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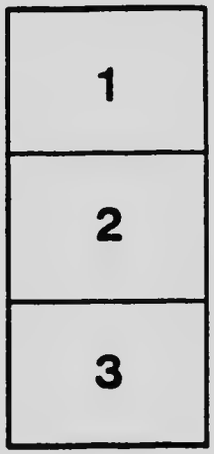

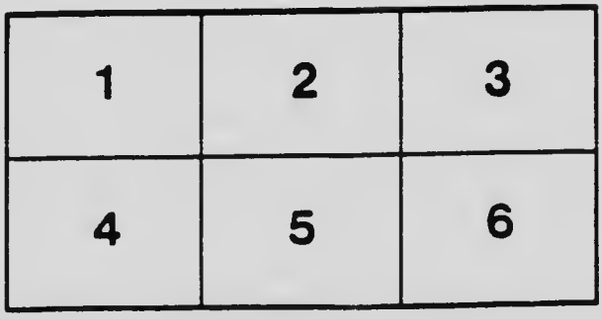

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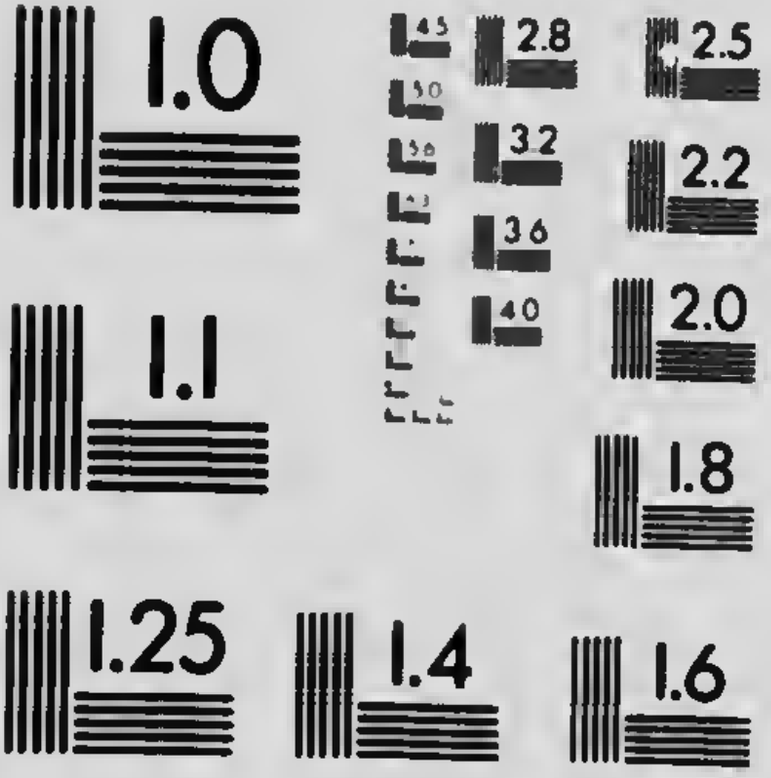

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FIRST REPORT

OF THE

COMMITTEE ON THE RELATIONS BETWEEN HIGH SCHOOLS AND COLLEGES IN NOVA SCOTIA

APPOINTED AT THE MEETING

OF THE

PROVINCIAL EDUCATIONAL ASSOCIATION,

AUGUST, 1905.

First Report of the Committee on the Relations between High Schools and Colleges in Nova Scotia.

At the meeting of the Provincial Educational Association of Nova Scotia held at Truro in August 1905, a paper was submitted by Principal E. W. Sawyer of the Horton Collegiate Academy, in which it was claimed that there was at present a serious lack of harmony between the ideals of our high schools and of our colleges, and a lack of proper co-ordination in their work; and that the consequences of this lack of co-ordination meant serious loss and injury to our country.

As a result of the discussion arising out of this paper a resolution was adopted by the Association, on motion of Prof. D. A. Murray of Dalhousie College, that a committee be appointed to consider the relations between our high schools and colleges, and to report at the next meeting of the Association, this committee to be constituted as follows, viz: seven members appointed by the Association and two members to be appointed by each of the degree-conferring colleges of the province.

In accordance with the above resolution the following members were appointed:

Dr. A. H. MacKay, Superintendent of Education for Nova Scotia.
Principal E. W. Sawyer, of the Horton Collegiate Academy.
J. W. Logan, of the Halifax Academy.
Principal R. MacLellan, of the Pictou Academy.
Principal B. McKittrick, of the Lunenburg Academy.
Principal W. R. Campbell, of the Truro Academy.
Rev. Father Amirault, Principal of the Church Point Academy.
Dr. L. E. Wortman, of Acadia College.
Dr. C. C. Jones, of Acadia College.
Rev. P. Chiasson, of St. Anne's College.
Rev. E. Le Bonter, of St. Anne's College.
President Ian Hannah of King's College.
Professor Lothar Bober, of King's College.
Professor C. M. Dennan of St. Mary's College.
Rev. C. S. McManus, of St. Mary's College.
Rev. Dr. McPherson, of St. Francis Xavier's College.
Professor J. M. Almond, of St. Francis Xavier's College.
Professor Howard Murray, of Dalhousie College.
Professor Eben MacKay, of Dalhousie College.

This committee met and held its first session in Halifax on January 3rd, 1906, all the members being present except Principals Amirault and McKittrick, and Professors Wortman, Chiasson, LeBonter and Bober; and of these, Professor Wortman was present at the subsequent sessions. Six sessions in all were held on this and the succeeding days, three of the whole committee and three of sub-committees. Dr. A. H. McKay acted as chairman of the whole committee, and Professor Howard Murray was appointed Secretary.

The committee were unanimously of the opinion that, in mathematical and in science subjects, the standard in our schools had been raised in recent years

and the work in them had been greatly improved and would compare favorably with that done in the schools of any other country; but that language studies had suffered from being comparatively neglected, and that our schools were in this respect behind those of the most progressive and enlightened countries.

This condition of affairs had resulted moreover in an unsettling of the relations between the high schools and the colleges. The advance in the standard in mathematical and in science subjects and the making of both of these lines compulsory on all high school pupils, had brought about in these an overlapping of the colleges by the schools, and, to avoid the waste involved in duplicating work already done in the schools, it had been found necessary for the colleges to readjust their courses in mathematical subjects by raising their standard by an amount equal to the work of about one session or year. On the other hand the putting down of Latin, Greek, French, and German, merely as extra subjects to be taken up or not just as the pupil or teacher saw fit, placed these subjects at a great disadvantage as compared with the others which had been made compulsory, and resulted in a considerable diminution in the number of those studying them and in less attention being given to them; for, with the spirit of emulation engendered by the government examinations, both teachers and pupils naturally directed their attention to those subjects from which there was no escape, and in which a certain minimum of marks had perforce to be made, if the pupil was to receive the coveted "pass" certificate. In the case of these languages therefore, and more particularly in the case of Latin and Greek, the schools had been falling away from the colleges, and although the colleges had been trying to keep in touch with the schools by repeated lowerings of their entrance requirements in these subjects, a point had been reached when it had been found absolutely necessary to start beginners' classes in the colleges in both Latin and Greek in order to accommodate the many who now enter college with little or no previous instruction in those subjects, and who wish to acquire a knowledge of them. It is to be hoped that these classes, or that in Latin at any rate, may not be found necessary for more than a year or two after the present high-school course has undergone revision.

The committee believe that the course of study in the high school should be such as will not only furnish a sound mental equipment for those who leave the school to enter upon the business of life, but will also serve as a fitting preparation for those who may wish to continue their studies in the college or professional school. It is certainly one of the proper functions of the high school to serve as a connecting link between the elementary school and the college.

The committee believe further that these two objects which nominally appear different are after all essentially the same; that the aim in both cases should be to really educate rather than instruct, to improve the character and to develop and strengthen the intellect so as to bring it to the highest possible condition of efficiency in whatever sphere it may be called upon to act, rather than to cram the memory with a number of bits of knowledge however interesting or valuable these may be in themselves or in the eyes of the advocates of so-called useful knowledge.

If the work of the colleges is being conducted upon right lines, if the large number of those who perhaps know most about educational matters and who are able to avail themselves of the opportunities afforded by the colleges, are doing right in seeing that their sons and daughters have a course in college for their intellectual improvement before they go into business or a professional school, then surely the still larger number who feel that they are not able to avail themselves of those opportunities, cannot be going very far astray in

having their children follow a somewhat similiar course in the high schools and one which will enable them, if that decision should at any time be arrived at, to pass from the high school into the college or professional school without any serious dislocation in their studies and without being handicapped, as so many young men and women in Nova Scotia now find themselves, to such an extent as to deprive them of the proper benefits of a college course.

As a basis for discussion the committee drew up a tentative course of study, which is given below, and on which they would like to have the opinions, criticisms, and suggestions of those engaged in educational work throughout the province, and more particularly of those who are teaching in the high schools and academies, and of the inspectors of schools.

The objects which the committee had in view when they were drawing up their tentative course of study were:

1. To simplify the present course by reducing the number of subjects which pupils are required or permitted to take up each year.

2. To include in the course as far as possible only such subjects as have a distinctly educational value.

3. To place language studies in a position more in accordance with their importance in any educational scheme.

4. To include one science subject for each year of the course.

5. To conserve the time and energy of the teacher and to secure more thorough work and better educational results on the part of the pupils by concentrating their attention on a few subjects which have been shown by experience to possess the highest educational value.

With these objects in view the committee drew up the following scheme, which is framed so as to cover four years. Together with the subjects the values which it was proposed to assign to them are also given. For the purpose of comparison the subjects of the present high school course are placed alongside.

PROPOSED HIGH SCHOOL COURSE.

First Year or Grade IX.

English	200
Latin	200
Arithmetic	100
Algebra	100
Physical Geography	100
Drawing (Freehand and Geometrical)	100
Bookkeeping (?)	100

Second Year or Grade X.

English	200
Latin	200
Greek or French or German	100
Canadian History	100
Arithmetic and Algebra	100
Geometry	100
Botany or Zoology	100

PRESENT HIGH SCHOOL COURSE.

First Year or Grade IX.

English	200
History	50
Geography	50
Botany	80
Physics	20
Drawing	50
Bookkeeping	50
Arithmetic	100
Algebra	100
Geometry	100
Latin (optional)	100
French (optional)	100

Second Year or Grade X.

English	200
History	50
Geography	50
Chemistry	70
Agriculture	30
Drawing	50
Bookkeeping	50
Arithmetic	100
Algebra	100
Geometry	100
Latin (optional)	100
Greek (optional)	100
French (optional)	100
German (optional)	100

Third Year or Grade XI.

English	200
Latin	200
Greek or French or German	200
British History	100
Algebra	100
Geometry	100
Chemistry	100

Third Year or Grade XI.

