

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

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ST. JOHN, N. B., AUGUST, 1896.

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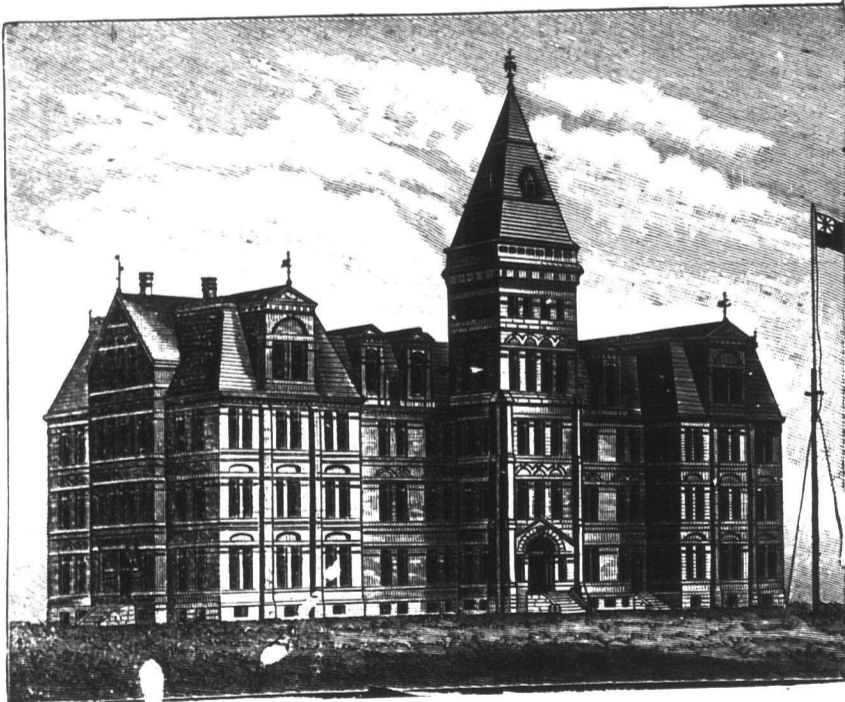
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The Educational Review

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INSTITUTE NUMBER, 32 PAGES.

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G. U. HAY,
Editor for New Brunswick.

A. McKAY,
Editor for Nova Scotia.

J. D. SEAMAN,
Editor for P. E. Island

THE EDUCATIONAL REVIEW.

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CONTENTS:

EDITORIAL—	41-42
PAPERS OF THE N. B. EDUCATIONAL INSTITUTE:	
OUR EDUCATIONAL PROGRESS, J. R. Inch, LL. D.—	43-46
PROBLEMS OF THE COUNTRY SCHOOL, Bessie M. Fraser—	46-47
RELATIONS OF THE UNIVERSITY TO THE PUBLIC SCHOOL, Prof. W. F. Stockley—	47-51
PUBLIC SCHOOLS AND ETHICAL CULTURE, Prof. W. C. Murray—	51-56
CORRELATION OF STUDIES, G. U. Hay, E. W. Lewis, G. J. Trueman—	57-64
SUMMER SCHOOL OF SCIENCE—	64-65
TEACHERS' INSTITUTE: Annapolis and Digby—	65-66
N. B. NORMAL SCHOOL ENTRANCE PAPERS—	66-67

INSTITUTE NUMBER.

We give up nearly all our space in this number to the papers read at the New Brunswick Educational Institute. We should like to do this as often as a provincial educational convention is held, either in New Brunswick, Nova Scotia, or P. E. Island, believing that if this were done every year it would indicate, more than in any other way, what shape and direction our educational thought is taking and what is the measure of our progress. The readers of the REVIEW now beginning to be numbered by thousands instead of hundreds cannot fail to be benefitted by the careful perusal of these papers. Who that takes pride in our educational progress will not be stimulated to fresh effort on reading the address of Chief Superintendent Dr. Inch? Who will not be aroused to take new interest in the fields of moral and intellectual education on reading the thoughtful papers of Prof. Murray, Prof. Stockley, and others?

Another feature in these conventions is the discussions. Those in the recent institute at Fredericton were characterized by an admirable spirit and were moderate in tone. We regret that we are unable to

give even the gist of the remarks made by those who spoke on the papers, and we can only summarize a few of the most important of the points made. In future conventions, the REVIEW, if possible, will publish discussions as well as papers.

An excellent feature of the public meeting on Monday evening was the addresses made by the inspectors. They were much to be preferred to the educational small-talk that usually proves so wearisome on such an occasion. Each inspector gave a sort of running report of progress in his inspectorate, coupled with suggestions and incidents that proved most interesting to members of the Institute. These might be characterized as local supplements to the Chief Superintendent's report of progress delivered later.

The courteous and impartial manner in which Dr. Inch discharged the duties of presiding officer, won for him increased esteem. To his business-like methods and firm guidance much of the success of the Institute is due.

THE necessity for a common entrance examination for pupils entering the high schools of New Brunswick, was pointed out by Prof. Stockley. Such an examination would be a great stimulus to the advanced schools. The labor and expense attending such an examination need not be great. The questions would be prepared by the chief superintendent and his deputies. The high school teachers could examine the papers, as is now done by the teachers of academies in Nova Scotia. A common standard and an entrance examination based on the curriculum must lead to good results in rounding off the common school course. To pupils passing such an examination, a diploma could be given, which would be evidence of attainments whether the holder presented himself for admission to a high school or sought a situation.

PROFESSOR STOCKLEY in the course of his paper, which was brimful of suggestions, said Latin should be studied seriously, if at all. And why is it not? It is not a question of the amount of time that should be given it.

If its importance were clear to every teacher and learner the requisite amount of time would be found and given to it. But unfortunately the importance of Latin as a means of culture and mental discipline is not clearly appreciated. Too many who attempt to teach this subject have never attempted to go beyond the mere rudiments themselves. They half acquiesce in the complaint

"what is the use of learning Latin anyway? Yes, Latin is not taught seriously, but "the fault is not in our stars but in ourselves."

