reference to candidate's performance in the last year. This certificate should show the candidate's habitual attitude toward his work. (2) The examinations prepared by the College Entrance Examination Board provide a standard test; when enrollment is limited and a selective system of admission is in operation such a standard test applied to every candidate is essential, for school certification differs in value and cannot be standardized. (3) Psychological tests, or such as the Scholastic Aptitude Tests prepared and conducted by the College Board give valuable evidence as to the mental alertness of the applicant and are an excellent check on school certificate and board examinations. (4) It is essential that the character, personality and promise of the candidate be given serious consideration. No applicant of doubtful character should be accepted, no matter what his scholastic standing. We feel that no candidate should be admitted on one of these factors alone. All four must receive careful consideration."

BROWN: "(a) Applicants presenting complete credentials who stand in the first fifth of their class in approved schools graduating at least twenty students will as heretofore be admitted without the submission of further evidence. (b) Applicants presenting complete credentials who stand in the first two-fifths of their class in approved schools where during the past three years one-half of the graduates have gone to college will as heretofore be admitted without the submission of further evidence. Complete credentials include credits by certificate or by examination in specific subjects and supplementary evidence from the school respecting character, ability, and general fitness of the applicant. For all other applicants complete credentials will no longer insure admission." Quoted from statement inclosed by reporting official.

GROUP V—TOTAL ANNUAL INCOME BETWEEN A HALF MILLION AND A MILLION DOLLARS.

WILLIAM AND MARY: "We require graduation from a four-year accredited high school with at least sixteen units—and number six in proposed plan."

OHIO WESLEYAN: "It should be noted that we accept graduates of first-grade preparatory schools regardless of the subjects offered. We really advise rather than require the subjects previously checked." (Approved all six items.)

RICE INSTITUTE: "We insist on fifteen units. For about five years we have been using items 2, 3, 5 and 6 in addition. We are going slowly on the matter

of intelligence tests. I am not in a position at this time to recommend a change in our policy."

TEMPLE: "I approve all six items in proposed plan, but would like to propose the additional items: In item two, position in 'top half' determined by judging the last year in school; in item four, aptitude test always considered in relation to scholastic trend."

GROUP VI—TOTAL ANNUAL INCOME BETWEEN A QUARTER MILLION AND A HALF MILLION.

MUHLENBERG: "In general I like the plan proposed, and I think it very satisfactory for institutions which admit mainly on certificate from high schools . . . but my own preference is No. 3." (Latest plan.)

UNIVERSITY OF BUFFALO: "I approve all six items. Substantially our procedure. The only difference was in the presentation of a foreign language; three years of Latin have been required for the B. A. and three years of one, or two of two languages for the B. S."

KNOX: "We regard numbers 2, 3 and 4 as desirable, but believe they could not be met adequately by very many of the small high schools from which students come to us."

GROUP VII—TOTAL ANNUAL INCOME UNDER A QUARTER MILLION DOLLARS.

ADRIAN: "I approve 2, 3, 4 . . . but would set a somewhat more liberal standard, say upper two-thirds of class." (Approved 1, 5 and 6 unconditionally.)

OKLAHOMA BAPTIST: "The proposed plan would be a boon to administrators." (Approved all.)

GUSTAVUS ADOLPHUS: "New plans for college entry have been considered, but are not worked out in full; many of the above-named items are under consideration."

WABASH: "These six items are in line with our present procedure, except that (a) we admit candidates with entrance examinations who stand in upper three-fourths of class, and (b) are recommended by principal, favorite teacher, and some Wabash alumnus."

GROVE CITY: "I approve all six items, but would favor less elective privileges to high-school students."

BRIDGWATER: "Approve all six items, but would propose personal interview with parents and candidate by a responsible representative of the college."

ROANOKE: "Approve all six items," adds: "If the candidate for admission cannot qualify on the six items, he shall be required to stand comprehensive examinations in four fields."

FURMAN: "We are heartily in sympathy with the idea of securing well-prepared students for college, but in view of the present stage of development of the plan and the differences in grading of high school students, we are not ready to give our unqualified approval."

WASHINGTON AND JEFFERSON: "Approve all six, but suggest: That at least three sequences of two or three units in English, mathematics, and foreign languages be required. This preparation seems indispensable for doing advanced work."

ANTIOCH: "Approve all six items, propose additional: Physical examination by (a) Uniform Agency (such as Life Extension Institute) or (b) approved physician on uniform blank."

LITTLE ROCK: "I believe that every graduate of an accredited high school should be allowed to enter college; that the college have a committee from the faculty who should study the freshmen, and weed out such who cannot meet college conditions . . . or such for whom a college education would be of little advantage."

ELLSWORTH: "A candidate should rank in the upper half in scholarship, or in the event that he does not he should rank in the upper-half in an intelligence test. This would take care of the student who has a 'drive' and the one who is intelligent but not a 'grind.'"

MARYVILLE: "I approve all six items with this exception: It is taken for granted that this excellent plan, much superior to prevailing methods, would need to be administered gradually until high-school students generally became well acquainted with it and took it as a matter of course. Also, that in small high schools, not strongly affected by the 'curve,' sometimes the entire class, and sometimes none, are equipped for college work; to this extent 2, 3 and 4 would need to be modified."

SOUTHWESTERN (KANSAS): "We are not quite ready for such rigid requirements, but are discussing such a change."

ILLINOIS COLLEGE: "I am not ready to subscribe to items 2, 3 and 4 because I believe there are many good potential college students (and better American citizens because of college training) in the lower 50 per cent of the high-school students."

DOANE: "While appreciating the comfort to the administration and faculty and the advantage to the reputation of the institution of a plan for selecting only those of higher scholarship, I am convinced that a Christian college should, while maintaining high scholastic standing, give an opportunity to those who may be slower in development and who, if not graduating near the head of their classes, may become important leaders in smaller communities. I have known many such. If the moral purposes of the students are right, we prefer to do more of the eliminating ourselves, provided they have sufficient credits from an accredited high school. Our chief interest is in the individual student and his all-around development as a contribution to the welfare of society. I understand that scholarship for scholarship's sake is more nearly the aim of a university in contrast to that of a Christian college's purpose."

ALBRIGHT: "The selective plan on high percentage is easy and as a rule gives the college teacher the easiest work, but is unfair to the candidate. Pupils of high-school grade are in the 'teen' ages and their personality and purpose not sufficiently developed to judge. You cannot properly judge a boy or girl passing through the 'storm and stress periods.' A few of our most successful graduates we have entered with poor grades, and one, now a member of the faculty of the University of Pittsburg, ran 'poor' to the middle or end of his sophomore year, then suddenly changed."