English	200
History and Geography	100
Physiology	100
Physics	100
Arithmetic and Algebra	100
Geometry	100
Practical Mathematics	100
Latin (optional)	200
Greek (optional)	200
French (optional)	100
German (optional)	100

PROPOSED COURSE.

Fourth Year or Grade XII.

English	200
Latin	200
Greek or French or German	200
Ancient History	100
Algebra	100
Geometry	100
Practical Mathematics,	100
Physics	100
Physiology & Hygiene,	50

PRESENT COURSE.

Fourth Year or Grade XII.

A. Imperative Subjects for Classical Side.

English	200
History	100
Psychology	100
Sanitation	100
Latin Grammar	100
Tacitus	100
Cicero	100
Virgil	100
Horace	100
Roman History	100
Greek Grammar	100
Xenophon	100
Demosthenes	100
Homer	100
Greek History	100
Plus any other 4	100

B. Imperative Subjects for Scientific Side.

English	200
History	100
Psychology	100
Sanitation	100
Physics	100
Chemistry	100
Botany	100
Zoology	100
Geology	100
Astronomy	100
Navigation	100
Trigonometry	100
Algebra	100
Geometry	100
Plus any other 5	500

C. Optional Subjects for Both Sides.

French Grammar	100
French Authors	100
German Grammar	100
German Authors	100

Some differences of opinion were expressed with regard to a few matters of detail, but the committee, with perhaps one exception, were unanimously of the opinion that the adoption of some such programme of studies as that outlined above would give very much better results than were at present being obtained.

Some thought that Arithmetic should not be carried beyond Grade IX. It was pointed out that in the United States it is not customary for Arithmetic as a special subject to be carried into the high school grades at all. In Germany also "Arithmetic proper ceases in Class IV," at which stage the average age of the pupil is twelve.

It was thought that better progress could be made in Geometry by post-

pening it to the second year of the course. It was stated that a considerable number of pupils found a difficulty in grasping the fundamental ideas of the subject, and they would be able to take hold of it better after a further training in Algebra and Drawing.

The majority were of the opinion that Drawing might be dropped from the second year, that more time might be given to it in the first year, that special attention should be given to Geometrical Drawing, and that it should be utilized as an introduction to formal Geometry which was to be taken up in the following grade.

Some of the committee protested vigorously against the retaining of Bookkeeping, basing their protest on the ground that it was of little or no value from an educational point of view and therefore not a proper subject for the regular high school course; and it would probably have been thrown out, but owing to a very strong expression of opinion as to the necessity of retaining it, which was put forward by the Supervisor of Schools for the city of Halifax, who was present at all the general meetings of the committee and occasionally took part in the discussions on the invitation of the Superintendent of Education, it was allowed to remain—for the present—in the "Tentative" course.*

One point on which the committee were perfectly unanimous was the very great importance of the study of Latin, and the desirability of its being taken up by every high school pupil. On this not a dissenting voice was heard. The committee, it might be noted, was not a one-sided one in its composition. Among its members were included teachers of various sciences, modern languages, mathematics, and other subjects, as well as teachers of the classics; but all, without exception, were anxious to see Latin given a very prominent place in the high school course of study. The teachers of the other subjects expressed themselves as anxious for this from the conviction that it would result in far better work being afterwards done in their own particular subjects, for the experience of those actually engaged in teaching goes to show that besides the other benefits to be derived from it, the boy who has undergone the severe mental discipline and training involved in a systematic study of Latin, has thereby acquired the power of strenuously applying himself to other subjects and accomplishing more in them than the boy who has not been subjected to that discipline. The committee therefore, while not proposing to make Latin a compulsory subject of study in our schools any more than algebra or history or chemistry, are unanimously of the opinion that a knowledge of it should be deemed a qualification not less essential for a high school teacher than a knowledge of those subjects, and they recommend that in and after the year 1908, Latin should be included among the Imperative subjects required of those applying for teachers' licenses of grade B, and that the scholarship requirements be based on the subjects which it may be decided should constitute the fourth year of the high school course.

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*The chairman of the publication committee wishes to state here that subsequent investigation seems to indicate that the educational authorities of Germany, England, and the United States, do not have so keen an appreciation of the importance of Bookkeeping as a high school subject, for it nowhere appears in the German secondary school programme; the celebrated American committees, the "Committee of Ten" and the "Committee on College Entrance Requirements," have decided that it is a proper subject to be excluded from the high school course; and the English Board of Education in a recently published letter have declared that they "do not consider Bookkeeping as a suitable subject for secondary schools."

It was agreed that the consideration of the subjects and amount of work in them that should be required of candidates for teachers' licenses of grade A, should be left to a sub-committee consisting of Principal R. Maclellan of Pictou Academy; Principal W. R. Campbell of Truro Academy; Rev. Dr. MacPherson of St. Francis Xavier's College, Antigonish; Principal E. J. Lay of Amherst Academy; Principal J. A. Armstrong of Sydney Academy; Principal W. F. Kempton of Yarmouth Academy; Supervisor A. McKay of Halifax.

Committees were also appointed on different subjects, to consider and to indicate in some detail what should be taken up in those subjects, and to give suggestions as to methods of teaching them. Those appointed were as follows:

1. Classics.

Professor Howard Murray of Dalhousie College, Halifax.
Principal R. Maclellan of Pictou Academy.
Principal E. W. Sawyer of Horton Collegiate Academy.

2. Modern Languages.

Professor L. E. Wortman of Acadia College, Wolfville.
Professor H. MacPherson of St. Francis Xavier's College, Antigonish.
Principal W. F. Kempton of Yarmouth Academy.

3. English (including History).

Principal David Soloan of the Provincial Normal School, Truro.
President Ian Hannah of King's College, Windsor.
J. W. Logan of Halifax Academy.

4. Mathematics.

Inspector A. G. MacDonald of Antigonish.
Professor C. C. Jones of Acadia College, Wolfville.
Professor D. A. Murray of Dalhousie College, Halifax.

5. Science (including Drawing).

J. E. Barteaux of Truro Academy.
C. L. Moore of Pictou Academy.
Professor Eben MacKay of Dalhousie College, Halifax.

A sub-committee was also appointed to prepare for publication a report of what had already been done, setting forth the tentative course of study, and giving a statement of the general principles followed in the framing of it. This committee was also instructed to collect opinions on the proposed course of study from teachers in the high schools and academies, and inspectors of schools throughout the province, and to invite criticisms and suggestions. Those appointed on this committee were Professor H. Murray, Professor Jones, Professor MacPherson, Principal Maclellan, Principal Campbell.

The committee would remind those who take an interest in education in Nova Scotia that it is now some fourteen years since any material change has been made in the course of study prescribed for our schools. During these fourteen years the world has not been standing still. The importance of education is coming to be more fully realized, and the interest in it has been growing more intense. This period of fourteen years has seen an immense amount of time and thought and united effort, more perhaps than any previous century of years in the world's history, devoted to educational problems by the ablest educationists in many countries, and notably in Great Britain, Germany, and the United States. By far the larger part of these efforts moreover has been concentrated on the consideration of the best course of study for pupils in secondary or high schools. Some of the results arrived at by these labors are open to us in a number of exceedingly interesting and valuable reports, and it would be strange indeed if we in Nova Scotia could not learn something from them. Among these there are four documents to which the committee desire to direct the attention of our teachers and the public in general.

*These are :

1. The Report of the Committee of Ten on Secondary Schools Studies.
2. The Report of the Committee of Fifteen on Elementary Education.
3. The Report of the Committee on College Entrance Requirements.
4. Problems in Prussian Secondary Education for Boys.

It is probably not too much to say that in these documents are to be found the most valuable contributions to secondary education which have ever been published; and, as they have been issued at a merely nominal price every teacher and every one else who is interested in education should possess copies of them and make the subjects of careful study.

To indicate more particularly the character of these documents, it may be stated that the Committee of Ten on Secondary School Studies was appointed in July 1892 by the National Educational Association of the United States, an association whose annual meetings are attended by nearly 40,000 educationists from all parts of the country, the purpose being to consider the whole subject of secondary education and to see in what way improvements could be made in the existing system. Ten of the leading educationists of the country were appointed on this committee, President Eliot of Harvard University being chosen as chairman. This committee, being authorized to appoint others to assist them in their deliberations, selected ninety more of the ablest and most experienced educationists, care being taken that different subjects and that different parts of the country should be fairly represented. Care was also taken that equal representation should be given to those experienced in general school affairs and those whose work was of college or university grade. An appropriation of $2500 was made to meet necessary expenses. After labors extending over about a year and a half the conclusions arrived at by these hundred experts were embodied in a report issued in 1894.

The Committee of Fifteen on Elementary Education was appointed in February 1893. It consisted of state and city superintendents of schools together with President A. S. Draper of the University of Illinois, and Dr. W. T. Harris, United States Commissioner of Education. To assist these in their investigations, lists of questions were drawn up "which the members were directed to submit to all persons thoroughout the country whose opinions might be considered as of value." An appropriation of a thousand dollars was made by the National Educational Association towards the defraying of necessary expenses. The labors of this committee extended over two years and the results are contained in their report issued in 1895.

The Committee on College Entrance Requirements was appointed by the Departments of Secondary and Higher Education of the National Educational Association at the Denver meeting of July 1895; their report was submitted at the Los Angeles meeting of July 1899. The work was carried on for the most part at individual and private expense; but towards the end, the Association placed the sum of five hundred dollars at the disposal of the committee. Two preliminary reports appeared; one in 1896, a second in 1897.

The final general report bears twelve signatures, but this list forms but a

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*1. Report of the Committee of Ten on Secondary Studies, with the Reports of the Conferences arranged by the Committee. New York: American Book Co., 1894. Pp. 249. 30 cents.

2. Report of Committee of Fifteen on Elementary Education, with the Reports of the Sub-Committees: On the Training of Teachers: On the Correlation of Studies in Elementary Education; On the Organization of City School Systems. New York: American Book Co., 1895. Pp. 235. 30 cents.

3. Report of the Committee on College Entrance Requirements. Chicago: The University of Chicago Press, 1899. Pp. 188. 25 cents.

4. Special Reports on Secondary Education in Prussia: (1) Problems in Prussian Secondary Education for Boys, with Special Reference to Similar Questions in England, by Michael E. Sadler. (2) Curricula and Programmes of Work for Higher Schools in Prussia. London: Wyman & Sons, 1899. Pp. 239. 1s.

very small fraction of those who contributed in time, labor, money and ideas, towards the making of the report. The "partial list of those who have assisted in the preparation of this report" and considered worthy of special mention, fills six pages and includes 137 names. Of the nine special committees which gave assistance, one alone with its auxiliary committees included no less than 32 eminent educationists from widely different parts of the country, and this one section alone sent out over six thousand copies of a circular of inquiry addressed to teachers, to superintendents of schools, and to others prominent in educational work. As a result "there was placed in the hands of the committee a mass of material for consideration—exact information, and the opinion of specialists—such as had never before been gathered in relation to this subject." This one section alone made a careful investigation of the course of instruction in about a thousand high schools and academies and received assistance in information and counsel from twelve hundred teachers. And this was only one section out of nine. In their introduction the committee say "The reports that follow, both that of the regularly appointed Committee on the College Entrance Requirements and those of the special committees appointed by the eminent associations organized for the purpose of advancing the interests of higher education along special lines, are the result of four years of thought, study, and investigation. They contain not only the opinions of the scores of distinguished educators whose names are appended to the special reports, but they also embody the conclusions of conferences, institutes, and conventions, which have zealously studied this question since the meeting of the National Educational Association at Denver, in July, 1895. They are submitted, therefore, with confidence that they must in a large degree meet with the approval of the better class of colleges and secondary schools of the country."