But is Latin the only subject that is not taught seriously? Perhaps the same complaint may be made about Natural Science. Is it taught in such a way as to be of the disciplinary value that it should be, to foster and increase a love for nature, to make the children who study it the better for it no matter what may be their life-work?

"Few ever get their degrees with us," says Professor Stockley, "without making mistakes in spelling up to the last; and almost none it may be said, without some, more or less, barbarous incorrectness in sentence making, paragraphs and punctuation." Unfortunately this is too true. But is not the fault due to lack of backbone somewhere?

We believe that every teacher will heartily endorse what Prof. Murray has said and said so well in his excellent address on Moral Training. The personality of the teacher must be the effective stimulus in moral teaching. In the teaching of religion, or temperance, or any form of morality in our common schools, text-books are of little importance compared to the teacher himself. The one great safeguard of our country is in the character of our schools and its teachers. The great majority of our teachers are honestly striving to avail themselves of all the means at their disposal to do effective and conscientious work, and it is just such a clear and earnest address as this that puts many more on the right track in working out the many problems that meet them in their every day work.

Institute Notes.

Though the time for discussion was short at the various sessions of the N. B. Provincial Institute, it was fully and profitably taken advantage of, and at times the discussions became very animated.

In relation to the statistics of the departmental examinations given by the chief superintendent, it was asked whether the severity of the tests had not out-paced what might be reasonably expected from the schools. The chief leaving the matter open, it was stated by one who had an intimate knowledge of the facts (Dr. Bridges) that in some cases the questions given were unreasonably severe, and it was doubtful if the examiners themselves could answer them in the time allowed.

Dr. Stockley's excellent paper provoked the warmest discussion of the sessions. It was critical and pointed in matter, but most courteous in tone. Mr. John Brittain, considering that science teaching had been disparaged in comparison with classics, came manfully to the defence of his favorite subject, and in an eloquent address established beyond doubt that science is the more democratic, if it does not possess greater educational value than the classics.

Prof. Davidson, of the university, being present, was invited to discuss this paper, which he did. In the course of his remarks he reflected severely upon some of the work done in the public schools. Inspector Carter vigorously defended the schools, alleging that notwithstanding the higher standard required by the university, the students seldom or never failed to matriculate. If in the face of this they were not prepared a false standard of efficiency was being set up. The best products of the public schools were not seeking entrance to the university, partly because of the peculiar and partial nature of the matriculation examinations. Our boys and girls were able to enter McGill and other Canadian, American, and even old country colleges, not with a mere pass, but with honor. Inspector Carter also took occasion to refute the statement made by another speaker, that high school work had deteriorated. He claimed that in every respect, except in the amount of classics taught, that high school work, attendance and equipment, were much in advance of any former time in the history of education in the province. Messrs. Hay, Foster and Inspector Steeves also took part in this discussion.

One of the features of the Institutes of late years has been the election of a representative to the senate of the university. Inspector Bridges having served two years with entire satisfaction to all, retired.

The election this year was most good natured all around, and resulted in the choice of Mr. B. C. Foster, A.M., Principal of the York County high school, who will make a most capable representative.

N. B. Educational Institute.

The Educational Institute of New Brunswick was opened at Fredericton by a public meeting on Monday evening, July 29th, the president, Dr. J. R. Inch, Chief Superintendent of Education, in the Chair. Addresses of welcome were extended to the members of the Institute by the President: His Worship Mayor Vanwart; Dr. Coulthard, Chairman of the Fredericton Board of School Trustees; Dr. Harrison, Chancellor of the University of New Brunswick; Dr. Bailey; Principal Mullin, of the Normal School; and Principal Foster, of the Collegiate School. Suitable replies were made by Inspectors Mersereau, Carter, Bridges and Meagher, and by Principal Hay of St. John, and G. J. Oulton, Esq., of the Moncton High School.

On Tuesday morning after enrolment the report of the Secretary, John Brittain, was read. For the two years just ended the total receipts of the Institute have been \$474.09, expenditure \$197.05, leaving a balance on hand of \$277.04. The report was received and adopted. John Brittain was elected Secretary; Miss Orr (St. John), Assistant Secretary; Mr. Montgomery, Inspector Carter, Geo. J. Oulton, B. C. Foster, Dr. Bridges, N. W. Brown, G. U. Hay, F. O. Sullivan, P. G. McFarlane and G. H. Harrison were chosen as a nominating committee.

Then followed the address of the Chief Superintendent, Dr. Inch, which is as follows:

OUR EDUCATIONAL PROGRESS.

Ladies and Gentlemen. When I had the honor of last addressing you in Provincial Institute, assembled two years ago in the City of St. John, I attempted to indicate the position and progress of our public educational work as it appeared to me at that time, and to forecast, in some measure, results which might be hoped for, judging from tendencies then apparent, and from plans in process of being formed. It will be fitting on the present occasion to inquire how far these forecasts have been verified, whether the present outlook affords grounds of encouragement or of discouragement, and what measures should be taken further to promote the efficiency of our educational agencies, and to extend their beneficent influence.

In making a survey of the position and prospects of the work, different observers will form quite different judgments. The various standpoints from which the survey may be made, the relation which the observer bears to the work and to the workers, and even his subjective condition and constitutional tendencies, will necessarily color his views, and, perhaps, seriously warp his judgments. The constitutional pessimist sees everything with jaundiced eyes; on the other hand everything reflects a roseate hue to the eyes of the constitutional optimist. One may be happy in a fool's paradise, the other wails because of the spots on the sun and takes no pleasure in that luminary's life-giving light and heat.

Between these extremes there will always be a thousand different tints and shades of opinion produced by the individual condition and environment of the observer. To view affairs in the plain white light of truth should be the desire of every honest mind. Shall we depend on statistics? Yes, and no. Carefully prepared and well authenticated statistics afford the only practicable method of registering progress or retrogression, as the case may be, so that the public mind may readily apprehend it. And yet statistics reveal only a part of the truth, and not always the most important part.