GOODING: "We have enough of caste and class now for a democracy with our frats, high-brow degrees, and other forms of imported trumpery. The men and women your plan would shut out are the ones who need the help of an educational institution and the inspiration and encouragement of our teachers. God save the day when America is ruled by the high I. Q.'s, the upper half, or by estimates made by those who know more about research than they do about men. Our business as schoolmen is to encourage these students to go on, to teach them that honesty, industry, faithfulness, and persistency can overcome the handicap of a poor start; to teach them to think and then to work along the lines of that thinking. Any scheme or plan that robs a man of his chance to go on and grow on, when he is willing to do his best, when he has visions and dreams of his own, even though those dreams may not be strictly in accord with the course of study, because

he fails to reach the standards set for others, by others, is unfair, undemocratic, and unwise. If you think my last word 'unwise' is poorly chosen, let me ask you what you intend to do with the ones you would shut out and bar from college privileges with your 'top half,' 'opinions of high-school teachers,' 'standardized tests,' 'college aptitude tests,' 'evidences of seriousness of purpose,' 'conferences,' etc., after you shut them out? Probably use them as slaves and flunkies for the highbrows and later on to endow the colleges from which they have been barred, which might be a pretty good plan, if young America would only consent to stay 'put' where these damnable schemes would place them."

COMMENTS OF COLLEGE OFFICIALS ON THE PROPOSED PLAN BY ITEMS.

ITEM ONE: "Candidates for recommendation to college must have passed at least fifteen units of work in a satisfactory manner; provided, that those who have completed twelve units in the senior high school, *i. e.*, tenth, eleventh and twelfth grades, based on a junior high-school course where full work was carried in the ninth grade, may be granted three additional college entrance units to make up the necessary total of fifteen."

NOTE.—These are in addition to the 69 per cent who approved this item without comment, or in a very few cases represents their opinions . . . although approval has been given. No comments are omitted.

GROUP I—STATE UNIVERSITIES.

IOWA: "With reference to 'item one' I should say that we would approve of the admission of a student having completed twelve units in the senior high school based upon a junior high-school course where full work was carried in the ninth grade of the junior high school, provided that *either* within the senior high school or within the ninth grade of the junior high school this student's credits included at least a full unit of algebra; and we would accept as one of the necessary fifteen units a full year's work in a foreign language in the ninth grade, provided that this year's work constituted one-fourth of the entire ninth-grade work."

IDAHO: "The Committee on Admissions is now considering the adoption of an alternate requirement based on the work of the senior high school."

VERMONT: "I approve 'one' literally and the others in substance."

MICHIGAN: "Approve 'one' with this change: (last line) may be granted three additional college entrance units *in specified high-school subjects* to make up the necessary fifteen."

GROUP II—TECHNOLOGY, APPLIED SCIENCE, AND AGRICULTURE.

STEVENS INSTITUTE OF TECHNOLOGY: "Would modify 'one' to read: Fourteen and a half units in a satisfactory manner . . . may be granted two and one-half additional college entrance units . . . to make up the necessary total of fourteen and a half. (Their standing must entitle them to the certificate grade for admission to college of the certifying school. In addition a general examination in mathematics, for such candidates.)"

WORCESTER POLYTECHNIC (MASSACHUSETTS): "In common with other engineering schools of high grade, the Worcester Polytechnic Institute insists on certain entrance requirements, which must be met."

PENNSYLVANIA STATE COLLEGE: "This college also insists that the applicant present four full years of preparation, and does not give certificate credit for three- or three-and-one-half-year graduates, except at the rate of four units per year. Entrance examinations required in the remaining two or four units."

ARMOUR INSTITUTE: "I approve number 'one' also, if of the fifteen units a definite number were specified and no account were taken of junior high schools. We are not interested as to whether a subject was taken in the ninth or tenth grade."

GROUP III—WOMEN'S COLLEGES.

COKER: "Believe there is but one school in our state (South Carolina) that has the twelfth grade."

PENNSYLVANIA: "Approve 'one' but believe that no student should enter college without four years of English."

SIMMONS: "The question of the revision of entrance requirements is on the docket to be considered by the faculty in the fall. The junior high school situation is especially to be taken into account."

WESLEYAN (GEORGIA): Approves "one" but states: "We require sixteen unconditional units for admission."

GROUP IV—(No comment on item one specifically.)

GROUP V—TOTAL ANNUAL INCOME BETWEEN A HALF MILLION AND A MILLION DOLLARS.

LEHIGH: ". . . provided that those who have credit for eleven units . . . may be granted four additional college entrance units, etc."

OHIO WESLEYAN: "Must present statement of work taken in junior high school."

VANDERBILT: "We should want our specific requirements in English, foreign language, and mathematics, with electives in nonvocational subjects. To this extent I would modify item one."

GROUP VI—TOTAL ANNUAL INCOME BETWEEN A QUARTER AND A HALF MILLION DOLLARS.

WESLEYAN (CONNECTICUT): "No objection in principle, but we do not accept any units . . . only those strictly limited by us . . . no free elective units."

AMHERST: Approves all six items, but suggests: "Amherst requires twelve units, English 3, mathematics 3, foreign language 6, now. Possible further selection necessary to keep size of college down to desired smallness."

MIDDLEBURY: "We are not entirely in agreement as to these matters and I see no value in adding my personal opinions as to what is advisable as to acceptance of the junior high-school work for credit, etc., as we shall probably continue with a compromise program."

GROUP VII—TOTAL ANNUAL INCOME UNDER A QUARTER MILLION DOLLARS.

WITTENBERG: "Item one seems ambiguous to me. My interpretation . . . graduation from high school the only basis . . . no specified units, or other qualifications."

UNIVERSITY OF AKRON: "Provided minimum subject matter requirements are met."

GONZAGA: "One. Not satisfactory. Transfer to senior high from junior high a serious drawback."

DENVER: "As soon as the senior and junior high schools are well established, the university is willing to accept students on the certificates of the senior high school credits only."

ITEM TWO: "Candidates must accomplish their high-school work with an average scholarship which places them in the top half of their high-school graduating class."

NOTE.—These are in addition to the 49 per cent who approved the item as worded. No comments are omitted.

GROUP I—STATE UNIVERSITIES.

NEBRASKA: "With an average scholarship which places them in the *upper three-fourths*."

IOWA: "With reference to item two we would surely be well pleased to receive a student with an average scholarship which placed him in the top half of his high school graduating class; but this university has never yet been willing to place this standard as a condition of admission."