In his work on the German schools, Dr. Sadler, who occupies a unique position in England as an educational authority, gives a most interesting and illuminating sketch of the history of secondary education in Germany from the beginning of the nineteenth century. No other country has made education so much a national concern; in no other country have the people shown such a personal interest in it. It is not so much to be wondered at, therefore, that the German schools have come to be regarded as models for the rest of the world. As Dr. Sadler says: "Men of the highest learning and position in all walks of life are incessantly working for the improvement of the schools, investigating their results, canvassing their curricula, defending or urging their claims. In short, education has the recognized position of a great branch of social science, and there is an audience for general and expert criticism alike. The advance of education in Germany is consequently to be compared to that of any of the other departments of science; it commands general respect by reason both of its intellectual significance and by the value of its practical applications." Nowhere can a better or more interesting account of this advance of education be found than in Dr. Sadler's "Problems in Prussian Secondary Education," which, from its broad and able discussion of principles, will remain a work of permanent value when the programmes of study ultimately arrived at in it have become old or even obsolete.*

HOWARD MURRAY, *Chairman, Publication Committee.*
Professor of Classics, Dalhousie College, Halifax.

C. C. JONES,
Professor of Mathematics, Acadia College, [Wolfville.

HUGH MACPHERSON,
Professor of Chemistry, St. Francis Xavier's College, Antigonish.

R. MACLELLAN,
Principal of Pictou Academy.

W. R. CAMPBELL,
Principal of Truro Academy.

*Those wishing to acquire a fuller acquaintance with the working of the German schools, and to learn their latest developments, are advised to procure Dr. J. E. Russell's admirable book on "German Higher Schools." 2nd edition revised and brought down to date, September 1905. New York: Longmans, Green & Co. Pp. 489. $2.50

APPENDIX I.

The Importance of Limiting the Number of Subjects to be Studied.

The U. S. National Educational Association's Committee on College Entrance Requirements:

In the interpretation of the recommendations of this committee concerning the subjects to be included in the secondary-school programme and the requirements for admission to college, for which credit should be given, it is distinctly understood that all secondary schools will not offer opportunities for the pursuit of all these subjects, and that the colleges will select those only which they deem wise and appropriate.

The very large secondary schools containing six hundred or more pupils are perhaps, the only ones which can offer all the studies which the committee enumerates as legitimately belonging to a four-year's secondary programme. No pupil in these schools can pursue them all, for no study should occupy less than one year, and *no pupil should carry more than four regular studies which occur four periods a week.* The larger the school, the more elective can be the curriculum, without any considerable extra expense. The smaller schools must content themselves with more rigid programmes. (*Report, p. 32*).

It is felt that the acceptance of the proposed wider range of options, combined with the insistence upon such a method of treatment, upon such amount of time, and upon such facilities for teaching as will secure good educational results from a disciplinary and cultural point of view, will have a pronounced influence in persuading high schools to adopt *the principle of selecting a few subjects in which they can give adequate training, rather than the patchwork system of selecting very many subjects and giving only slight attention to each one* which prevails in so many of our American high schools. And it is believed that this will be a very valuable educational result. (*Report, p. 58*).

The statistics show that in these nine years *marked progress has been made toward the concentration of school work upon a few central studies, in place of the tendency towards scattering which was formerly manifest.* The rate of increase in the number of students pursuing such studies as algebra, geometry, history, Latin, and German, far exceeds the rate of increase in the total enrollment. This fact indicates that *studies of central importance are receiving recognition of their proper place and value; while other studies are being relegated to a secondary position or altogether excluded from the schools.* (*Report, p. 76*).

A few things thoroughly and intelligently done make the best secondary discipline. (*Report, p. 93.*)

The U. S. National Educational Association's Committee of Ten on Secondary School Studies.

Selection for the individual is necessary to thoroughness, and to the imparting of power as distinguished from information; for any large subject whatever, to yield its training value, must be pursued through several years and be studied from three to five times a week, and if each subject studied is thus to claim a considerable fraction of the pupil's school time, then clearly the individual pupil can give attention to only a moderate number of subjects. (*Report, p. 40*).

If in a secondary school Latin is steadily pursued for four years with four or five hours a week devoted to it, that subject will be worth more to the pupil than the sum of half a dozen other subjects, each of which has one-sixth of the time allotted to Latin. (*Report, p. 45*).

As secondary school courses are now too often arranged, the pupil may now go through a secondary school course of a very feeble and scrappy nature—studying a little of many subjects and not much of any one, getting, perhaps, a little

information in a variety of fields, but nothing which can be called a thorough training. (*Report, p. 52*).

Professor Friedrich Paulsen, of Berlin.

Every year the pupil must complete the appointed tale of exercises in *seven or eight distinct subjects* or else lose his promotion. *The result* of this is the feeling of tension which people call "*over-pressure*," an evil which has not been abolished and cannot be argued away. (From his *History of Higher Education in Germany.*)

Professor M. E. Sadler, of Manchester.

Greater intensity of work within narrower limits but with more training in the power to think and to find out things and with less absorption of masses of knowledge is likely to give better results than are an overloaded curriculum and multiplicity of subjects. (From his recently published *Science in National Education.*)

The attempt to teach too many subjects leads to smattering and to intellectual indigestion. Pupils who have suffered from the process seem to have very little real appetite for continuing their studies. Their interests are deadened instead of being quickened.

Let us avoid over-teaching. We do not want to produce a passive generation. *It is far better that our boys and girls should learn a little thoroughly than get a smattering of a number of subjects.* (In *School World* for September 1903).

So many new subjects and new ideas are crowding in for recognition as parts of school curricula, that it is impossible to make room for them all in any single scheme. And we know by experience that subjects which look at first sight eminently suitable for educational purposes, do not always prove so excellent when the first flush of enthusiasm has faded. . . This disillusioning experience strengthens the instinctive feeling that we shall do wisely if we hold fast to methods of intellectual discipline which however old fashioned and apparently useless from a practical point of view, do at least possess the solid merit of being effective for their purpose. . . Thus we come to value, more than we once thought possible, old methods of traditional education and cling to them as at any rate an essential part of our scheme. But other subjects still make an irresistible claim for admission, and thus, in spite of all efforts to the contrary, the curriculum grows and grows until it is in danger of breaking down by its own weight. (*Problems in Prussian Secondary Education for Boys, p. 198*).

But in attempting to fix a formula for what shall be regarded as the moral outcome of a good secondary education, there are *two special dangers.* We may decide on the *wrong ingredients,* or we may put in *too many of them.* The first mistake ends in the production of the wrong kind of men for the work which has to be done. *The second mistake produces premature fatigue of the intellectual powers, or* (if actual "over-pressure is avoided) *a certain lack of focus in the mind.* It is admitted by many German writers that, in the history of higher education in the [illegible]ry during the present century, the reality of these dangers has been observed. To remedying such evils where they have been ascertained to exist, and to guarding against them at points where they have been thought likely to arise, the best intelligence has been steadily applied. Even so, however, there are some who believe that the evils have not been eradicated. (*Prussian Problems, p. 149*).

Sir William Anson, Parliamentary Secretary to the Board of Education, England.

There are two conflicting views as to the character of the education which should be given in schools. There is the view that education must be liberal, that the student must be brought into contact with great masterpieces of literature and acquire a general knowledge of history, and, on the other hand, there is the commercial view that the students must learn modern languages because they have a present commercial value, learn science because it is supposed that a knowledge of the principles of science is capable of being turned to some immediate account. The result is, that the unfortunate students

are not made to understand that if their education is a liberal education it can, nevertheless, be turned to the development of their faculties, and not merely to acquainting them with authors in whom they may not perhaps be particularly interested. *In the endeavour to combine in some schools the liberal and the commercial qualities in education we have obtained a curriculum of study so overloaded that the mind of the adult fails in the contemplation of it and the student becomes hopelessly confused.* In some of our great schools a boy is expected to learn at the same time Greek, Latin, French, science, arithmetic, geometry algebra, history, geography, and divinity. (From an address delivered on September 29th, 1905)

J. Easterbrook, President of the Incorporated Association of Head Masters, England.

The great danger in the modern secondary school from which the more purely classical schools are free is that we try to teach too many subjects at one time, and the boy leaves school not knowing any one subject well. As time goes on and the sum of human knowledge has increased, new subjects have been added to the curriculum, and every subject has its partisans who consider it more important than any other subject. In fact the overloading of the time-table has been going on to an increasing degree for years. *The whole system is in a state of acute congestion, and the only cure is in an immediate simplification.* No real progress is made in any subject until a certain degree of mastery is obtained, but, under the present conditions, it is impossible for the average boy to master any subject. The stimulus of enjoyment is therefore sacrificed and a boy's whole time is spent on elements. (From his Inaugural Address, January 11, 1906).

Joseph Payne, Professor of the Science and Art of Education, College of Preceptors, London, England.

It appears, then, that Ascham's pupil proceeds firmly on a broad basis of facts, which he has made his own by mental conquest, and that this has been possible because the field of conquest has been intentionally limited. It is obvious that no method of teaching which consists in bringing a bit of this thing, a bit of that thing, transiently before the pupil's mind, creating ideas, like dissolving views, each of which in its turn displaces its predecessor, which makes acquisitions only to abandon them before they are incorporated with the organic life of the mind, can possibly be a good method . . . .It would be easy to show that the valuable ends of education can only be gained by doing a little well; that the ambition to grasp many things, ignobly ends in the loss of the large majority of them; that apprehension is not comprehension; and generally, that to the characteristics of a good method of teaching we must add this, that it aims at securing *multum*, but not *multa*. If the object of education is training to faculty, to mental self-direction, this principle must be constantly insisted on. I see, however, with the deepest regret, that our educational amateurs—men of the best intentions, but of no practical experience—are continually violating it in their persistent attempts to extend the curriculum of elementary instruction. A little bit of this knowledge, a little bit of that—some information on this point, and some on that—is so "useful." They forget that *the most useful thing of all is the formation of good mental habits, and that these can only be formed by concentrating the mind on a few subjects,* and making them the basis of training. (*Lectures on Education,* p. 50.)