What do statistics say in regard to educational progress in New Brunswick since the last meeting of the Provincial Institute. First, in regard to expansion, A comparison of the figures for 1893 and 1895 (those for 1896 are not yet available) gives the following results:

Increase in the number of teachers employed . . .	97
Increase in the number of schools in operation, . . .	81
Increase in the total number of days' attendance, . . .	377,636
Increase in total number of pupils in attendance, . . .	2,364

Expressed in another form the total number of days' attendance of all pupils has increased ten per cent; the average attendance for the whole term has increased three and a half per cent; the number of pupils in attendance four per cent; the number of teachers and schools five per cent.

Second, in regard to the class of teachers employed. The number of first class teachers employed increased, during the two years, by nearly ten per cent; the number of second class teachers by over five per cent; the number of third class teachers by only three and three-quarters per cent; the number of untrained teachers employed decreased by sixty per cent.

Third, in regard to the increase of pupils in the higher grades, showing a longer period of school life for an increasing number. In 1893 there were only 724 pupils above Grade VIII; in 1895 the number was 1060, an increase of forty-six per cent.

Fourth, in regard to school libraries. During the two years over 3,000 volumes have been added to the libraries at a cost of about \$1500.

I might continue these comparisons, but I do not wish to weary you with dry statistics. The only important point in which the figures do not indicate progress is in the average salary of the teacher. While this fact is greatly to be deplored, it ought not to be forgotten that the rapid extension of the work into the poorer districts, where the people are able to pay only the most meagre salaries, tends constantly to lower the general average.

Whether there has been any marked advancement in the efficiency of the schools is a question not easy of determination. The inspectors are in the best position to form sound judgments in regard to this vital matter, and their reports are, on the whole, assuring. The results, even of the best teaching, like "bread cast upon the waters," are often seen only "after many days." Two years constitute too short a period to enable even the acutest observer to mark much progress in this respect; but good teaching will always produce good results, which will be manifest sooner or later.

In so far as the results of the annual departmental examinations may be taken as a criterion of the efficiency of the schools, the summing up is not as satisfactory as could be desired. About 1100 candidates, representing in round numbers 500 different schools, presented themselves during the years 1894 and 1895 at the examinations for normal school entrance, and for advance of class. Of the whole number sixty-four per cent failed to get the class applied for; thirty-two per cent failed to get any class. Of the 757 candidates who were classified, nineteen per cent were placed in Class I, forty-five per cent in Class II; and thirty-seven per cent in Class III. Only ten per cent of the whole number of applicants had applied for the lowest class. In the university matriculation and junior leaving examinations, which represent more directly the work of the high schools, 131 candidates presented themselves. Of these thirty-three per cent failed, thirty per cent passed (with conditions) in the third division, and thirty-seven per cent passed unconditionally, chiefly in the second division.

These results are somewhat disappointing; and yet it would be unfair to the teachers from whose schools the unsuccessful candidates came, to infer that inefficient teaching was the principal cause of the failures. Many of the candidates came forward prematurely, without the advice and even against the judgment of their teachers. Some of the candidates were inexperienced in methods of written examinations. The novelty of the circumstances under which they were tested would tend to produce a nervous excitement unfavorable to concentration and clearness of thought. Perhaps some of the questions submitted may have transcended the lines within which special training had been received. Yet after all reasonable allowances have been made, it must be admitted that a considerable percentage of the answers submitted to the examiners failed to show careful training, either in clearness of thought or accuracy of expression.

There is an unfair and unreasoning tendency in many minds to judge of a class by its poorest members, and the teaching profession more frequently suffers from this tendency than other classes. While we still have in the ranks of New Brunswick teachers a few who are unfitted both by nature and training to discharge the high duties of their calling, I think there can be no question that the number of such teachers is annually diminishing, that the general average stands as high in all essential qualities as that of any other province of the Dominion or state of the American Union, and that at the top we have a fair percentage of real teachers, as efficient, as earnest, of as high ideals and noble purposes, as can be found in any land.

To increase the number of such teachers, to keep out and to weed out the incompetent and unworthy, must be more and more the policy of the Education department. Accurate scholarship, at least within the limits of the required syllabus, must be insisted on. It is, of course, painful to those upon whom the responsibility chiefly rests, to close the door against honest young men and women ambitious to enter the profession, but whose unconsciousness of their own educational defects and natural incapacity proclaim at the outset their unfitness for the positions to which they aspire. We must more

and more aim to protect the trustees, the ratepayers, the children, and our honorable profession against the incapacity of unqualified and worthless teachers. The most effectual way to accomplish this is by a series of faithful and rigorous examinations before a license to teach is granted, and by an equally faithful and rigorous inspection of the schools afterwards. When it becomes manifest to the inspectors that a teacher has mistaken his calling, or has grown negligent of his duties, some method must be devised to remedy the mistake that has been made. The law of the survival of the fittest is too slow in its operation.

Under our present system the initiatory examinations for entrance to the Normal school, the course of training received there with its frequent tests both as to scholarship and professional skill, and the final examination by competent and independent examiners at the close of the Normal school course, ought to make it impossible for an unqualified candidate to obtain a license, provided the regulations are faithfully and conscientiously followed. This is a matter of vital importance and demands the strictest vigilance. With well-qualified and faithful teachers, other deficiencies will not prove a permanent obstacle to success; with poorly qualified and merely mechanical teachers, the most perfect organization will avail but little.

Next to the obtaining and retaining for the service, a body of well-qualified, conscientious, earnest, enthusiastic teachers, the aim must be to perfect our courses of study, as to method, form and matter, so as to assign to each period of the child's progress towards manhood, the appropriate intellectual and moral stimuli, and to furnish the best conditions for the symmetrical development of all his powers and capacities, physical, intellectual and spiritual. This intricate problem of pedagogy is receiving at the present time such an amount of patient investigation by the ablest educationists in Europe and America as promises fruitful results. It will be our duty to keep abreast of the best thought and practice in this important matter. A third aim should be the perfection of a national system of education based on the highest ideals, so that from the nursery to the university there shall be no missing links, no overlapping of agencies, no waste of energy, no loss of time.