MARYLAND: "The procedures specified in two, three and four are not sufficiently exact to warrant automatic exclusion of a student who fails to reach the top half in any one or all three of these categories."

WEST VIRGINIA: "I would reject item two. Would substitute a provision for subjecting freshmen to intelligence tests . . . or college aptitude tests." (Complete comment quoted in general discussion of the items.)

GROUP II—TECHNOLOGY, APPLIED SCIENCE, AND AGRICULTURE.

MONTANA STATE: "Numbers 2, 3, 4 and 6 are impracticable. We have tried them, or rather something similar."

NEW MEXICO: "Too few high-school graduates in this state attend college. We need more of them rather than devising schemes to limit them."

GROUP III—WOMEN'S COLLEGES.

OKLAHOMA COLLEGE: "It is our opinion that plans two and four outline a selective system that is hardly desirable, and for which we are not ready."

COLLEGE OF INDUSTRIAL ARTS (TEXAS): "Candidly it has been the experience of this college that there is but little relation between grades made in high school and those made in college."

WELLESLEY: "Generally we would approve of two and four. Because of the difference in standards of grading in schools and the very carefully selected group in some small college preparatory classes relative class standing is not always a desirable basis of admission. Two and four could certainly be applied for all high-school candidates."

CONNECTICUT: "In two . . . say upper quarter."

GROUP IV—TOTAL ANNUAL INCOME A MILLION OR MORE DOLLARS.

WASHINGTON (ST. LOUIS): "Those in the lower half may be admitted upon successfully passing prescribed entrance examinations."

PITTSBURG: "Upper two-thirds of class."

GROUP V—TOTAL ANNUAL INCOME BETWEEN A HALF MILLION AND A MILLION DOLLARS.

LEHIGH: "In the top two-thirds of their graduating class. It is assumed that the quality of their work has been of certification standard, and if so, the fact of being in the lowest third should not bar them from college."

RICE: "For about five years we have been using item two."

TULANE: "Item two now under consideration by the Committee on Admissions."

OHIO WESLEYAN: "Would change 'graduation in upper half' to upper two-thirds."

TEMPLE: "Position in top half to be determined by considering last year in school."

GROUP VI—TOTAL ANNUAL INCOME BETWEEN A QUARTER AND A HALF MILLION DOLLARS.

WESLEYAN (CONNECTICUT): "First or second third is high enough."

OCCIDENTAL: "The top *third* be substituted for the top half."

KNOX: "We regard numbers 2, 3, 4 and 5 as desirable but believe they could not be met adequately by very many of the smaller high schools from which students come to us."

GROUP VII—TOTAL ANNUAL INCOME UNDER A QUARTER MILLION DOLLARS.

HENDRIX: "Admission only of 'upper half' of class is a pernicious rule—especially in small classes; it often happens that *none* (or maybe *all*) ought to go to college."

ADRIAN: "I approve two, but would set a somewhat more liberal standard, say upper two-thirds of class."

AUSTIN: "I object to item two on the ground that for every applicant of average intelligence means of higher education of some kind should be available."

ARKANSAS COLLEGE: "Instead of top half, item two be changed to read, *top two-thirds*."

MILLIKEN: "J. M. U. obtains division of high-school graduating class into thirds, and is disposed to exclude candidates from lowest third."

WESTMINSTER: "O. K. Ideal condition. All colleges cannot put it into practice immediately."

REED: "Items 1, 2, 3 and 6 are practically identical with methods in use here."

WITTENBERG: "Item two to read: In place of top half, *upper two-thirds*."

ALBANY: "Would substitute upper three-fourths for upper half."

GONZAGA: "Not satisfactory. Many students with lower grades in high school do superior work in college owing to the fact that they become more mature and serious with age; tests and measurements to the contrary notwithstanding."

ELLSWORTH: "That candidates meeting item two but not item four be admitted, and *vice versa*."

THIEL: "But I should be skeptical of a strict definition of the upper half, *e. g.*, would the upper half of a class of twenty equal that of a class of two hundred?"

ITEM THREE: "Candidates shall be rated by at least three of their high-school teachers on such personality traits as industry, reliability, judgment, coöperativeness, initiative, leadership, physical vitality, etc., and should be found in the top half of their graduating class in such traits."

NOTE.—These comments are in addition to the 49 per cent who approved the item as worded. No comments are omitted.

GROUP I—STATE UNIVERSITIES.

WEST VIRGINIA: "Adopt the first part of item three, but reject the second part, which requires that accepted candidates shall be found in the top half of their graduating class in the traits enumerated in the first part of this item."

MARYLAND: "Procedure not sufficiently exact to warrant automatic exclusion of a student who fails to reach the top half."

IOWA: "As to item number three we have not hitherto required such ratings by either the principal or any group of teachers. Possibly such ratings would be useful in our dealings with freshmen during their first year in the university. I have myself often thought that those who ask and those who give ratings on these traits have had a rather strong tendency to assume their practical value. While there is much less certainty the assumption is well based."

GROUP II—TECHNOLOGY, APPLIED SCIENCE, AND AGRICULTURE.

No comments previously unquoted under "general."

GROUP III—WOMEN'S COLLEGES.

OKLAHOMA: "We believe the information intended to be obtained by item three would be desirable, but do not think dependable information could be obtained in sufficient amount to be practicable."

CONNECTICUT: "Three or four could not be enforced absolutely. If all three judges had to place them in the upper half in every trait it would lead to nonsense."

GROUP IV.—TOTAL ANNUAL INCOME EXCEEDING A MILLION DOLLARS.

CHICAGO: "We gather data along these lines, but find it less reliable than other data secured."

PITTSBURG: "I would substitute receiving recommendation of high-school principal."

PRINCETON: "Careful examination of the character, personality and promise of the applicant, derived by principals' reports, letters of recommendation and personal interviews."

YALE: "A statement from the principal or headmaster concerning the applicant's character and other essential qualifications."

GROUP V—(No comment previously unrecorded).

GROUP VI—(No comments previously unrecorded).

GROUP VII—TOTAL ANNUAL INCOME UNDER A QUARTER MILLION DOLLARS.

CHATTANOOGA: "In general I agree, but would not bar a student who could qualify under two."

AUSTIN: "Item three would be very helpful but for the limitation."

HAMLIN: "I would approve of the rating, but only for *guidance* in personnel administration."

WABASH: "Are recommended by principal, favorite teacher, and some Wabash alumnus."