APPENDIX II.

The Importance of Language as an Instrument of Education.

The U. S. National Educational Association's Committee on College Entrance Requirements:

While the committee recognizes as suitable for recommendation by the colleges for admission the several studies enumerated in this report,* and while it also recognizes the principle of large liberty to the students in secondary schools it does not believe in unlimited election, but especially emphasizes the importance of a certain number of constants in all secondary schools and in all requirements for admission to college.

The committee recommends that the number of constants be recognized in the following proportion, namely: four units in foreign languages, two units in mathematics, two in English, one in history, and one in science. (Report, p. 32).

(In other words, it was the opinion of the committee that language study is of such importance in any scheme of secondary education that *one of a total of four units of constants it should be entitled to not less than 6*, leaving the remaining 4 to be divided among the three departments of mathematics, history, and science).

What we have called *the general disciplinary value of linguistic and literary study is well understood the world over, and has long been recognized in the educational arrangements of every civilized nation.* The study of a language other than the mother-tongue requires the learner to compare and discriminate, thus training the analytic and reflecting faculties. The effort to express himself in the unfamiliar idiom, to translate from it into his own, makes him attentive to the meaning of words, gives a new insight into the possible resources of expression, and cultivates precision of thought and statement. Incidentally the memory is strengthened and the power of steady application developed. In time such study opens the gate to a new literature, thus liberalizing the mind and giving an ampler outlook on life. Through literature the student is made a partaker in the intellectual life of other times and other peoples. He becomes familiar with their manners and customs, their ideals and institutions, their mistakes and failures, and with the artistic forms in which the national genius has expressed itself. When he leaves school, such knowledge not only enriches his personal life, but makes him a more useful, because a more intelligent, member of society. It exerts a steadying, sanative influence, for it furnishes him with standards based upon the best performance of the race everywhere. *(Report, p. 80.)*

The U. S. National Educational Association's Committee of Fifteen on Elementary Education:

Your Committee would sum up these considerations by saying that *language rightfully forms the centre of instruction in the elementary school.* *(Report, p. 46)* Grammar is the science of language, and as the first of the seven liberal arts it

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*The subjects which the National Educational Association's Committee recognized as suitable for High Schools are the following, viz:

English	History	Physical Geography
Latin	Economics	Botany
Greek	Algebra	Zoology
French	Geometry	Physics
German	Trigonometry	Chemistry

It should be noted also with regard to these that the Committee say "it is distinctly understood that all secondary schools will not offer opportunities for the pursuit of all these subjects, and that the colleges will select those only which they deem wise and appropriate." Only the very large schools containing 600 or more pupils should attempt them all, while smaller schools must content themselves with more limited and more rigid programmes.

has long held sway in school as the disciplinary study *par excellence*. A survey of its educational value, subjective and objective, usually produces the conviction that it is to retain the first place in the future. Its chief objective advantage is that it shows the structure of language, and the logical forms of subject, predicate and modifier, thus revealing the essential nature of thought itself, the most important of all objects because it is self-object. On the objective or psychological side, grammar demonstrates its title to the first place by its use as a discipline in subtle analysis, in logical division and classification, in the art of questioning, and in the mental accomplishment of making exact definitions. Nor is this an empty, formal discipline, for its subject matter, language, is a product of the reason of a people not as individuals but as a social whole, and the vocabulary holds in its store of words the generalized experience of that people, including sensuous observation and reflection, feeling and emotion, instinct and volition. (*Report, p. 48.*)

Professor M. E. Sadler: The object of a good secondary school is a liberal education, without which the mere possession of imitative dexterity in picking up the sounds of a strange language will be found of little permanent value. It is in the firm but lifting discipline of the mind and body, in the training of the will, in the tempering of the mind, in the sharpening of the powers of accurate observation, in strengthening the memory, in the zymotic power of great ideas, in the purging and deepening of belief, that the real and only virtue of education lies. It is not cram, but discipline. But when we come to choose our instruments of education, our choice is a wide one. It is indeed possible that one instrument may not be in itself better than the others; but it is certain that all are not equally fitting for all temperaments or for all stages of culture, or for the producing of all the different aptitudes needed in different lines of life. In the choice of the right instrument or instruments for the given child, the given school, the given district, and the given calling, lies the central problem of educational work. *The champions of the Realschulen* (i. e. the modern schools without either Latin or Greek) are convinced that for modern life, modern languages are an essential (not necessarily, however, the only essential) instrument in linguistic discipline. They are far from disparaging the discipline of science or the discipline of mathematics, but they *maintain that, for children of school age—up to 16 at all events—the linguistic discipline in its wider sense ought to be the backbone of education.* They contend that the laws of mental growth, the need for initiating each new generation into the accumulated stores of human culture as expressed in language and literature of all kinds and the fact that books are cheaper than laboratories, will compel us to make use of the linguistic discipline as our mainstay during the earlier stages of liberal education. . . But they are fully alive to the fact that, for the very reason that the modern languages are living, it is incumbent on the non-classical schools to lay special stress on grammatical exercises, and on the accurate and laborious study of inflexion and of syntax, wherein lies the mental gymnastic, the logical training, of linguistic study. (*Problems in Prussian Secondary Education for Boys, p. 213.*)

The emphasis in all German secondary schools is laid on linguistic discipline, but every boy is also required to come up to the required standard in religious knowledge, mathematics, history, geography, German literature, and certain branches of natural science. There are no schools exactly corresponding to our secondary "schools of science." Science is taught as an obligatory subject in all secondary schools, but never plays such an important part in the curriculum of those schools as it does in the "Schools of Science" under the Science and Art Department. This difference between English and German schools is partly due to historical reasons, but partly to divergence of educational principle. The Germans have concentrated the intenser form of scientific study in their Higher Technical Schools, to which the boys may pass if (but only if) they have completed the prescribed course at a secondary school. Educational opinion in Germany prefers to lay stress on a wide general education during the period of secondary school life, and the regulations sternly forbid anything which approaches premature specialization in any one branch of study. Commercial aptitude is a bye-product in their system of "modern" secondary education. The German secondary schools seem eminently successful in cultivating the powers of apt expression. These powers, it is true, are useful in trade, especially when a young man can use two living languages

besides his own. If the arts of making things need brain and practised hand and eye, the craft of selling things needs brain and practised eye and ear and tongue. But that is not the reason why *the German schools insist upon the cultivation of linguistic powers.* They do so *because they regard exact and searching discipline in the use of language to be one of the most beneficial, as it is also one of the cheapest, forms of mental training.* (*Prussian Problems*, p. 249)

Professor Emil Hausknecht, Director of the Twelfth Realschule, Berlin:

It certainly is the effect of our German system to secure a high and uniform level attainment in all subjects, though, of course, there are shades of differences in the attainments of different boys. Our system is to give at school a very broad general basis of knowledge, no specializing at too early an age, but a very broad stock of well-connected knowledge; a great deal of linguistic and historical knowledge on the one hand, with a fair amount of mathematical and scientific knowledge on the other, neither side being over-developed or prematurely developed at the expense of the other, though generally *the linguistic and historical side does (or ought) to prevail.* (From a letter quoted in Sadler's "*Prussian Problems*, p. 123.)

P. A. Barnett, Inspector of Schools, England.

As a training in the honest weighing of evidence, the solving of a problem in translation or the interpretation of a Greek or Latin text is of the highest value. And the language studies have this advantage over the applied physical sciences, that the apparatus is cheap and plentiful. (*Common Sense in Education*, p. 205.)

Sir Joshua G. Fitch, Inspector of His Majesty's Training Colleges.

The systematic study of language ought to hold a high place, perhaps even the highest place, among formative educational agencies. Moreover, such study is indispensable, not only because language is the instrument for the expression of our thoughts, but because it is the main instrument for accurate thinking on any subject at all. Further, the fullest and best insight into the philosophy of language is not to be had from the study of a modern and analytic language alone, but it is to be best attained by the comparison of such a language with a synthetic and highly inflected language. The best and most fruitful studies are those which are not limited to their immediate object, but those which tend to carry the learner further into other regions of thought, and to shed light on subjects other than themselves. And the study of language fulfils this condition in an eminent degree. (*Educational Aims and Methods*, p. 246.)

It is a shallow thing to say that what the human being wants is a knowledge of things, and not words. Words *are* things; they embody facts. He who studies them is studying much more than sounds and letters. He is gaining an insight into the heart and reality of the things they represent. (*Lectures on Teaching*, p. 227.)

The study of language is the study of humanity; the forms of language represent the forms of human thought; the history of language is the history of our race and its development, and great command over the resources of language is only another name for great command over the ideas and conceptions which make up the wealth of our intellectual life. (Ibid. p. 226.)

We must remember that the knowledge of grammar as a science is to be had, not from the study of any one language *per se*, but from the comparison and synthesis of two or more languages. It is not till we have seen the differences and the resemblances in the structure of two distinct grammars, that we can get the least perception of the difference between those principles which are accidental or distinctive of particular tongues, and those which are fundamental and common to all organized languages alike. (Ibid. p. 237.)

It may be roughly said that if you have say twenty hours of a week available for the serious study of disciplinal subjects, it is not unreasonable to give nearly half of these to language and literature and subsidiary exercises. (Ibid. p. 422.)

The Royal Commissioners on Middle Schools in England:

The "human" subjects of instruction, of which the study of language is the beginning, appear to have a distinctly greater educational power than the "material." As all civilization really takes its rise in human intercourse, so the most efficient instrument of education appears to be the study which most bears on that intercourse, the study of human speech. Nothing appears to develop and discipline the whole man so much as the study which assists the learner to understand the thoughts, to enter into the feelings, to appreciate the moral judgments of others. (*Middle Schools Report*, p. 22.)

S. S. Laurie, Professor of Education in the University of Edinburgh. "Professor Laurie is our greatest living writer on education."—*The Journal of Education*, London.

"Among the works which have given to Professor Laurie a world-wide reputation as an educationist may be mentioned his "Language and Linguistic Method"*—*The School Review*, Chicago.

It may be said with a show of truth, that to attain this great result—intellectual and moral discipline—the language of elementary mathematics, physics, or biology would serve. It would serve, unquestionably but not so well, because the language of these studies is partial and restricted, whereas the language of which we are speaking—*the language of everyday intercourse and of literature*—is universal in its sweep, and *presents a variety, a delicacy, and subtlety of the thinking process which all the sciences of nature taken together cannot for a moment approach.* The language then of ordinary human intercourse and of literature is when pursued as an abstract study—i. e. in its historical forms and logical relations—*the best of all possible disciplines of the intellect:* first, because it is the study of the intellect itself, but this in a concrete material which brings it within the capacity of the immature mind of boyhood: and, secondly, because of its universal character—because, that is to say, all the processes of mind are presented for analysis, and this in every possible relation of simplicity, complexity, and subtlety. (*Language and Linguistic Method*, p. 9.)