I was much impressed with a scheme for the organization of national education, read before the National Teachers' Association of the United States, in session at Saratoga in 1892. The writer, President Hyde, of Bowdoin College, Me., illustrated the scheme by a diagram, a copy of which I have placed upon the blackboard, as worthy of examination and study by the members of this Institute. Time will not permit me to explain it in detail, much less to present the arguments by which the proposed system was supported; but by reference to the diagram, I will endeavor to make its salient points clear. It may be premised that the system is not based on any merely utilitarian idea, but upon a conception of the object of education, which regards human life as an end in itself, and a complete and rounded manhood and womanhood as the true aim of all educational effort.

(Here followed orally an explanation of the diagram.)
So far as our organization and course of study go, they are in general harmony with the scheme here out-

lined. We have some gaps to fill up, notably the kindergarten. Our provincial university occupies the sixth circle of the diagram—the university proper is yet to be supplied, and should belong to the Dominion rather than any province. All the inner circles should represent institutions under provincial control the outer circle should represent a national university located at Ottawa, and maintained by national funds. Is such a scheme visionary for our young country? Far from it. Dr. W. T. Harris, the distinguished commissioner for education at Washington, in contrasting educational conditions in Canada with those of the United States, points out the advantage to education which the greater centralization of our political system gives us over the individualism which prevails in the great republic. "It may be doubted," he says "whether there is another instance in America of so wise a use of money and supervising power for educational purposes as is shown in the province of Ontario." And this he attributes to the fact that "that the central power makes a liberal appropriation of money to local authorities, but requires, as a condition, the recipient to respond by contributing an equal sum of money, and by showing to the central supervisory power, results that equal the standard of requirement." A similar statement might be made in regard to the other provinces, so far as their respective resources permit. Why should not the supreme central authority crown the educational edifice by the cap-stone of a national university? Some of us may live to see this consummation. In an age when the question of education absorbs the public attention, perhaps more than any other question affecting the public interest, when political parties divide on the true policy to be pursued, when the parliament of Canada and the parliament of Great Britain exhaust their strength for a whole session in struggling with the problems involved; when every kindred, language, nation and people on earth, that make claim to any degree of civilization, feels the stirrings of an educational renaissance—we may confidently look for marvellous results in the not distant future.

Happy for us, fellow-teachers, that our lot has fallen in an age when the strongest intellects and the warmest hearts are daily devising wiser measures for the training of youth, when it is universally recognized that the safety, the development, the prosperity, the performance of a nation depend more upon the faithfulness of its teachers than upon the courage and loyalty of its soldiers; when all science and all art and all industry are laid under contribution to promote the virtue and intelligence of the people, beginning wisely at the fountain head of childhood. All the great publishing houses are busily engaged in publishing books for the young. Millions of volumes in the daintiest style of the book-making art are annually circulated. Numerous periodicals with splendid illustrations to attract and instruct, are scattered like leaves from the tree of life for the healing of the nations. In the houses of the common people, the children are now becoming familiar with pictures and literature which the wealthiest could not command half a century ago. As at the beginning of the Christian era, the wise men from the east presented their gifts of gold, frankincense and myrrh to

the young Child in the manger; so at the feet of the favored childhood of these latter days, whether found in cottage or in castle, in palace or hut, are laid the choicest treasures of literature and art, of history and philosophy, of invention and discovery. The world is working for the children as never before. The teacher who knows how to avail himself of aid and facilities to his professional work, had never so grand an opportunity.

Perhaps I ought not to draw these remarks to a close without alluding to some changes in the school law passed at the last session of the legislature. The principal purpose in view in asking the legislature to amend the law, was two-fold. First, to promote secondary education by strengthening superior schools and grammar schools in counties where a demand exists for advanced education. Second, to strengthen the schools in poor districts where it has been found impossible to maintain efficient schools because of the sparseness and poverty of the population. In regard to the first of these, the provisions of the bill became law. The limitation in the former act by which two superior schools could not be established in the same parish has been removed; so that provided the total number of such schools permitted to the county has not been reached, there may be two superior schools in the same parish, if the conditions warrant their establishment.

In regard to grammar schools, the provisions of the late act authorize the payment to all the teachers in a grammar school employed in work in advance of Grade VIII, the provincial grant of \$350 per annum. Hitherto the principal only received the grammar school grant, the other teachers receiving the grant for first-class teachers. These new provisions of the law ought to increase the number of efficient superior schools, to greatly strengthen the grammar schools in cities and towns, and to materially increase the salaries of teachers employed in these schools.

It is to be regretted that the provision of the bill intended in aid the poor districts of the province by an increase of the county fund, failed to meet the approval of a majority of the legislature. The reasons for an increase of the county fund seem to me so strong and the necessities of the work in the poorer districts so urgent, that I cannot but believe that when the matter is better understood, and a few misapprehensions removed, our enlightened legislature will see the necessity of passing the measure.

The only other provisions of the act provide first for holding the annual school meeting on Saturday instead of Thursday, in order to prevent the necessity of closing the schools in country districts in the middle of the week, and second the payment of the provincial grant to teachers (after the close of the present school year) not as formerly in two equal semi-annual instalments, but *pro rata* at the end of each term in respect to the number of teaching days in the term. Hitherto the teacher who taught 120 days or more during the inclemency of the winter months received only the same provincial grant as the summer teacher received for teaching two-thirds of the time. This inequality has been removed, and the provincial grant after the close of the present year will be divided between the two

terms on the same principle as the division of the salary from the district.

I will not occupy your time longer, ladies and gentlemen. I trust every member of this Institute will contribute to its success, by taking as deep an interest as possible in its proceedings, and by sharing in its discussions. Though our time is somewhat broken, owing to the intervention of Dominion Day, we have important subjects before us which demand strict attention— all the more so because of our limited time. The arrangements made by the committee for Dominion Day, will, I feel confident, add not only to your pleasure, but will have educational value as well. Let us hope that our association together, and our interchange of views, will give us renewed courage and inspiration for our work, and will strengthen the bond which unites us in fellowship with the noble army of the world's teachers.

After Dr. Inch's paper was discussed, a paper was read by A. Bowman Maggs, A. B., Principal of the Queens County Grammar School. (This paper did not reach the REVIEW at time of going to press.)

The paper was discussed by P. G. McFarlane, Inspector Mersereau, G. U. Hay, Dr. Bridges, G. J. Oulton, N. W. Brown and Prof. W. C. Murray.