GONZAGA: "Not satisfactory. The traits examined (judgment and industry excepted) refer to social and mechanical intelligence and not to abstract intelligence, which (latter) should *mainly* be taken cognizance of in college entrance examinations."

ALBANY: "Too uncertain, in my opinion, to form proper basis."

ITEM FOUR: "Candidates shall stand in the top half of their graduating class in the distribution of scores made on one or more standardized intelligence tests or college aptitude tests."

NOTE.—These comments are in addition to the 38 per cent who approved the item as worded. No comments are omitted.

GROUP I—STATE UNIVERSITIES.

WEST VIRGINIA: "Adopt a provision for subjecting freshmen to intelligence or college aptitude tests, but reject the 'top half' provision of item four."

ILLINOIS: "I should not wish to deny admission to a student failing on item four."

IOWA: "As to item four, our answer is similar to that presented in connection with item two, except that while we have given these intelligence tests to entering freshmen for the last six years we have never used them as determinative on the question whether or not a student should be admitted. We have college placement examinations and aptitude tests upon the results of which we base a redistribution in any given college course (such as English, mathematics, chemistry, French, Spanish) to sections for notably superior students, and sections for medium students, and sections for noticeably inferior students."

Group II omitted; no comments previously unrecorded.

GROUP III—WOMEN'S COLLEGES.

WELLESLEY: "Two and four could certainly be applied for all high-school candidates."

GRANADA: "Perhaps number four is a little high for this section at present."

GEORGIA STATE (WOMEN): "If the faculty can handle such tests."

Group IV omitted; no comments previously unrecorded.

GROUP V—TOTAL ANNUAL INCOME BETWEEN A HALF MILLION DOLLARS AND A MILLION DOLLARS.

TEMPLE: "The aptitude test always considered in relation to scholastic trend."

GROUP VI—TOTAL ANNUAL INCOME BETWEEN A QUARTER AND A HALF MILLION DOLLARS.

WESLEYAN (CONNECTICUT): "Some more experience in such testing needed before we should require it."

GROUP VII—TOTAL ANNUAL INCOME UNDER QUARTER MILLION DOLLARS.

CHATTANOOGA: "In general I agree, but would not bar a student who can qualify under two."

AUSTIN: "The tests and other aids to proper placement are highly to be recommended, but in the present state of perfection are unacceptable to my mind to set up as bars across the college doorway."

REED: "We are not much in favor of this yet, but are watching progress made."

WITTENBERG: "One test not adequate to judge of ability. Would say upper *two-thirds* not top half."

WESTMINSTER: "Doubt if this is sufficient grounds for excluding a student."

GONZAGA: "Not entirely satisfactory, as most of these standardized tests do not examine for *abstract* intelligence. Several of these tests mistake superficial brightness for deeper intellectual characteristics. So far as protagonists of tests (standardized) have given very imperfect definitions of intelligence. Many who score very low in tests are of high-grade ability."

ITEM FIVE: "Candidates should complete at least ten of the fifteen secondary units in the fields of English, social science, natural science, mathematics, or foreign language, with at least two sequences of three units each selected within these five fields. The remaining five units may be chosen from any subject for which credit is given towards graduation by the high school recommending the candidate."

NOTE.—These comments are in addition to the 57 per cent who approved the item as worded. No comments are omitted.

GROUP I—STATE UNIVERSITIES.

WEST VIRGINIA: "Adopt items five and six. Devise and adopt more workable and effective measures for advising and guiding freshmen than those now in use in most state universities."

COLORADO: "Should complete at least *eleven* of the fifteen units . . . the remaining *four* units may be chosen, etc."

IOWA: "As to item five, we require that all units shall be within what we call 'five principal groups,' English, foreign language, the history-civics-economics group, mathematics—not including arithmetic—and the physical and biological sciences. The remaining *four* units may be chosen from any subjects for which credit is given for graduation by the high school recommending the candidate."

GROUP II—TECHNOLOGY, APPLIED SCIENCES AND AGRICULTURE.

GEORGIA SCHOOL OF TECHNOLOGY: "Should complete at least *twelve* of the fifteen . . . with at least two sequences of three units each in *English and mathematics*."

GROUP III—WOMEN'S COLLEGES.

WILSON: "Wilson's requirements are very definite."

WHEATON: "Candidates should complete the *fifteen* secondary units in the principal fields named."

ST. MARY OF THE WOODS: "We favor the classical requirement."

PENNSYLVANIA: "I believe the requirements should be more specific than in five . . . and no student enter college without four years of English."

OUR LADY OF THE LAKE: "Add: 'fulfilling the requirements of the college the student prepares to enter.'"

ILLINOIS WOMAN'S: "I suggest, *the remaining three units*."

MILLS: "Prefer greater restriction of electives."

WESTERN (OHIO): "That under five the college concerned could insist on certain courses that would be needed for the type of course offered in that college."

ROCKFORD: "Should complete at least *thirteen* of the fifteen . . . the remaining two . . . etc."

ELMIRA: "The committee questions the expediency of allowing so many as five units to be taken in vocational subjects as preparation for college work."

GEORGIA STATE: "Believe it is a good plan, but should not be so strict as to exclude the exceptional pupil."

GROUP IV—ANNUAL INCOME EXCEEDING A MILLION DOLLARS.

PURDUE: "Provided that for all students one sequence be in English and for engineers the second sequence be in mathematics."

GROUP V—TOTAL ANNUAL INCOME BETWEEN A HALF MILLION AND A MILLION DOLLARS.

CARLTON: "Under five, I would change ten to eleven units."

VANDERBILT: "We should want our specific requirements in English, foreign language, and mathematics with elective in *nonvocational* subjects. To this extent I would modify items one and five."

GROUP VI—TOTAL ANNUAL INCOME BETWEEN A QUARTER AND A HALF MILLION DOLLARS.

WESLEYAN (CONNECTICUT): "No free electives permitted."

GEORGETOWN: "I feel the acceptance of 'any subject for which credit is given' (five) is too broad. The amount of commercial and vocational work should be limited to fewer units."

MUHLENBERG: "My objection to five is that five units are too many to be distributed at random. For instance, at present we do not give five units of credit for commercial work, and we are unwilling to do it."

SULLINS: "I would substitute *three* sequences, specifying English 3 units, mathematics 3 units, and languages 3 units."

KENYON: "Item five can well be more specific for the remaining five free units for admission to liberal arts colleges."

GROUP VII—TOTAL ANNUAL INCOME UNDER A QUARTER MILLION DOLLARS.

SOUTHWESTERN (KANSAS): "Should complete at least *eleven* of the fifteen units . . . the remaining *four* . . . etc."