Enough has been said to show that, whether we regard the discipline of intellect, the substance of morality and wisdom, or the growth of the distinctively spiritual life (the life in ideas and ideals), *language* as a formal or logical study, as a real study, and as a literary or art study, *is, and must always be, the supreme subject in the education of a human being*, the centre round which all other educational agencies ought to range themselves in due subordination. . . . In conclusion, when I say that language is the supreme subject in all education, I mean the vernacular language, with some foreign tongue as a necessary auxiliary. (Ibid. p. 17.)

What I have said applies to Language in general, including the vernacular language above all. But the vernacular cannot be thoroughly known without the aid of another, and, above all, an ancient tongue; and for English-speaking people that tongue *must be Latin.* (Ibid. p. 189. The italics here are Professor Laurie's.)

My object in this course of lectures has been to demonstrate that Language must always be the governing subject of all education worthy of the name. (p. 173.)

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*Lectures on Language and Linguistic Method in the School. By S. S. Laurie, Edinburgh. James Thin, 1890. Second edition, 1893. Pp. 197. 4s.

All language teachers should possess a copy of *Laurie's Language and Linguistic Method* which is probably the ablest exposition in existence of the importance of language studies. The larger part of the volume is devoted to the consideration of the teaching of English; lectures X and XI are on methods of teaching Latin and French; lecture IX gives reasons for teaching Latin; and in a supplementary chapter Professor Laurie discusses the comparative merits of language and science studies in secondary schools.

Charles De Garmo, *Professor of Pedagogy*, Cornell University, Ithaca, N. Y.:

Furthermore, grammatical and mathematical studies are the easiest to teach. They become powerful pedagogical instruments of mind-training, even with poor teaching. The reason for this is that they are perfectly definite, and are for the most part logically arranged. This being the case, it is comparatively easy to present at each lesson just enough surmountable difficulties for the pupil to overcome. A lesson in Latin or Greek has so many sentences to translate, so many expressions to be noted. A lesson in Mathematics has so many problems to solve. These difficulties are perceptible, definite, and surmountable. They are of a nature to make themselves felt to the student; he cannot help seeing them and, if he learns his lesson, overcoming them. There is consequently in these subjects a movable fulcrum of difficulties upon which the pupil may exert his mental power. This is the reason why linguistic and mathematical studies have always been such incomparable instruments for exercising the intellectual powers of students. It is still their warrant for a large place in the modern curriculum. The college has not yet learned how to teach modern subjects, even modern languages, in such a way as to make them equivalent to the old subjects as intellectual disciplines . . . The probability is that a poorer teacher in the old studies will show better results in the line of strictly intellectual drill. "*Formal vs. Concrete Studies in the College.*" In *The School Review*, January 1894.

APPENDIX III.

THE IMPORTANCE OF LATIN AS AN INSTRUMENT OF EDUCATION

THE U. S. NATIONAL EDUCATIONAL ASSOCIATION'S COMMITTEE OF TEN ON SECONDARY SCHOOL STUDIES.

One of the most interesting opinions expressed by the Conference [i. e. the Conference of experts on the teaching of English] is that *the best results in the teaching of English in high schools cannot be secured without the aid given by the study of some other language; and that Latin and German, by reason of their fuller inflectional system, are especially suited to this end.* (*Report*, p. 21).

Although the Committee thought it expedient to include among the four programmes, one which included neither Latin nor Greek, and one which included only one foreign language (which might be either ancient or modern), they desired to affirm explicitly their unanimous opinion that, under existing conditions in the United States as to the training of teachers and the provision of necessary means of instruction, the two programmes called respectively "Modern Languages" and "English" must in practice be distinctly inferior to the other two. (*Report*, p. 48.)

[In other words—*The Committee desired to affirm explicitly their unanimous opinion that the programmes in which Latin did not appear at all, or in which it appeared as an optional subject, were distinctly inferior to those programmes in which Latin appeared as an obligatory subject.*

One of the members of the Committee afterwards stated, through the columns of "The School Review," that *particular care had been taken in the framing of the two programmes, called the "Classical" and the "Latin-Scientific," and that "it was the best judgment of the Committee that both for pupils going to college and for those whose education terminates with the high school, one of these two programmes is the best possible."*]

THE U. S. NATIONAL ASSOCIATION'S COMMITTEE OF FIFTEEN ON ELEMENTARY EDUCATION.

A majority of your Committee are of the opinion that formal English grammar should be discontinued in the eighth year [i. e. the eighth year of the course and the fourteenth year of the pupil], and the study of some foreign language, preferably that of Latin, substituted. The educational effect on an English-speaking pupil of taking up a language which, like Latin, uses inflections instead of prepositions, and which further differs from English by the order in which its words are arranged in the sentences, is quite marked, and *a year of Latin places a pupil by a wide interval out of the range of the pupil who has continued English grammar without taking up Latin.* But the effect of the year's study of Latin increases the youth's power of apperception in very many directions by reason of the fact that so much of the English vocabulary used in technical vocabularies, like those of geography, grammar, history, and literature, is from a Latin source, and besides there are so many traces in the form and substance of human learning of the hundreds of years when Latin was the only tongue in which observation and reflection could be expressed. (*Report*, p. 73.)

In Latin, for instance, the pupil learns in his first week's study the to him strange phenomenon of a language that performs by inflections what his own language performs by the use of prepositions and auxiliaries. He is still more surprised to find that the order of words in a sentence is altogether different in Roman usage from that to which he is accustomed. He further begins to recognize in the Latin words many roots or stems which are employed to denote immediate sensuous objects, while they have been adopted into his English tongue to signify fine shades of distinction in thought or feeling. By these three things his powers of observation in matters of language are armed, as it were, with new faculties. *Nothing that he has hitherto learned in grammar is so radical and far-reaching as*

what he learns in his first week's study of Latin. The Latin arrangement of words in a sentence indicates a different order of mental arrangement in the process of apprehension and expression of thought. This arrangement is rendered possible by declensions. This amounts to attaching prepositions to the ends of the words, which they thus convert into adjectival or adverbial modifiers; whereas the separate prepositions of the English must indicate by their position in the sentence their grammatical relation. *These observations, and the new insight into the etymology of English words having a Latin derivation, are of the nature of mental seeds which will grow and bear fruit throughout life in the better command of one's native tongue. All this will come from a very brief time devoted to Latin in school.* (*Report*, p. 88.)

D. R. Fearon, *Inspector of Schools*, England.

English grammar is unfortunately taught in our elementary schools by teachers who for the most part are unacquainted with the grammar of any other language. The consequence of this is that they have no power of steadying their thoughts and testing their conclusions in English grammar, by comparison of them with their thoughts and conclusions in the grammar of any other language living or dead. The inspector, even if he does not know anything of old English or German, is saved from many a mistake, into which the teacher falls, by his knowledge of Latin; and *it is impossible to overrate the importance of even a little knowledge of Latin for the purposes of an elementary teacher.* The study of grammar is not of much value, until it can be treated comparatively. It would not be worth while, probably, to require our elementary school teachers to learn old English or German for the sake of teaching English grammar. But it is well worth while to make them learn something of Latin; because some knowledge of that language will not only help them in giving grammar lessons, but will enlarge and enlighten their understanding upon the whole range of subjects, from spelling up to history, with which as learners or teachers they have to deal. (*School Inspection*, p. 46. The italics are Fearon's.)

William DeWitt Hyde, *President of Bowdoin College*, Brunswick, Me.

Some studies are fundamental to a liberal education. To omit them is to build upon the sand. To postpone them is to build from the roof down.

Latin is fundamental to the study of language, literature, law, history, and all that concerns the expression man has made of himself in art, letters, politics, and institutions. . . . . The man who has never studied Latin finds all forms of liberal study blind and unintelligible. By a dead lift of arbitrary memory he will have to learn roots of words and forms of speech which with the aid of a little Latin would become rationally intelligible. He will have to dig out of dictionaries the dead bones of references and allusions which a little classical learning would have clothed with life.

Greek is a highly desirable element of a liberal education; and indispensable for certain lines of liberal study. *Latin is indispensable for all forms of liberal study that is worthy of the name.*

Latin, mathematics, and English should be absolute requirements for every liberal course of study. These studies are fundamental to the enjoyment and profit of all future studies; and it is the duty of the colleges to recognise the fundamental character of these studies in their requirements for admission. In view of the extreme difficulty in making English a serious study; and in recognition of the fact that the best training in English is the intelligent study of Latin, the colleges may wisely continue to make Latin a larger element in the preparatory work, and English a smaller element than the other subjects. (From an address on *Educational Values*, delivered at Boston, October 12, 1894.)

W. T. Harris, *United States Commissioner of Education*, Washington, D. C.

The modern system of Education in Europe and America places the study of Latin in all secondary and higher education as a first essential side by side with mathematics in the school studies. This secures for youth from three to seven years' daily occupation with the workings of the Latin mind. The boy or the girl gradually becomes permeated with the motives of that serious-minded people. The special significance of those words that express the ideals of Roman character (and the ideals of all character), words which we have preserved in our translation into English—gravity, soberness, probity, honesty, self-restraint, austerity, considerateness, modesty, patriotism—impresses his mind deeply as a result of long-continued study of Roman literature and history. (Editor's Preface to Davidson's *Education of the Greek People.*)

Latin and Greek are not dead languages. Nor were they ever eventually more useful in a liberal education than now. . . . . A youth equipped with Latin and Greek has powers of learning and understanding whatever relates to the social, political, and legal

forms and usages of his people, that gives him a distinct advantage over the youth educated only in the "moderns." . . . . . *I have long since abandoned my objections to the traditional education of Latin and Greek in colleges and academies.* (*Educational Review*, January, 1894.)

S. S. LAURIE, *Professor of Education*, University of Edinburgh, Scotland.

Latin as a formal and grammatical study has peculiar advantages, and more effectually than any other language (except Greek) *gives discipline to the intelligence and the result of discipline, viz., intellectual power.* (*Language and Linguistic Method*, p. 127.)

It has often been said of late that it is useless to teach boys Latin if they cannot look forward to a prolonged curriculum. My experience leads me to dissent from this emphatically. In three years Latin, well-taught, and not begun prematurely, can give an amount of genuine discipline and solid instruction in words and syntax forms which is invaluable. It places a boy, as it were, by one bound on a higher intellectual plane than his fellows. (*Ibid*, p. 137.)

The study of Latin by giving comprehension of mind and power of intellect, is the best of all preparations for even the scientific man; and further, it gives greater acuteness of discrimination—a most important attribute of the highest scientific minds. In short, we may say that the formal study of language, and, above all, of Latin, is the most admirable of all exercises in the analysis and synthesis which constitute the whole method of science. . . . . Those educationalists, who are not mere theorists, feel the necessity of finding an instrument which does not over strain boys, and which can work fairly well in the hands of no very cunning workmen. Where natural science is that instrument, the method which looks so well in theory must degenerate in actual practice into the most ordinary and vulgar cram. (p. 192.)