On Tuesday afternoon, the following paper was read by Miss Bessie M. Fraser, of Grand Falls.

PROBLEMS OF THE COUNTRY SCHOOL

The problems which face the teacher of the country school are many and puzzling, and at times, no doubt, to many, the possibility of meeting and solving them seems lost in the mists of the future. In some districts so much is expected of the teacher, she— I say she, because, as a rule, the country schools are in charge of female teachers— if willing to work, can find plenty to do, as others are perfectly willing she should do all in her power and a little more besides.

Among other things with which the teacher of the country school has more especially to contend, may be mentioned: The attitude of parents, irregular attendance of pupils, lack of apparatus.

The Attitude of Parents. This may take different forms. On the one hand, parents sometimes manifest utter indifference as to the school and its working. As a rule, in country districts, people live at long distances from the school house. Parents send their children to school, but give them not a thought after they have left. They never think of visiting the school and take not the slightest interest. The question is, how can we arouse in them an interest in the school? This may seem, and it generally is, a long and difficult task, but patience and perseverance will accomplish much. In this case, it would be a good plan for the teacher to visit the parents at their houses. Perhaps they will not be found very willing to talk of school matters, but talk to them and make them talk. Tell them of their own children, what they are doing, how they are getting along in their studies. Praise them up a little, this will always touch a parent's heart, and perhaps there will be a warmer feeling for the teacher. Ask them to call at the school house. At first, no doubt, many ex-

cuses will be made, but in time you will find them taking a real interest. Then it will be much easier, the children will be provided with text books and everything they need.

On the other hand, people sometimes take too deep an interest, or of the wrong kind. They wish to rule in everything, and of course, a poor young school teacher needs some one to advise her how to conduct the school. She needs an older head to direct her, and they think it their duty to tell of any mistakes they may think she makes, etc. If you try to do anything for the benefit of the school, you must consult them. With such people I would say, leave them entirely to themselves, give them distinctly to understand that you are able to manage your own affairs. Do not speak unkindly or in any way hurt their feelings, but be firm, listen to their friendly advice and do as you think right yourself.

Irregular Attendance of Pupils. How very trying it is, we probably all know, to have a pupil or pupils, who attend irregularly. In the country especially, pupils are kept at home for such trivial things. A little extra work to be done, one of the children must be kept home. They get behind their classes and a great amount of work must be done over again by the teacher or the pupils lose a great deal. After a time, they lose their interest in school and do not want to go. You must try to make the parents see of how much more lasting benefit, of how much greater importance, a boy or girl's education is to be to them in after life, than the little saved by their work. Youth is the time of storing for after years, and if the time is wasted then regrets will fill the years to come. Urge the trustees to give prizes and clearly impress upon the minds of the pupils that regular attendance is the principal thing. They will all be anxious to work for prizes. I often wish compulsory attendance were the law in New Brunswick. It would be the very best thing that we could have and I hope it will not be long in coming.

Lack of Apparatus. How often do we find the necessary apparatus even wanting. Maps are few, black boards poor, and many other things unknown. Here the teacher has a grand chance to work. In many little ways the supply can be added to, and the pupils greatly benefitted at the same time. Take for instance, a school concert. No small amount of work is implied but it is a pleasure, and the results amply repay one for all the trouble. It is a great help to the children. The training and study necessary to an appearance in public, strengthens the mental powers and improves their reading, beside the confidence in themselves, given by an appearance on the stage, a certain amount of which is necessary. Then the fact that certain articles in the school room were obtained by their own work, gives a delightful feeling of ownership and a right to take special care of them.

There are many other ways in which the school apparatus may be improved, and I think every teacher should consider it his or her duty to do something in this line.

Much more may be said in regard to country schools, but I will not try your patience longer.

I will say in conclusion, that I am proud to have my name enrolled in the ranks of the noble army of country

teachers of New Brunswick, as I think we are given a grand work to do, and a wide field in which to work. From among our country boys have come and are still coming, some of our greatest men. We may have under our charge one whose name will yet be famous. Let us then, not think lightly of our work, but rather consider the great responsibility resting on our shoulders. Let us strive to do our best, and, if we have no other, will surely have the love of our pupils, which is worth a great deal, and will finally receive the reward of the faithful.

Miss Fraser's paper was discussed by Messrs. Leonard Crandall, John Montgomery, Jas. Barry and by the Chief Superintendent.

Prof. W. F. Stockley, of the N. B. University, then read the following paper:

RELATIONS OF THE UNIVERSITY TO THE PUBLIC SCHOOL.

This is not the place to say soft things, nor to say things unreasonably hard. Above all, the things said ought to be practical.

For a great advantage in addressing this audience is the interest the teachers take in the subject of the talk. One can relate a plain unvarnished tale, and make bold statements, and put clear questions, expecting clear answers. Of course it might be easy to let off steam, expressing all one's difficulties and grievances. Every man has them in this world, every way of life has its own, and men in our teaching profession think those in some or in all other professions wonderfully lucky.

As was suggested at the outset, a middle course is wisest, but a firm middle course. We need not blow about ourselves, and we need not preach "blue ruin."

I. To take the university. There is no doubt that it should enjoy, and probably it does enjoy a decent reputation in the schools. There is a great deal of work done by its teachers: there is much readiness to meet students who wish to work. There is a good deal of activity of mind, and an adding to knowledge, and in the professors an increasing fitting of themselves for their work. But with all this, there is of course not enough of this. And there cannot be, while men have not more leisure to work, and fewer subjects to teach. It is impossible to do justice to the best students. Just think how long it takes to look up the matter in connection with one classical play in any foreign language, or indeed in English—weeks, working say four or five hours a day, and the work is not done then.

Again, how much outside reading should a man do in chemistry and physics in these days of scientific progress? Why if a man had a hundred years, I suppose he would not think he could entirely prepare for a class.

In this, as in everything else here, one does not propose to talk in the air, but merely to keep the ideal before us, and then to make some steps towards it, not to stand still, nor to recede.