COLLEGE OF CITY OF DETROIT: "The last *three* from any subjects offered in standard high schools."

AMERICAN (WASHINGTON, D. C.): "Two units in two subjects, four in English."

HENDRIX: "Limit to *four* in any *one* field."

HAMLIN: "One sequence of three, two sequences of two."

LINFIELD: "Strike out: With at least two sequences of three units each selected within these five fields."

AKRON: "Provided minimum subject requirements are met."

DOANE: "Remaining *three*, not five."

WESTMINSTER: "Object O. K., if student goes to right school or college."

REED: "We require twelve units in these fields mentioned, but do not accept: drill, spelling, penmanship, physical training or student activities for any of the three units."

BELOIT: "Too high a percentage of electives allowed. May mean entrance with 33 $\frac{1}{3}$ per cent of the work in nonacademic subjects."

GONZAGA: "Fairly satisfactory. I would not grant the remaining five credits for *any* subject. Such subjects may be, *e.g.*, auto repairing, fine arts, advanced golf, elementary clog dancing, wood cutting, etc. What value in the above for a college course which is supposed to be cultural?"

ITEM SIX: "Candidates must submit to the colleges to which they seek admission evidences of seriousness of purpose, capacity for self-direction and sustained effort, and their reason for desiring to secure a college education. This information may be transmitted by means of a personal letter, a formal application blank, recommendations of those who know them best, or by interview with representatives of the college concerned, or by all of these methods combined."

NOTE.—No comments in addition to the 60 per cent who approved the item as worded.

COMPARISON OF THE REACTIONS OF HIGH-SCHOOL PRINCIPALS AND COLLEGE OFFICIALS TO THE PROPOSED PLAN.

A comparison of the approval given to the proposed plan and to the separate items in the plan by the high-school principals and the college officials is presented in Table V.

TABLE V.

HOW HIGH-SCHOOL PRINCIPALS AND COLLEGE OFFICIALS REACT TO THE PROPOSED PLAN.

	High-school principals. (977)	College officials. (331)
Approval of the plan as a whole.....	48.5%	26%
Approval by items:		
Item one	76%	69%
Item two	67%	49%
Item three	65%	49%
Item four	59%	38%
Item five	73%	57%
Item six	75%	60%
Substitute plan (<i>h</i>) (principal's recommendation only)...	7%	6%
Would substitute for proposed plan:		
Old plan C. E. E. B.....	.3%	2%
New plan C. E. E. B.....	.4%	5%
Latest plan C. E. E. B.....	1.8%	5%
New England C. E. C. B.....	.2%	2%
North Central Association plan.....	3.0%	5%
Percentile position	2.0%	1.5%

The figures indicate that the principals as a whole approve the plan to a greater degree than do the college officials. This is true, not only for the plan as a whole, but for each item proposed.

Consideration of the foregoing pages brings to light the following points, which seem to be pertinent from the viewpoint of comparing the high-school principal's reactions to the proposed plan with those of the college officials:

The high-school principals on record in the study favor, in about half the votes cast, a plan which in its entirety is decidedly conservative and which

would be likely to result in their sending fewer graduates to college than at the present time. The college officials approve the same plan in about one-fourth of the instances. May not the more conservative vote of the college officials be due to any one of many factors, a few of which are listed? The traditional requirements would be displaced; the colleges would be deliberately relinquishing a prerogative which they have exercised from the beginning; the present mechanical procedure would be upset; the number of students would probably be decreased, and most institutions have taken much pride in their numbers; state-supported institutions have generally received increased appropriations when they could show largely increased numbers, and to limit numbers when a rival institution might not do so would tend to hurt the institution in the eyes of the public; and the institution slips out of the "approving all" class when it does not approve of some one item.

Neither high-school principals nor the college officials show by their votes that they favor to any considerable extent any of the existing examination plans. This is shown by their disinclination to substitute an examination plan for the one proposed. The fact that many of these principals are now sending a considerable number of their graduates to college by means of an examination plan, and that an examination is used to some extent by a large number of institutions of the collegiate group, apparently does not increase the favor with which the examination method as a college entrance device is viewed.

Neither the high-school principals nor the college officials would prefer to have candidates for college admission chosen entirely upon the recommendation of the principal. This is indicated by the small percentage of both high-school and college officials that voted to substitute this method for the proposed one.

Both high-school principals and college officials, in an unofficial vote, would favor a plan for college admission which provides "that those who have completed twelve units in the senior high school, *i. e.*, tenth, eleventh and twelfth grades, based on a junior high school course where full work was carried in the ninth grade, may be granted three additional college entrance units to make up the necessary total of fifteen." Seventy per cent of the votes cast favored this item.

Sixty-seven per cent of the high-school principals and nearly half of the college officials would favor a plan for admission to college which provides for selection of only the top half of graduating classes. This item (two), which applied to "scholarship," implies a graduating class large enough that something of a normal curve of distribution might be secured.

Sixty-five per cent of the principals and 49 per cent of the college officials approved item three, which reads: "Candidates shall be rated by at least three of their high-school teachers on such personality traits as industry, reliability, judgment, coöperativeness, initiative, leadership, physical vitality, etc., and should be found in the top half of their graduating class in such traits."

While a smaller percentage of both high-school and college officials approve of item four than of any other item in the plan, there were still 59 per cent of the former and 38 per cent of the latter approving it. This item reads: "Candidates shall stand in the top half of their graduating class in

the distribution of scores made on one or more standardized intelligence tests or college aptitude tests."

The belief that the present prescription in the matter of subject requirements is tending to limit the high schools in the work of adjusting their programs of study to fit the needs of the community is evidently responsible for the approval given to the fifth item of the plan, which proposes "that candidates should complete at least ten of the fifteen secondary units, etc." This item was approved by 73 per cent of the high-school principals and by 57 per cent of the college officials. This approval may be due, also, to the fact that there is little experimental evidence to point to a greater success in college of students from the "academic" group than from the "vocational" group. What evidence has been secured indicates that when equal mental, social, and industry abilities are paired, the differences being only in the "academic," "vocational" pattern in high school, that success can be predicted for either to about the same degree (14).

The belief in the desirability of securing as much personal information as is possible about the candidate for admission is indicated by the approval given to the last item, which states that "candidates must submit to the colleges to which they seek admission evidence of seriousness of purpose, capacity for self-direction, etc." This proposal met with approval from 60 per cent of the college officials and 75 per cent of the high-school principals.

CHAPTER III.