Science as it can at . . be taught to boys between twelve and sixteen years of age is a feeble educative instrument as compared with a language like Latin. (p. 186.)

To exclude Latin from the obligatory curriculum, would be an educational calamity. (p. 197.)

ARTHUR T. HADLEY, *President of Yale University*, New Haven, Conn.

To a man who has no practical experience with educational systems the idea of studying the things which are going to be useful is so attractive and so plausible that he rarely sees its underlying weakness. So great is the importance of systematic work, as distinct from dilettantism, that those who a few years ago were numbered among the opponents of traditional ideas now regard a considerable knowledge of Latin as an element in liberal education at the present day.

Whatever be the main cause, it seems to be true that the young men who have had a classical training, whether in America, in England, in France or in Germany, are able to take up scientific studies with a wider grasp and more alertness of touch than those whose preparation has been from the outset confined to the more distinctly modern subjects. ("*Modern Education*" in *Cosmopolitan*, Nov., 1899.)

CHARLES W. ELIOT, *President of Harvard University*, Cambridge, Mass.

The merit of different groups or courses in the same school has often been very different. *The classical course has generally been the best, the Latin-scientific the next best, while the English course and the commercial course have been distinctly inferior.* ("*Tendencies of Secondary Education*" in *Educational Review*, Dec. 1897.)

EDWARD THRING, *Head Master of Uppingham School*, England.

No English schoolmaster of the present day has made so powerful an impression on educational thought outside of England as Mr. Thring.—*Educational Review*, St. John, N. B.

It seems at first sight very strange that the classics should maintain their ground century after century in spite of progress and science as the main training of the young. A subject is made the principal study of the mighty ten years which only one or two of those who work at it will ever visibly make use of in after life. Nay more, very many will never look into a classical author again after leaving the University. . . . The two great powers of the world, religion and knowledge, seem alike to forbid this supremacy, and *yet they maintain their ground, and will ever do so as long as a nation cares for true Education.* (*Education and School*, p. 47.)

[Mr. Thring devotes the whole of this chapter (pp. 47-101), to the giving of reasons justifying the pre-eminence accorded to the Classics in the education of the youth of England, and in concluding he says]:—

Volumes might be written on any and all of the points raised in this chapter, to elucidate and prove them, but *enough has been done . . . at least to show that no great nation can let the study of Classics fall into disrepute . . . and remain a great nation long; enough to show that it is no superstition which makes it a part of a gentleman's education in England to know them.* (p. 100.)

FOSTER WATSON, *Professor of Education*, University College, Aberystwith, Wales.

Humanistic studies have not been dethroned. They cannot for long either abdicate or be put aside. (In *School World*, January, 1906.)

SIR WILLIAM HUGGINS, *Astronomer, President of the Royal Society of Great Britain*, (the greatest of all Scientific Societies.)

In the scheme of a liberal education, literature and languages, which include the habit of clear thinking in suitable words, should have a large place. It must, I think, be conceded that *the languages of ancient Greece and Rome*, which are highly developed for the conveyance of delicate shades of thought, *still stand unsurpassed as means of training in thinking in association with correct expression, while, at the same time, they feed the mind with great ideas and the heroic deeds of the past.* (Presidential Address before the Royal Society, November 30, 1905.)

SIR ARTHUR RUCKER, *Professor of Physics*, Royal College of Science, London.

For myself, I think that a boy looking forward to a scientific career will be wise not to neglect Latin. (Address at St. Mary's Hospital School, London, October 3, 1902.)

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Boston, Mass.

The Massachusetts Institute of Technology stands at the head of the whole system of technical education in the United States.—*Hon. Joseph Choate*, United States ambassador to Great Britain. Address at Oxford, August 1, 1903.

The Massachusetts Institute of Technology easily takes first rank among science schools.—*A. McKay*, Supervisor of Halifax Schools, Report for 1891.

Satisfactory evidence should be presented that the applicant (for admission) has acquired the elements of Latin grammar and that he has read four books of Cæsar or an equivalent.

The study of Latin is strongly recommended to persons who purpose to enter the Institute, since in addition to its disciplinary value it gives a better understanding of the various terms used in science, and greatly facilitates the acquisition of the Modern Languages. (From page 106 of their latest *Catalogue*, issued December, 1905.)

THE CENTRAL HIGH SCHOOL OF PHILADELPHIA, Pennsylvania.

Nowhere did I see more intelligent and accurate workers than in the Central School.—*A. McKay*, Supervisor of Halifax Schools.

The study of Latin is compulsory during Freshman and Sophomore years, and elective thereafter. (*Central High School Catalogue*, p. 33.)

H. H. ALMOND, *Head Master of Loretto School*, Scotland.

English, Latin, and Mathematics have a distinct precedence over all other subjects taught in this school.

The whole subject of "*Modern Sides*" is one of great difficulty and importance. In order to approach it, the fact must be borne in mind that they *have not hitherto succeeded in turning out as good a type of boys as "Classical Sides."* To whatever causes this may be due, the classical boys prove superior to the Modern in subjects in which the two sides are taught together, to a much greater extent than would result from the previous school positions of the two sets of boys; and the tone of Modern Sides is apt to be in every respect less satisfactory. . . . *It is the Head Master's experience that if one of two equal boys of fifteen, both in the Middle School, were to remain in the Classical Side for a year, and the other to join the Modern at once, the former would, in a few months, beat the latter in Modern subjects.* (*Public Schools Year Book.*)

REV. J. M. WILSON, *Head Master of Clifton School*, England.

[At Cambridge University Mr. Wilson was the most distinguished mathematician of his time. After graduating as Senior Wrangler he spent twenty years teaching science and mathematics at Rugby School when he was appointed Head Master of Clifton. After he had been in charge of the latter school for eleven years, a visitor to the school noticing that the boys on the Modern Side (that is the side containing those not going up to the Universities), were required to spend a very considerable amount of time in the study of Latin, asked him why he attached so much importance to the study of Latin in the case of these boys. Mr. Wilson's answer was as follows]:—

As to your question about Latin, I am afraid I cannot give my reasons very briefly, but these are the chief. First of all, experience shows us here and the observation is abundantly confirmed elsewhere, that *boys who learn Latin acquire a faculty for learning other subjects.* Some years ago Latin was very imperfectly taught on our Modern Side; more time was given to modern subjects. But the result was that the Modern Side was almost invariably beaten by the Classical Side—even in their own subjects. For instance, a classical boy began German in the fifth form at 16 and before he was 18 he was far better than a modern boy who began at 14, and gave quite as long a time to it every week. Again modern boys gave twice the time to science, and considerably more to mathematics and were almost invariably beaten by classical boys. And in English, in which the modern boys got far more teaching, they could not compete with the classical boys for a moment. (*Education*, April, 1890.)

THE UNIVERSITY OF BERLIN (the world's greatest University, whose students number over 13,000)

[The following was the unanimous verdict of all the Professors of the Philosophical or Arts Faculty on the comparative merits of the classical and the non-classical schools after *a careful test extending over a period of ten years* during the whole of which each Professor carefully noted and compared the work done in his classes by the students coming from the different kinds of schools. Dr. A. W. Hofmann, Professor of Chemistry and Rector of the University, thus summed up the result in his rectorial address]:—

The total result of this great investigation cannot be a moment in doubt, and may be briefly summed up as follows:—That the Real School of the first rank, whatever generous acknowledgment may be due to what it has actually accomplished, is nevertheless incapable of furnishing a preparation for academic studies equal to that offered by the Gymnasium; that the Real School lacks a central point about which all other branches may group themselves, while the Gymnasium possesses such a point in the classical languages; that *all efforts to find a substitute for the classical languages, whether in mathematics, in the modern languages, or in the natural sciences, have been hitherto unsuccessful;* that *after long and vain search, we must always come back finally to the result of centuries of experience, that the surest instrument that can be used in training the mind of youth is given in the study of the languages, the literature, and the works of art of classical antiquity.* According to the unanimous judgment of experienced teachers in the departments of mathematics and the natural sciences, graduates of the Real Schools are almost without exception overtaken in the later semesters by students from the Gymnasium, however much they may excel them in the same branches in the first semester. (From Dr. J. Conrad's *German Universities for the Last Fifty Years*, p. 329.)

THE PROFESSORS OF THE TECHNICAL HIGH SCHOOL AT KARLSRUHE, Germany.

In a remarkable memorial recently issued by the Professors of the Technical High School at Karlsruhe, *the systematic study of Latin, as a school discipline, is declared to be of the highest value for future engineers, botanists, zoologists, mineralogists, chemists and physicists.* The memorialists indeed advocate the study both of Greek and Latin in the schools, in the case of boys intending to follow any of the above scientific pursuits, but of the two ancient languages they emphasize Latin as the more indispensable. (From Dr. Sadler's *Prussian Problems*, p. 218.)

F. B. LOOMIS, *Professor of Biology*, Amherst College, Amherst, Mass.

It has been the writer's experience in teaching biology (mostly zoology) that the classical students do a better grade of work in the subject than do the scientific. All his classes are composed of a mixture of both sorts, and during the first three years *the scientific students were given a half year of zoology before the classicals came in with them, the latter even with this handicap doing as good or better work.* The chief difference is in the character of the work presented, the tendency being for *the classicals to turn out more accurate and thorough results.*

APPENDIX III.

It is the writer's belief that this is due to the better training obtained by the study of a language like Greek [or Latin] than is possible from a modern language. There are two main reasons why the Greek [or Latin] is the better, the first inherent in the language, due to its greater complexity and yet exact usage; the second in the manner in which the two are taught, the French or German being taught with the literary and artistic use emphasized. . . . .

The weakness of the mass of the so-called scientific students is their inability to concentrate, also the tendency to be easily satisfied. . . . .

The mental exercise in the ancient language is as much superior to that in the modern as swimming is superior to walking as a physical exercise. ("*Greek for Scientific Students.*" In *The Independent*, August 31, 1905.)

F. E. Bolton, *Professor of Education*, Iowa State University, Ames, Iowa, ("who has made a special study of educational principles and whose opinion therefore should be of great value."—*A. McKay*, Supervisor of Halifax Schools, in his report for 1905.)

The Course might well include some Latin for all, possibly a year and more for those who specialize. It certainly ought to include some modern language . . . . All should be given introductory courses in algebra and geometry, but two years in the High School should be ample. (Quoted by Supervisor McKay in his report for 1905.)

Sir Henry Hibbert, *Chairman of Education Committee*, County Council of Lancashire, ("the greatest hive of industry in the world."—*Moseley Reports.*)

Latin ought to be a compulsory subject in every secondary school. (From an address on Secondary Education delivered at Liverpool in October, 1904.)