The conclusion is definite and obvious, and it is this, that the province should support its public institution, the university, better than it does. This is not indefinite, it is perfectly definite. I mean, one, two or three thousand dollars a year are necessary, if the bet-

ter pupils from the schools are to find a professor with time to help them in philosophy, say, or in chemistry. A and B cannot look after them, when they are teaching political economy, or physics, or geology—the picture might be reversed or when they are studying, or taking necessary rest, or having leisure to meet men and talk, and so learn.

A small university helps her pupils specially by giving special attention. There is truth in that; but there is also truth in this, that larger universities are very close now—a few hours' journey—and that their instructors are numerous. That at Harvard, for instance, far more time can be given in English composition than in our college, and that each student gets far more teaching in it and more individual help; and that they can get five hours' French, say, a week, and that they insist on a rapidity of work in reading a new language, which would make some of us teachers in school or in college, pupils or students, jump and fly.

There is no use in being satisfied with a low standard. And there is no use in saying that when one proposes to raise the standard, one is proposing to raise it to an impossible height. We are supposed to be a most rational assembly here, and we may demand from one another most reasonable treatment.

Now, we are in a democracy, and everybody has his say; and often, the less a man knows, the more he will talk.

We cannot rule the public with a rod of iron; but we must be always aiming at ruling it, whether we let on or not.

It may be the public does not know anything about what we teach, and cannot judge whether we teach it well or badly. We must often pretend to care what it thinks; but we ought not to care really, and I hope we do not—if so be, that this, as Lord Bacon wisely adds, "be not with swelling or pride." For indeed, if the public is ignorant, it is much like the rest of us in this world. Is not that so?

We need, then, the dissatisfaction that is wise; and we need the expression of the dissatisfaction directly or indirectly, to lead to the practical result of a gradual move towards having better teaching, and a larger number of teachers, if we wish to give our young men more confidence in their province, and if we wish to add the incentives of worldly success so as to keep them at home. And it is at home that there are the many associations of great value to the finer parts of many natures, or of most. How much is lost by going from home.

And then, as to the number of teachers in the schools. We are considering university and schools together. And we want to aim as high as we can. Now we must take care that our words do not outrun our state, and show themselves to be too lofty for the circumstances which we rebel against, indeed, perhaps too little.

We speak of high schools and of university; and it is true that some of our work sometimes is such as befits such institutions. But words may be mistaken for things; and what is in a name?

What about the number of teachers and the size of the classes in the high school in this place, for instance—a school preparing specially for the college? We hear

there is to be another teacher. That is good. But we know that the former arrangement and the acquiescence of the public in it, show the lamentable, commonplace, uneducated level of life, and the incapacity to appreciate the question under consideration. People cannot feel really about that which is not constantly the subjects of their thoughts and the matter of their knowledge. I do not mean to fall into phrasing about magnificent education; but no man can teach high school work as it is understood elsewhere, say in France, in England, or if you like in Boston—shall we say Montreal?—unless you give him a chance, a proper chance. Latin, Greek: how long does it take to teach boys individually; to correct their work separately; to teach them as they are taught in some countries, in some places at least? How many boys ought one to have in a class? It is no answer to make that you cannot come down to fifteen or twenty, when you may come down to twenty-five or thirty, or thirty-five or forty, instead of being at fifty, sixty, seventy, eighty, and two classes in the one room. That old, thin end of the wedge argument, is a scandalous well-known old person by this time.

We must confess what we cannot do, being as we are; we must beware of too high talk, and no doubt of too grumbly or too fiery talk. But there is a point at which patience becomes pusillanimity. And it is easy to do nothing about a matter—easy, even when one talks a lot.

Our whole object is to get rid of the influence of incapable persons. For instance, the local trustee. Let the larger districts' nominees have the power as has been proposed. Let trustees having power over higher learning be learned persons, in so far as we can get them. Let teachers say these things, and let educational institutes be centres of combined effort, however weak. Do something. Get up a public opinion among teachers, and among the people where they teach. There are reasonable persons everywhere. Write and speak when occasion offers. Make occasions. Use the EDUCATIONAL REVIEW.

Because, what the university and the public schools are in their mutual relations depends on what the university and the schools are in themselves.

2. To begin now down among the younger pupils of the school, they seem to have a better spirit than the older ones. There seems greater interest in the work. They may not learn as solid things, so to speak, as they ought; they may have too scrappy work. But a lot can be done with young creatures willing to go your way.

Afterwards, there are the natural difficulties of age. And there are our special difficulties in the habits of many families, as a leading public man among us has suggested: the lack of fixed hours for going out and coming in; the general trapezing about, the amusements, children being taken everywhere, the production of a sort of natural education, meaning interest in "things in general," typified by the boy playing, dawdling, or swaggering in the street, by the girl swaying backward and forward, filling up half a pathway, gazing at every thing, talking loudly, chewing gum even, and proving her unconsciousness of her offensive state; this too

early abolition of the child, in fact, and the producing of the rowdy and the mix. A great scandal they are to gentlemanly and ladylike and modest learners, who are too often judged here by their boldfaced companions.

Indeed they are in one sense, of course, often, perhaps, not so in another. But educated in our college and high school sense, they simply cannot be. They do not give enough time, energy, or consistency to this education business. As Emerson says, you catch boys and girls two generations too late, you ought to begin with the grand parents. That is depressing. But not altogether so, for, first, these pupils are prospective grand parents, and so we can at any rate work for posterity; and secondly, we can to some extent influence present grand parents, and parents more or less, and hence the children through them. Try to get some high serious men and wise severity among them. Say this, that parents should stay in their homes in the evening, that the children's lessons should be a reason for keeping away what would disturb them; that they should have a room where their books are kept, shelves on which they are made to keep them—is there any country where books are treated as they are here? none where they are treated worse, anyway—and as to our neighbors, let them mind themselves. More or less such improvements are possible. There are houses here where such rules, or some of them, are carried out. They are the habits of many more people in other countries, and without wealth. Manners and customs must be modified according to place, no doubt. But to have work done, you must do it. And education is a great bother, and takes lots of time. I am sure no one could imagine from the habits of some young people in Fredericton, why it should be thought they would or could be educated in a college or a high school sense as we aim at it, and that without aiming at all unreasonably high.