RECOMMENDATIONS, PRINCIPLES, AND CONCLUSIONS
BASED ON A STUDY OF THE DATA FROM THE TABLES AND ON
THE REACTION TO THE PROPOSED PLAN OF ADMISSIONS.*

I. A critical review of the study as a whole brings out the fact that a uniform national plan of college admissions which does more than set down broad guiding principles, if not entirely impracticable, would at least be very difficult to put into effect. This is indicated by:

- (a) The lack of uniformity in the methods now in use.
- (b) The differences in method of entrance employed in different sections of the country.
- (c) The differences in method of entrance employed by institutions of the same type.
- (d) The differences in specific subject requirements by the different institutions when classified either by types or by regional associations.
- (e) Differences in requirements in individual institutions as expressed in the comments quoted in the study.
- (f) Differences in the amount of high-school electives accepted.
- (g) The fact that change of policy is largely voluntary in nature and institutions would need to be thoroughly convinced of the wisdom of the change before any adoption of a national plan could come about.
- (h) Differences in practice now existing in the matter of accepting vocational-industrial-commercial credit for college entrance.
- (i) The large number of reasons given for refusing freshmen admittance; these reasons are affected much by the types of institutions, by financial strength, and by the necessity for restricting numbers.
- (j) Lack of flexibility on the part of admission committees in interpreting wording of catalogues.
- (k) Differences in evaluating the ninth-grade work when offered, as compared with work in grades ten, eleven and twelve.
- (l) The lack of unanimity in approving any one of the six items in the proposed plan: Tables III and IV, pages 22 and 23.
- (m) Differences in institutions according to types in approving the different items in the proposed plan: Table III; page 22.
- (n) Differences in approving items in the proposed plan from different geographical areas: Table IV; page 23.
- (o) The need and desire for more students on the part of some institutions, and the need for restricting enrollment on the part of others.
- (p) Differences in the aims of the institutions: As no question in the inquiry form requested a statement of aims, this can only be brought out from a few institutions which mention their aims in commenting on the proposed plan. This is one of the outstanding arguments against a national plan, as a difference in aims would probably lead to differences in selecting students. It seems reasonable to believe that state supported institutions, women's colleges, financially strong endowed universities, and denominational colleges would continue to differ much in this factor. (See: Doane, page 32; Little Rock, page 32; Albright, page 32; Gooding, page 32; St. Mary of the Woods, page 39; Ohio State, page 28; Vanderbilt, page 40.)

*In order to give readers of this study a summary of findings previously published but not included in this study, a part of this summarization contains data not included in the text of this particular publication.

II. Although a national plan of admissions which would seek to solve admission problems in general seems to be impracticable at the present time, there is much evidence to support the finding that the college must recognize the imperative demands which the people are putting upon the high school. It is important that the college should seek to formulate admission policies which, while requiring preparation on the part of the student to carry the type of work offered in the colleges, shall yet provide reasonable freedom for the high school to meet the legitimate needs of the community and the state which it serves, and which furnishes its support.

This point of view is supported by the following references. The numbers in parentheses refer to the corresponding number in the bibliography (2, 6, 11, 14, 15, 23, 27, 30, 33, 34, 40, 44, 54, 56, 57, 68, 69, 72).

The same viewpoint is strengthened by the data in the tables in previously published parts of the study, and from the reactions to the proposed plan by the high-school principals.* Outstanding supporting indications are:

- (a) The preponderance of "academic" units offered in high school over vocational-industrial-commercial units, in spite of the fact that less than 15 per cent of the students entering high school ever go to college.
- (b) The relatively small percentage of high-school graduates who finish high school with as many as five units of vocational-industrial-commercial credit.
- (c) The fact that 43 per cent of the high-school principals named one item, "Satisfaction of college entrance requirements," as being the most important influencing factor causing students to take 'academic' subjects rather than 'vocational-industrial-commercial' subjects.
- (d) The fact that in high-school principals' opinions the most common reason for pupils changing from a vocational-industrial-commercial curriculum to an academic curriculum is "ability to go to college."
- (e) That whenever high-school principals have reorganized their courses of study, the changes have been in the direction of making the high school serve more adequately the community it represents.
- (f) The statements from the principals that were they free to make changes, "no restrictions from any source," that the greater part of the changes would be in the direction of serving the community and state more effectively.
- (g) The approval given by the principals to the proposed plan which provided for acceptance by the college for entrance of as many as five units of vocational-industrial-commercial credit: Tables I and II, pages 17 and 19.
- (h) The approval given by the principals to item one in the proposed plan, which provided for liberation of the junior high school from college entrance requirements: Tables I and II, pages 17 and 19.

III. The proposal to eliminate the work done in the ninth grades of junior and four-year high schools from the college entrance requirements and to base college admission on twelve units of work done in grades ten, eleven and twelve is not only desirable, but meets with approval which is quite general.

This statement is supported by the following references from the literature dealing with the subjects: (30, 33, 34, 40, 43, 57, 58, 59, 61, 71, 77, 79, 80, 83).

* William Martin Proctor and Edwin J. Brown: *College Admission Requirements in Relation to Curriculum Revision in Secondary Schools.* Department of Superintendence, Sixth Yearbook, 1928.

The approval given to the proposal is further indicated by:

- (a) The fact that lesser emphasis is placed upon the ninth grade than upon other grades in evaluating a transcript by about one-fifth of the colleges.
- (b) The changing attitude toward considering the ninth grade for college entrance purposes.
- (c) The fact that college officials in an unofficial vote favored freeing the ninth grade from college entrance restrictions in 69 per cent of the votes cast: Tables III and IV, pages 22 and 23.
- (d) The approval given to the proposition to free the ninth grade of the junior high school from college entrance restrictions by 76 per cent of the high-school principals: Tables I and II, pages 17 and 19.
- (e) The comments from colleges of all types in regard to item one of the proposed plan which deals with the junior high-school topic.

IV. There has been a slight tendency toward liberalization of entrance requirements in the period from 1920-'21 to 1926-'27.* This is made evident in the following ways:

- (a) Reduction of the number of specific units required.
- (b) Entrance requirements in subjects are practically restricted to the five major academic fields with the following percentages obtaining: English required by 100 per cent of the institutions reporting; mathematics required by 94 per cent of the institutions reporting; social science required by 77 per cent of the institutions reporting; foreign languages required by 75 per cent of the institutions reporting; science required by 54 per cent of the institutions reporting.
- (c) A willingness to accept vocational-industrial-commercial credit for college entrance. Twenty-one per cent of the institutions reporting expressed willingness to accept up to five units of this type of credit.
- (d) A tendency toward having a single requirement for admission to candidacy for all degrees.