A. McKay, *Supervisor of Halifax Schools*, Halifax, N. S.

"It is no disparagement to any other section in the province to acknowledge the pre-eminence of the present educational authorities of the metropolis as intelligent students of the science of education."—*Dr. A. H. MacKay*, Superintendent of Education for Nova Scotia, in his report for 1896.

I have always been, as many of you are, one of those whose sympathies were drawn to the so-called practical and scientific studies. *But I must admit that it is much more difficult and unusual to get as good results from them as from the classical studies.* . . . .

An innovation in the junior section (in the Academy) is that Latin with special drill in the derivation of words, is taught to all the members of the class. If a pupil finishes his school education at this point, he has received a year's training in Latin, and has a fair knowledge of its relations to English, and understands the structure and primary meaning of hundreds of English words—no small advantage in his future reading or study. If he is advanced to the senior section he has had an excellent foundation laid for the continuation of Latin, or for the study of French, in which he can now make as much progress in one year, as otherwise he could in two years. (Report for 1889.)

When you go into a school and find that, as a class, the boys who devote themselves exclusively to your practical studies do not make nearly as good progress mentally or physically as those who study Latin and Greek, you stop to think, and you hesitate to recommend changes of which you do not know the effect.

It is a surprising fact that out of 370 academic pupils from the most intelligent homes in the city, 287 deliberately choose Latin, although it is one of their most difficult studies. They give as a reason that the study of Latin "does them more good," by which they mean that it gives them better habits of study and strengthens their intellects more than the substitutes that are offered for it. (Report for 1894.)

Friedrich Paulsen, *Professor of Philosophy and Pedagogy*, University of Berlin, Germany.

"Dr. Friedrich Paulsen, the best known educational authority in Germany."—*Dr. A. H. MacKay*, Superintendent of Education, in his Reports for 1899 and 1901.

A school without Latin cannot be the culture-school of the present. . . . It may be that, in one hundred, or two hundred, or five hundred years, a school not only without Greek but also without Latin will suffice in preparation for the learned studies of that period. . . . But this must be said: The school of the future is not the school of the present. *The knowledge of the Latin language is to-day indispensable for most higher studies.* . . . *Just as Rome is the Eternal City, so is Latin also the language of eternity.* (Quotation taken from Dr. J. E. Russell's *Higher German Schools*, pp. 394, 395.)

SIR JOSHUA G. FITCH, *Inspector of His Majesty's Training Colleges*, England.

"A world renowned educationist."—*Supervisor A. McKay*, in his Report for 1893.
"The greatest living English educationist."—*Superintendent A. H MacKay*, in his Report for 1901.

For those scholars who, when at the Universities are likely to select mathematics, natural science, or modern subjects as their special subjects, and for the larger number who are never likely to proceed to the University, but who will enter professional or other active life at 16 or 17, the attempt to teach versification and the nicoties of scholarship, or even to teach Greek at all, generally proves to be a mistake. *Yet for such pupils Latin has a real value* . . . (1) because in it you find the best practical illustration of the science of grammar and the laws and structure of language generally; (2) because it furnishes an effective instrument for examining the history, formation, affinities and development of the English language, and (3) because it helps to explain much that would otherwise be obscure in our national literature, and to make intelligible the relation in which this literature stands to that of Greece and Rome. . . .

These objects are attainable within a very reasonable amount of time and without encroaching on the domain of other learning. And when it is once understood that they are worth attaining, it becomes evident that *they are just as important in schools for girls as in those for boys.* The tacit assumption in our school plans that somehow Latin was a masculine and French a feminine study, is wholly indefensible. *Both languages ought to be taught as essential parts of every school course which is likely to be prolonged to the age of 16,* and unless it is likely to be prolonged beyond that age, more than these two languages ught not to be attempted. (*Lectures on Teaching*, pp. 236, 237.)

THE BOARD OF EDUCATION, England.

For both of the types of School commonly known as "classical" and "modern," Latin and French will be essential elements in the advanced curriculum. The Bo . . nsider that Latin is the necessary basis of a thorough linguistic and literary training, either in ancient or in modern languages; and that among modern languages the claims of French are pre-eminent as regards grammatical training, practice in the accurate expression of thought, and access to the larger world of international relations and public aff s. In special Courses of the older or classical type, Greek may be taken as a third lang e; in those of a modern type the third language taken will ordinarily be German. (*Regulations for Secondary Schools*, 1905.)

APPENDIX IV.

SECONDARY EDUCATION IN GERMANY (PROGRAMME OF 1901.)

(A 9 years' course following a 3 years' elementary course).

(1.)—TIME TABLE OF GYMNASIA (Classical Schools).

[Showing number of lessons per week in school]

Class / *Approximate Age*	VI. 9	V. 10	IV. 11	III B 12	III A. 13	II B. 14	II A. 15	I B. 16	I A. 17	Total Hours.	Compared with Time-Table of 1892.
Religion	3	2	2	2	2	2	2	2	2	19	Unchanged.
German and	3	2	3	2	2	3	3	3	3	26	Unchanged.
Historical Tales.	1	1									
Latin	8	8	8	8	8	7	7	7	7	68	6 hours added, 1 to each class, except VI, V and II B.
Greek	....	....	....	6	6	6	6	6	6	36	In the three highest classes Greek may be allowed more than 6 hours, the excess being deducted from the 7 assigned to Latin.
French	....	....	4	2	2	3	3	3	3	20	1 hour less in III B and III A, 1 hour more in II B, I B, I A.
History	....	....	2	2	2	2	3	3	3	17	More time given to Geography in the lower, more to History in the higher classes.
Geography	2	2	2	1	1	1	..	..	..	9	
Mathematics	4	4	4	3	3	4	4	4	4	34	Unchanged, except for the permission to change the time allotment in the 4 highest classes.
Natural Sciences	2	2	2	2	2	2	2	2	2	18	
Writing	2	2	....	....	.. ..	....	....	....	....	4	Unchanged.
Drawing	....	2	2	2	2	....	....	...	....	8	Unchanged.
Tl hrs. per week	25	25	29	30	30	30	30	30	30	259	Total increased by 7 hours.

(The Brackets in the above table indicate that the time for subjects enclosed may be redistributed if desired.)

A. Besides the above, Drilling and Gymnastics are obligatory for 3 hours a week in every class, Singing for 2 hours in VI. and V. Boys with talent for singing are required to take part in chorus singing throughout their whole course. The hours devoted to singing and gymnastics are not looked upon as actual working hours and so are not included in the above table.

B. Optional studies are 2 hours Drawing in the 4 highest classes; 2 hours English, and 2 hours Hebrew in the highest classes.

For those whose writing is poor, special instruction in that line is provided in IV. and III. In the 3 highest classes, English may be substituted for French, and optional French take the place of the optional English.

In classes III B, III A, and II B, the 6 hours of Greek may be replaced by 3 hours of English, 2 hours of French, and 1 hour of Mathematics in the first two classes (i.e., in III B. and III A.) and by 3 hours of English, 1 hour of French and 2 hours of Mathematics and Natural Science in II B.

SECONDARY EDUCATION IN GERMANY (PROGRAMME OF 1901).

(2.)—TIME TABLE OF REALGYMNASIA (Modern Schools with Latin).

Class. / *Age.*	VI. 9	V. 10	IV. 11	III B. 12	III A. 13	II B. 14	II A. 15	I B. 16	I A. 17	Total Hours.	Compared with Time-Table of 1892.
Religion	3	2	2	2	2	2	2	2	2	19	Unchanged.
German and Historical Tales.	3 + 1 = 4	2 + 1 = 3	3	3	3	3	3	3	3	28	Unchanged.
Latin	8	8	7	5	5	4	4	4	4	49	6 hours added, 1 to each class, except the 3 lowest.
French	.....	.....	5	4	4	4	4	4	4	29	1 hour less in III B. and III A.
English	.....	.....	.....	3	3	3	3	3	3	18	Unchanged.
History.....	.....	.....	2	2	2	2	3	3	3	17	More time given to Geography in the lower, more to History in the higher classes.
Geography	2	2	2	2	2	1	..	..	..	11	
Mathematics.	4	4	4	5	5	5	5	5	5	42	Unchanged.
Natural Sciences	2	2	2	2	2	4	5	5	5	29	1 hour less in 2 B.
Writing	2	2	..	..	..	..	..	..	..	4	Unchanged.
Drawing	..	2	2	2	2	2	2	2	2	16	Unchanged.
Tl hrs. per week	25	25	29	30	30	30	31	31	31	262	Total increased by 3 hours.

Optional: Mechanical Drawing in the 5 highest classes for 2 hours a week.
For Gymnastics, Singing, Writing, see under Time Table of Gymnasia.

SECONDARY EDUCATION IN GERMANY (PROGRAMME OF 1901.)

(3.)—TIME TABLE OF OBERREALSCHULEN (Modern Schools without Latin).

Class. / *Age.*	VI. 9	V. 10	IV. 11	III B. 12	III A 13	II B. 14	II A. 15	I B. 16	I A. 17	Total Hours.	Compared with Time-Table of 1892.
Religion	3	2	2	2	2	2	2	2	2	19	Unchanged.
German and Historical Tales.	4 + 1 = 5	3 + 1 = 4	4	3	3	3	4	4	4	34	Unchanged.
French	6	6	6	6	6	5	4	4	4	47	Unchanged except that permission is now given to change distribution of hours between French and English in the four highest classes.
English	....	....	....	5	4	4	4	4	4	25	
History	..	...	3	2	2	2	3	3	3	18	More time given to Geography in the lower, more to History in the higher classes.
Geography	2	2	2	2	2	1	1	1	1	14	
Mathematics ...	5	5	6	6	5	5	5	5	5	47	Unchanged.
Natural Sciences	2	2	2	2	4	6	6	6	6	36	Unchanged.
Writing	2	2	2	.....	.....	....	...	....	....	6	Unchanged.
Freehand Drawing	....	2	2	2	2	2	2	2	2	16	Unchanged.
Tl. hrs. per week	25	25	29	30	30	30	30	31	31	262	Total increased by 4 hours.

Optional: Mechanical Drawing in the 5 highest classes for 2 hours a week.
For Gymnastics, Singing, Writing, see under Time Table of Gymnasia.

SECONDARY EDUCATION IN GERMANY.

TIME-TABLE OF "REFORM SCHOOL," AT FRANKFORT.

	Common Preparatory Course.			Alternate Courses.											
				Gymnasium.						Realgymnasium.					
Class.	VI.	V.	IV.	III B.	III A.	II B.	II A.	I B.	I A.	III B.	III A.	II B.	II A.	I B.	I A.
Age.	9	10	11	12	13	14	15	16	17	12	13	14	15	16	17
Religion	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2
German	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3
Latin	...	...	...	10	10	8	8	8	7	8	8	6	6	5	5
Greek	...	...	...	.....	....	8	8	8	8	.....	.....	....	....	...	...
French	6	6	6	3	2	2	2	2	2	4	4	3	3	3	3
English	...	...	...	.....	.....	....	....	...	...	.....	.....	6	4	4	4
Hist. & Geog.	2	2	3	3	4	2	2	2	3	4	4	3	3	3	3
Mathematics.	5	5	5	4	4	3	3	3	3	4	4	4	5	5	5
Nat. Sciences	2	2	3	2	2	2	2	2	2	3	3	3	4	5	5
Writing	2	2	..	.....	.....	....	...	...	..	.....	.....	....	....	...	...
Drawing	..	2	2	2	2	....	....	...	..	2	2	2	2	2	2
Totals	25	25	28	29	29	29	29	30	30	30	30	32	32	32	32

Gymnastics, Singing, Writing as under Time Table of Gymnasia.