There are those who work, who would work more or less anywhere. But let us confess it, we have a tremendous weight for us to lift in the happy-go-lucky notions of many families, and of much of the life in the society about us. At its best it is very nice, very friendly in many ways, and it gets up nice amusements. But, Latin, and history, and geometry, and quiet studious habits, and strain, and steady hard work, all that is impossible.

They say in print now that young people should have only about four or five hours work, or less, teaching and learning and all. I know we used to have double that, and precious little we learnt. But anyway let us be clear about what we mean. Let us have one end in view or another, and see what is the way to reach the end we propose.

My hearers will fill up all this by their own experience of facts at home and at school, and by comparisons with other times and other places.

As a teacher, I find I can't raise the weight, and I tumble back to where all are pretty comfortable and undisturbed by any too distressing efforts at Excelesior.

I hope that what I say is not sounding cheap and smart. It is not meant to be so foolish, but to be really practical for us here in Fredericton and through our province. Sometimes a certain tone gets into the voice, and for the moment seems invariable.

We contrasted the lower grades of the school with the higher, and found that the pupils get weaker as they ascend. It may be that, as was said to me about the college youths, after ceasing to be school boys, "the good get better and the bad get worse." Is there anything in that?

This paper looks for discussion, and for criticism, and for information and suggestions.

3. The higher depend on the lower for their own efficiency.

[a] Check then at once the system by which children are passed on too readily by inspectors, without the decision of the teacher, or by teachers with no mercy for the teacher in the next class, and with an examination which must be insufficient. What matter comparatively if grades are "congested"? Do not smooth over, when the stuff is rough and tumble beneath. Shall we say that dozens are passed on who are obstructionists, and who simply "do for" higher standards?

Should there not be a serious keeping-out door at the high school, and at the university; entrance examinations, not too hard, but firm barriers! let no one in as full student who fails in two subjects, supplemental or not supplemental. Aim at a common entrance examination for high schools and for colleges all through the Maritime provinces. The large colleges in the east of the United States have got that now. They pounded away and they were listened to at last.

But indeed Harvard never had soundness of health, a professor there said, till the government gave up appointments, to its senate as we should call it till all the members were appointed as being capable, not in other ways, but in the needful way of being as highly educated as possible.

[b] Then in the schools let the Latin teaching be more serious. We are behind the age, behind the United States. Take the Latin teaching in the Boston high schools for instance. It seems that in New England the minimum for Latin is five weekly lessons of forty-five minutes. Three half hours a week are given in some of our schools. Tell it not in Gath. For indeed it would make the Philistines rejoice. Is it Philistines we wish to produce? Is it not a characteristic of that class "not to know when they do know," whether the ignorance is of Latin or of science. Go further go to Germany where the famous report of the heads of the great "modern side" schools, "real schulen," declared that Latin and Greek language training put the youth more solidly on their feet than other studies, and that the other studies were built up firmer in less time with that foundation.

However, it is not our business to go into that old story. Only, if we learn Latin, let us have a chance of learning it. It could not be learnt by two big classes in the one room with three half hours a week each. Please let us confess that it could not. The college teaching, as college teaching, must be a sham, if its freshmen are thus prepared. I am not a mathematician, but that may be signed with a Q. E. D. for *quod erat demonstrandum*.

And Americans give themselves some good shocks these times. We compared Germany and America, one of them said, and we began to get out of our self-com-

placency; for we "found that our public schools did not educate, and it was doubtful if they instructed."

In an address lately before Yale University, a person in the educational authority said: "One of the greatest evils in American life of the present day is the shallowness and insufficiency of our popular education. It is but a little learning that our public schools afford, and that little is often poorly taught, and of the most elementary kind."

Mr. Morse Stephens, the Englishman, now professor of European history at Cornell, constantly remarks, it seems, that the American schools are bad, and so men have to do all their work in college; whereas in England a man does his work in school, and simply absorbs while in the university.

That was the way his remarks were reported. But any way there is a plain meaning at the bottom. Though of course, woeful wailings might go up from English teachers too, even if less woeful.

[c] By the way, to come down again to detail, this English professor "conditions" men for mistakes in spelling. Few ever get their degrees with us without making mistakes in spelling up to the last; and almost none, it may be said, without some, more or less, barbarous incorrectness in sentence making, paragraphs and punctuation.

The spelling of those who come to college from the normal school and with first-class license, and from the high school, is often very bad: something like twenty mistakes in a short essay; and, as has been said, the spelling of some of those who leave us with degrees, is often little or no better. What should be done? The senate once said that the degree of every bad speller should be stopped. Well, what does this audience think about that?

[d] What has been said above suggests the multiplicity of subject questions. In those New England schools no botany is taught, I believe. On the other hand, in the *Canada Educational Monthly* for July, 1896, Professor McCurdy wants phonetics and astronomy taught in the schools; and claims have been made here for shorthand and typewriting.

Dr. McCurdy protests against so much time being given to arithmetic: "working out algebra problems by arithmetical processes is vanity and vexation of spirit." "And would it be believed," he adds, "that under this same educational system of ours—in Ontario anyway—of which arithmetic is the chief corner stone, the learning of dates in the history lesson is almost universally discouraged." Is that absurdity to be laid to our charge too?

[e] To return to the connection between school and college. No one should enter college under seventeen, unless by passing the senior matriculation examination, a candidate showed that he or she was above the average, probably in intelligence or in habits of work.

Students entering younger than that, have a very poor chance of getting good out of literature, history, political economy and philosophy, to say nothing of other subjects. I am not here speaking in the air; I have frequently heard students express this opinion about themselves and others, and sometimes with unavailing regrets, bitter enough.

And judging by the words of some experienced teachers, we should ask the schools to turn out pupils with more of the adult and less of the juvenile mind. These teachers say that it is certainly a fault the way in which the pupil gets to think, by the teacher constantly repeating that he must be forced to take in the information with a maximum of trouble to the teacher and a minimum of trouble to himself.

Far greater independence, activity, and sense of personal mental responsibility is needed. There is a fatal word in the mouths of the younger children sometimes, "So and so is not in my reader, I have not come to that yet!" and the deadening sense of "there fore it is no interest to me," is over the child, and unless he is cured, certainly he will never be educated. When he comes to college, he has the same dreadful sense that definite set lessons bound truth. You can do nothing with people in that state, except just give them degrees. There is no doubt this is a serious matter. And we are, perhaps, specially afflicted that way.