V. That there is need for improvement in the standardizing and construction of intelligence or college aptitude tests; need for a greater amount of empirical evidence as to their predictive value; and need for a greater number of comparative studies of their worth when combined with other measures in admission procedure. This is evidenced by the fact that item four of the proposed plan, which provided for selecting candidates for college admission from the top half of graduating classes in the distribution of scores made on intelligence or aptitude tests, was the least approved of the items in the proposed plan by both principals and college officials. The statement is further supported by college officials, whose comments upon the separate items indicate a lack of confidence in such tests when used as a basis for rejection of students. On the other hand, the authors of many articles dealing with the subject of aptitude tests express confidence in the future worth of these tests, but admit the limitations of such tests as now constituted (1, 2, 11, 16, 24, 30, 32, 39, 45, 46, 48, 51, 52, 74, 80, 82, 88, 90, 95, 96, 97, 99).

The statement is further supported by: Table I, Table II, Table III, and Table IV, pages 17, 19, 22 and 23. This is borne out by comments (college officials) from West Virginia, Illinois, Iowa, Wellesley, Granada, Georgia State (Women), Temple, Wesleyan (Connecticut), Chattanooga, Austin, Reed, Wittenberg, Westminster, and Gonzaga.

VI. That if candidates are to be graded on such qualities as leadership,

* See footnotes 1 and 2, page 7.

personality, initiative, coöperativeness, etc., a rating scale must be devised which is more analytical and which yields better objective and measureable results than those now in use. In general, there is lack of confidence in those ratings in their present state of development (2, 26, 32, 52, 80, 86).

Tables I and II, pages 17 and 19; Tables III and IV, pages 22 and 23; Comments from individual institutions, Maryland, page 37; Iowa, page 37; Oklahoma, page 37; Chicago, page 37; Pittsburg, page 37; Hamline, page 37; Albany, page 38.

VII. The conclusion seems justified that there is a wide difference in the attitudes of college officials toward accepting a definite percentile position of the candidate in respect to his high-school class in the factors of scholarship, personality traits, and intelligence as indicated by standardized tests, as a basis of selection for college entrance. The divergence in opinion is indicated by these findings from the study:

- (a) Item two in the proposed plan, which carried the provision that candidates must accomplish their high-school work with an average *scholarship* which places them in the *top half* of their high-school graduating class, was approved by slightly less than half of the college officials. Tables III and IV, pages 22 and 23. Reasons for greater approval not being given are indicated by:
- (b) Unofficial comments from administrative officials, credited to the institution they represent, indicate that some institutions place little reliability in the high-school scholastic record as a predictive measure (Texas Industrial Arts, page 29); that others would consider only the last year in high school instead of the four-year record (Temple, page 31); that every graduate of an accredited high school should be allowed to enter college, his work determining whether he should stay there (Little Rock, page 32); Austin, page 38; Gooding, page 32; New Mexico A. and M., page 29); that candidates should be selected from the upper *three-fourths* of the graduating class (Nebraska, page 35; Albany, page 38); that candidates should be selected from the *upper two-thirds* of the graduating class (Pittsburg, page 35; Lehigh, page 35; Ohio Wesleyan, page 36; Adrian, page 36; Arkansas College, page 36; Milliken, page 36; Wittenberg, page 36); that candidates should be selected from *upper one-third* of the class on a scholarship distribution (Occidental, page 36); that candidates should be selected from the *upper one-fourth* of the high-school classes (Connecticut Women, page 35); and that a special privilege in the form of being admitted without submitting further evidence be allowed students presenting credentials who stand in the *top fifth* of their graduating classes (Brown, page 30).
- (c) Item three in the proposed plan, which provided that candidates should be rated by three of their teachers on personality traits and should be found in the *top half* of their graduating classes, was approved by slightly less than half of the college officials. The comments indicate that *not only* is there lack of confidence in the personality ratings as admission instruments, as is shown in VI, page 46, but that there is a wide divergence in opinion as to what per cent of the graduating classes should be denied consideration for college entrance because of low scores on these ratings. The comments indicate that some officials are unwilling to accept the *top half* provision of item three, but favor the remainder of the item (West Virginia, page 37); that officials feel that the procedure is not sufficiently exact to warrant exclusion of a student who fails to reach the "top half" (Maryland, page 37; Iowa, page 37; Oklahoma Women, page 37; Connecticut Women, page 37; Princeton, page 37; Yale, page 37; Chattanooga, page 37; Austin, page 37; Albany, page 38).

- (d) Item four in the proposed plan, which provided that candidates should stand in the *top half* of their graduating class in the distribution of scores made on one or more standardized intelligence tests or college aptitude tests, was approved the least of any item in the proposed plan: Tables III and IV, pages 22 and 23. Reasons for greater approval not being given are indicated by:
- (e) Comments from the officials representing the institutions, which indicate not only lack of confidence in the intelligence or aptitude test as an admission instrument in its present form and organization, as is shown in V, page 46, but that there is considerable difference of opinion as to what percentage of the class should be considered for admission to college as indicated by the tests, when their use is approved: Comments from West Virginia, page 38; Iowa, page 38; Granada, page 38; Chattanooga, page 38; Wittenberg, page 39; Westminster, page 39.

VIII. The study indicates that there is apparently a recognition on the part of the high-school principals of the right of the colleges to apply a rather severe selective process to the admission of candidates, provided this selective process is directed at the discovery of the mental, social, and educational fitness of the candidate and does not minutely prescribe the subjects which he is to take in high school. This conclusion finds its support in the following facts from the study; the first four items (*a*, *b*, *c* and *d*) supporting the first part of the conclusion and the last item (*e*) supporting the concluding part of the statement:

- (a) Item two in the plan proposed for admitting students to college, which provided that "candidates must accomplish their high-school work with an *average scholarship* which places them in the *top half of their high-school graduating class*," was approved by 67 per cent of the 977 principals voting on this item. College officials approved this item in 49 per cent of the votes cast: Table I, page 17; Table II, page 19.
- (b) Item three in the proposed plan for admitting students to college, which provides that "candidates shall be rated by at least three of their high-school teachers on such *personality traits* as industry, reliability, judgment, coöperativeness, initiative, leadership, physical vitality, etc., and should be found in the *top half* of their graduating class in such traits," was approved by 65 per cent of the high-school principals voting on this item. College officials approved this item in 49 per cent of the votes cast: Tables I and II, pages 17 and 19.
- (c) Item four in the proposed plan for admitting students to college which provides that "candidates shall stand in the *top half* of their graduating class in the distribution of scores made on one or more standardized *intelligence tests* or *college aptitude tests*," was approved by 59 per cent of the high-school principals. College officials gave approval to the item in 38 per cent of the votes cast: Tables I and II, pages 17 and 19.
- (d) Substitute plan (*h*), which provides for the substitution "for the proposed plan that of admitting to college any graduate of an accredited high school, without reference to pattern of subjects taken, *on the recommendation of the high-school principal*," was approved by but 7 per cent of the high-school principals. College officials approved the item in 6 per cent of the votes cast.
- (e) Item five, which would allow the candidate to present as many as *five units of credit* for college entrance in fields other than the five principal "academic" groups (English, social science, science, foreign language, and mathematics), was approved by 73 per cent of the high-school principals. Tables I and II, pages 17 and 19.