SECONDARY EDUCATION IN ENGLAND.

(A 6 years' course following a 6 years' elementary course.)

TIME TABLE OF ETON COLLEGE.

[The great English school which has contributed eleven of the twenty-one Prime Ministers who during the last hundred years have controlled the destinies of the British Empire, and which claimed as former pupils more than half of the members of the late British government.

"Confessedly the first of public schools." (Cyclopædia of Education.)]

Class.	F.	E.	D.	C.	B.	A.
Approximate Age.	12	13	14	15	16	17
Divinity	1	1	1	1	1	1
Latin	6	7	7	6	7	7
Greek	3	4	5	7	7	7
French	4	4	4	.....	.....	.....
English	2	1	3	3	3	3
Mathematics	5	4	4	5	.....	.....
Science	4	4	.....	.....	.....	.....
Extra Studies	.....	.....	.....	2	4	4
	25	25	24	24	22	22

The Science of F and E includes Physical Geography.

The Mathematics of F includes 1 hour of Drawing.

In C, German may be substituted for Greek; and in B and A German alone, or both German and French may be substituted for Greek.

[NOTE.—The above is the time-table as revised and modified during the present year 1906.]

SECONDARY EDUCATION IN THE UNITED STATES.

(A 4 years' course following an 8 years' elementary course such as we have in Nova Scotia.)

DENVER HIGH SCHOOL CURRICULUM.

[Given in Reports of the Moseley Educational Commission to the United States of America (Oct.-Dec. 1903), as "fairly representative of many other schools visited."]

CLASSICAL COURSE.

First Year.	Second Year.	Third Year.	Fourth Year.
Latin 5	Latin 5	Latin 5	Latin 5
	Greek or German . 5	Greek or German .. 5	Greek or German... 5
		French (optional) . 5	French (optional) . 5
English 3	English 2	English 1	English 5
Algebra 5			
	Geometry 4		Algebra & Geometry 3
Physical Geography 2			
		Physics 5	
History (Greek) ... 3	History (Roman).. 4		
Drawing 2			
20	20	21	23

Music, and Calisthenics or Military Drill 3 hours throughout the course.

GENERAL COURSE.

First Year.	Second Year.	Third Year.	Fourth Year.
Latin or German.. 5	Latin or German... 5	Latin or German.. 5	Latin or German.. 5
		French or Spanish . 5	French or Spanish.. 5
English..... 3	English 2½	English 1	English 5
Algebra 5			Algebra 2
	Geometry 4	Geometry 2	
Physical Geog aphy 2			Trigonometry 2
	Physiology or Botany ... 4		
		Physics..... 5	
			Chemistry..... 5
		Bookkeeping 2	
Drawing..... 2	Drawing..... 2	Drawing 2	[Drawing (optional) 2]
History (Greek).... 3	History (Roman).. 2½	History (U. S.).... 5	
20	20	27	26

Music, and Calisthenics or Military Drill 3 hours throughout the course.

Those who contemplate an advanced scientific course may substitute French for History and English or for Science in the third and fourth years. Others by permission of the Home and the Principal, may substitute French or Spanish for Mathematics, and in the third year English Literature for Latin and German, and in the fourth year English History for Latin or German.

SECONDARY EDUCATION IN THE UNITED STATES.

St. Louis High School.

GENERAL COURSE.

First Year.	Second Year.	Third Year.	Fourth Year.
Latin 5	Latin 5	Latin 5	Latin 5
		German or French.. 5	German or French.. 5
English 5	English 5	English 5	English 5
Algebra 5			
	Geometry 5		
Biology..... 5			
	Physics..... 5	Physics 1	
		Chemistry 3	Chemistry 3
		History 3	History 3
20	20	22	21

CLASSICAL COURSE.

First Year.	Second Year	Third Year.	Fourth Year.
Latin 5	Latin 5	Latin 5	Latin 5
	Greek 5	Greek 5	Greek 5
		German or French.. 5	German or French.. 5
English 5	English 5	English 5	English 5
Algebra..... . 5			
	Geometry 5		
Biology 5			
			Physics 5
		History 5	History 3
20	20	23	23

SECONDARY EDUCATION IN THE UNITED STATES.

St. Louis High School.

SCIENTIFIC COURSE.

First Year.	Second Year.	Third Year.	Fourth Year.
Latin 5	Latin 5	Latin 5	Latin 5
		German or French.. 5	German or French. 5
English 5	English 5	English 5	English 5
Algebra 5		Algebra 2½	
	Geometry 5	Geometry 2½	
			Trigonometry 3
Biology 5	Physics 5	Physics..... 1	
		Chemistry 3	Chemistry 3
		History 3	History 3
20	20	27	24

COMMERCIAL COURSE.

First Year.	Second Year.	Third Year.	Fourth Year.
Latin or German .. 5	Latin or German ... 5	Latin or German ... 5	Latin or German .. 5
English 5	English 5	English 5	English 5
Algebra 5			
	Geometry 5		
	Arithmetic 1½		
	Bookkeeping 1½	Bookkeeping..... 2½	
Biology 5			
	Physics 5	Physics..... 1	
		Chemistry 3	Chemistry 3
		History 3	History 3
			Psychology 2½
			Ethics 2½
			Civics 2½
			Economics 2½
		Commercial Law ... 2½	
		Stenography 5	Stenography 2
23	23	27	28

In the 1st and 2nd years Drawing, and in the 3rd and 4th years French, may be substituted for Latin or German.

SECONDARY EDUCATION IN THE UNITED STATES.

CURRICULUM OF THE HOPKINS GRAMMAR SCHOOL, NEW HAVEN, CONN.

(Quoted in the latest Report of the U. S. Commissioner of Education, as representative of the courses of many strong Schools in the United States.)

CLASSICAL COURSE.

First Year.		Second Year.		Junior Year.		Senior Year.	
Latin	5	Latin	5	Latin	5	Latin	5
		Greek	5	Greek	5	Greek	5
Algebra	5	Algebra	3	Algebra	2		
				Geometry	3	Geometry	2
English	5	English	3	English	2	English	3
History	3	History	2			History	2
				German or French	3	German or French	3
	18		18		20		20

SCIENTIFIC COURSE.

First Year.		Junior Year.		Senior Year.	
Latin	5	Latin	5	Latin	5
Algebra	5	Algebra	5		
		Geometry	5	Geometry and Trigonometry	5
English	5	English	3	English	3
History	3			History	3
		German or French	3	German or French	3
				Botany	2
	18		21		21

SECONDARY EDUCATION IN THE UNITED STATES.

HIGH SCHOOL COURSES RECOMMENDED BY THE COMMITTEE OF TEN.

Year.	Modern Languages Course. Two foreign languages (both modern.)	Periods.	English Course. One foreign language (ancient or modern.)	Periods.
I.	French	5	Latin, or German, or French	5
	English	4	English	4
	Algebra	4	Algebra	4
	History	4	History	4
	Physical Geography	3	Physical Geography	3
		20		20
II.	French	4	Latin, or German, or French	5 or 4
	English	2	English	3 or 4
	German	5	Geometry	3
	Geometry	3	Physics	3
	Physics	3	History	3
	Botany or Zoology	3	Botany or Zoology	3
		20		20
III.	French	4	Latin, or German, or French	4
	English	3	English (As in other courses 3; Additional 2)	4
	German	4		
	Mathematics (Algebra 2; Geometry 2)	4	Mathematics (Algebra 2; Geometry 2)	4
	Astronomy (half year) and Meteorology (half year)	3	Astronomy (half year) and Meteorology (half year)	3
	History	2	History (As in Latin Scientific 2; Additional 2)	4
		20		20
IV.	French	3	Latin, or German, or French	4
	English (As in Classical 2; Additional 2)	4	English (As in Classical 2; Additional 2)	4
	German	4	Chemistry	3
	Chemistry	3	Trigonometry and Higher Algebra	3
	Trigonometry and Higher Algebra or History	3	History	3
	Geology or Physiography (half year) and Anatomy, Physiology and Hygiene (half year)	3	Geology or Physiography (half year) and Anatomy, Physiology and Hygiene (half year)	3
		20		20

Note.—"Although the Committee thought it expedient to include among the four programmes, one which included neither Latin nor Greek, and one which included only one foreign language (which might be either ancient or modern), they desired to affirm explicitly their unanimous opinion that under existing conditions in the United States as to the training of teachers and the provision of necessary means of instruction, the two programmes called respectively 'Modern Languages' and 'English,' must in practice be distinctly inferior to the other two." (From page 48 of their Report.)

HIGH SCHOOL COURSES RECOMMENDED BY THE COMMITTEE OF TEN.

Year.	Classical Course. Three foreign languages (one modern.)	Periods.	Latin-Scientific Course. Two foreign languages (one modern).	Periods.
I.	Latin	5	Latin	5
	English	4	English	4
	Algebra	4	Algebra	4
	History	4	History	4
	Physical Geography	3	Physical Geography	3
		20		20
II.	Latin	5	Latin	5
	English	2	English	2
	*German [or French]	4	German [or French]	4
	Geometry	3	Geometry	3
	Physics	3	Physics	3
	History	3	Botany or Zoology	3
		20		20
III.	Latin	4	Latin	4
	*Greek	5	English	3
	English	3	German [or French]	4
	German [or French]	4	Mathematics { Algebra 2 / Geometry 2 }	4
	Mathematics { Algebra 2 / Geometry 2 }	4	Astronomy (half year and Meteorology (half year)	3
			History	2
		20		20
IV.	Latin	4	Latin	4
	Greek	5	English { as in Classical 2 / additional 2 }	4
	English	2	German [or French]	3
	German [or French]	3	Chemistry	3
	Chemistry	3	Trigonometry & Higher Algebra or History	3
	Trigonometry and Higher Algebra or History	3	Geology or Physiography (half year) and Anatomy, Physiology and Hygiene (half year)	3
		20		20

* In any school in which Greek can be better taught than a modern language, or in which local public opinion or the history of the school makes it desirable to teach Greek in an ample way, Greek may be substituted for German or French in the second year of the Classical programme.

N. B.—"It was the best judgment of the Committee that both for pupils going to college and for those whose education terminates with the high school, one of these two programmes (the 'Classical' and the 'Latin-Scientific') is the best possible."