IX. That entrance examinations, whether "old plan," "new plan," or "latest plan," are considered by a large majority of both high-school principals and college officials to be undesirable as a chief means of college admission. This is evidenced by the limited number of institutions using the examination as the predominant entrance method, by the unwillingness to substitute an examination method for the proposed plan, and by a majority of the articles discussing the examinations: (4, 6, 12, 17, 24, 35, 45, 47, 64, 73, 80, 81, 84, 98, 100, 101). Table I, page 17; Table II, page 19; Tables III and IV, pages 22 and 23.

X. That existing opportunities for college admission are not now fully made known to high-school graduates because of the lack of an official publication giving the facts about the admission requirements of the various colleges and universities. Something in the form of a bulletin should be published, either by the National Education Association or the Office of Education. This bulletin should show definitely what each college requires for entrance, and what electives are accepted. The need for such a service is indicated by the following items selected from the data:

- (a) The wide divergence among colleges in the number of units prescribed.
- (b) The differences in entrance methods employed.
- (c) That institutions willing to accept vocational-industrial-commercial credit in amounts equaling five or more units have few more transcripts offered them containing that amount than do institutions unwilling to accept any such credit.
- (d) The differences in subject requirements among institutions of the same type and in the same geographical area.
- (e) That institutions of the same type and in the same geographical area differ much in their willingness to accept vocational-industrial-commercial credit in amounts equaling five or more units.
- (f) That reasons for refusal of a candidate differ much among institutions of the same type.
- (g) That institutions differ much in their attitude toward leaving out of consideration the ninth grade of high school for college entrance. This implies that a student ineligible to enter one college because of low marks in the ninth grade of high school would be eligible to enter another college if marks in the upper three grades were satisfactory.

CONCLUSIONS BASED ON A STUDY OF THE LITERATURE
DEALING WITH THE SUBJECT OF COLLEGE
ADMISSIONS.

I. That a college education is not a right but a privilege provided by the state or private generosity for the training of leaders that the state may benefit from such training, therefore the need for making a selection from among those applying for admission: (1, 2, 3, 8, 13, 18, 22, 25, 31, 38, 39, 42, 49, 53, 75, 85, 87, 90, 92, 93, 97).

II. That high schools and colleges are a part of a national educational system, and as such their essential interests are inseparable: (2, 5, 7, 11, 13, 15, 19, 21, 27, 30, 33, 50, 54, 56, 63, 65, 70, 88, 93).

III. That the high school should proceed upon the assumption that preparation for college is an essential function, but not necessarily its primary function: (5, 6, 7, 10, 13, 14, 15, 19, 30, 33, 34, 35, 42, 54, 56, 62, 63).

IV. That the responsibility of selecting candidates rests primarily upon the college, but that great care should be exercised by the college to so organize its selective plan as to leave the high school free to carry out its other necessary function: (1, 2, 3, 8, 18, 22, 25, 28, 29, 37, 42, 51, 53, 55, 65, 94).

COLLEGE ADMISSIONS PROBLEMS SUGGESTED FOR FURTHER STUDY.

I. That in each college it is desirable that a survey be made on the basis of present and immediately prospective plant, staff, endowment, and equipment for the purpose of determining the maximum number of students that can be handled efficiently. Consideration should be given to the size of classes, the policy of the institution, reasonable teaching schedules, and the demands made upon the faculty by research activities and other professional activities. The number so determined should be the basis for limiting student enrollment or increasing endowment or appropriation.

II. That the desirability of choosing a director of admissions should be considered. He should be an administrative official of the college and permanent chairman of a faculty committee.

III. That each institution should carry on a systematic study, under the Director of Admissions, of the causes of freshman and sophomore mortality. The period considered should be of sufficient duration to secure comparable results. This implies the making of just as careful or even a more careful study of the departing student as of the incoming one. Common causes of mortality are: Scholarship, finances, family troubles, discouragement, transfers, health, misconduct, marriage, and death. While the first is commonly blamed, it is desirable to know to what extent other factors have been operating and to what extent scholarship failure might have been averted.

IV. From a survey of each case (personal interview and other methods) an attempt should be made to determine what the "drop-out" has gotten from his college work; whether he has been injured by being in college for a time and then being sent home; and whether the money expended upon him by the institution and his parents has been wasted or whether value has been received. (Is it possible that a student who stays six months and is then sent home, has gotten one-sixth as much as one who stays thirty-six months?)

V. That the Director of Admissions and his committee consider the advisability of dividing the incoming class for a period of years by means of four bases of selection (which are to-day used), pairing as nearly as possible similar capabilities in other lines:

- (a) Definite number of recommended units.
- (b) A fixed high-school average.
- (c) A minimum requirement in specified subject matter.
- (d) Percentile position in class.

With the data thus secured the utility of these devices as admission instruments could be more definitely determined.

VI. That institutions consider the desirability of admitting for experimental purposes, each year for a period of years, a number of students presenting all "academic" credit from high school, and a control group of students selected on a basis of similar qualifications except for the one factor of

subject matter taken in high school. The second group to be selected entirely from "vocational" majors in high school.

VII. That departments in each institution be encouraged in carrying on under the Director of Admissions, or of research, independent investigations to determine the extent of "carry-over" from specific subjects taken in high school. That is, does a student who has taken a three-unit science major from high school rank higher in science at the end of his senior year in college than does a classmate who presented no science from high school?

VIII. "Our tests foretell as accurately as an entrance examination or a high-school record what a boy will do in college." J. M. Cattell (24).

That each institution consider the advisability of carrying on empirical studies under the Director of Admissions or the Director of Research to determine the accuracy of this statement. There is at present a lack of agreement upon the worth of the intelligence test or the college aptitude test for prognosis of college success.

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