A help, of course, is found in a rational home with some books, and in a habit gained of reading; another help is in note taking—the substance of what is said being taken down. Perfect attention might be as good or better, and a writing out of the substance afterward. But can you get this? And if not, note taking exercises intelligence, and is a great improvement on those oppressive and depressing, stony, amiable or listless ways. On the whole, is there too great a gap between school and college?

Some answer no, others yes, saying that the difference in ways of teaching is so great, that it takes a year to find out where you are. And so the student is at the university without knowing what to do.

That was said with regard to the Latin and Greek, implying that the youth was not independent enough to study by himself as much as the classical professor rightly asked him to do.

I must say, I see that sort of thing in my classes. If I do not give something definite to new students every day, they seem hardly to know what to do with themselves. Still as far as I know, they seem much more interested in plays when read at school, if I may judge from my visits than by the plays read with me. I speak of the younger classes in college, at least.

[7] We work too much in the dark. We require as much mutual knowledge as possible of work done. A sign of that might be seen in the fact that we cannot get ourselves comfortably and definitely arranged about the courses required for matriculation. There is a strong feeling in some parts and in some minds, that the college does not interest itself sufficiently in the schools.

At the closing of schools there should be mention made of the college as the destiny of the pupils. So it has been strongly said.

[8] In classical requirements for entrance we have been going down, as Dr. Bridges points out to me, instead of going up. And it seems it is the fault of some teachers that while five Latin portions—two Virgil, two Caesar, one Horace—used to be required, now only three, one Virgil, one Caesar, one Cicero. Dr. Bridges' successor will have his powerful influence to support any efforts he may make in treading again the ancient track.

And Greek. Why there was a man entered some time ago a man of moderate ability, I think he himself would say) after six weeks study of Greek. What is this but ridiculous? A boy might as well start a \$20,000 house with twenty cents pocket money.

[9] An excellent suggestion, as it seems to me, has been made, by which the principal of the normal school will give lectures on teaching to college students, his lectures counting at least partially as an optional course.

And another way in which the schools are connected with the college is by correspondence between professors and former students. Students should feel, and some do feel, that when teaching they can write to the college for information as to books, or for explanation of difficulties, or indeed about what affects them in more personal ways. And they often do so write to the chancellor, at least.

And a matter that this recalls is the date of the entrance examination or examinations. Should there be two in July and in September, do the teachers think? How should they be made equal as tests? They are meant to be equal. The impression in the college, commonly has been that they were so, and outside, that they were not. For myself, I never even thought of the possibility of any difference, until it was pointed out to me. But in one or more subjects, I am told, there is only one paper in September, while there are three in July. Again in Greek, it appears that last year there was Greek composition set in July, more difficult than has been set in September.

The impression however that has been so strongly and deeply made, has its cause in the fact that in July, the failure of candidates in certain subjects is made known to the public, while in September the names are sometimes published as of those entering, though as many may have to pass subsequent supplemental examinations as in July. But it is a mistake so to publish them—a great mistake. It gives a false impression, and it gives some ridiculous persons the notion that they can come to college. Again, as was said at the beginning, we need not raise our standard very high; but we ought in justice and honesty to raise it high enough to keep out certain persons of street boy and street girl habits, who are not only ridiculous students, but who make the university ridiculous.

To repeat: We dishearten our best pupils, or leave them to solidify, and get stupid, by letting them be content with so little work. Put one of our best fellows in a school with a higher standard and see what he could do. Give our best teachers a chance; give them every chance; combine and support one another, so that we may be able to keep the helpless ones out of our classes. Teaching is not for the best ones only; but the way the others drag us down sometimes is pitiable. And every check given to the practice of letting this sort of thing through our educational machine is calling attention to needful cleansing and fixing. Ignorant they go to English universities, and ignorant they go away. I. S. Mill, cynically exclaimed, Ignorant too many come to me and ignorant too many go away. Some will squeeze through, no doubt. But this plea is for lessening the numbers.

It is all very fine to jog along. But we fall into a poor pace. And to drop metaphor. If you simply say three mistakes in spelling will disqualify at the preliminary examination from going up for any military or civil service examination in England—that is the law: a law inflexibly carried out, as they do over there, not in our fashion—you get the result that school boys knowing they must learn spelling, do learn it.

So with grammatical forms. If a boy knows that he will never get through college, not if he lives to be a Methuselah boy, unless he can write foreign verbs and nouns without a single mistake, he will so write them. It is a fact. Look elsewhere and we shall see. And to pass on in the college course, we find men losing their years, and their whole course, who ought not to be admitted.

The valedictory address of this year at the Eneonia dwelt on that. I have known students give very little thanks; but on the contrary give bitterness to those whom they blamed for allowing them to pass into college too easily.

I hope we shall not be only hearers and talkers, but doers.

Professor Stockley's paper was discussed by Stanley Downey, J. Brittain, Prof. Davidson, Inspector Carter, G. U. Hay, B. C. Foster, and Inspector Steeves.

At the evening session, Professor W. C. Murray, of Dalhousie university, read the following paper:

PUBLIC SCHOOLS AND ETHICAL CULTURE.

A Change and its Causes. Perhaps the most notable change in public interest in educational matters, has been with regard to moral training. This excessive emphasis of the importance of moral training is not a novelty. It is rather a revival. To indicate the extent of the change, it is not necessary to do more than mention M. Jules Ferry's law of 1886 requiring positive instruction in morality and patriotism in the schools of France; the great contest over religious teaching in the London county council; the new education bill in England, favouring those schools which gave an unusual prominence to religious instruction; the appearance in America of courses of instruction, text books and numerous articles in periodicals on ethics and civics in the public schools; and in our own Dominion, the deliverances of the supreme court of at least three of our great religious bodies—all demanding more moral and religious instruction in our schools. These facts indicate a great reaction from the opinions of the secularists in France and England.

The school systems, which are now losing their popularity, were the logical consequences of the triumph of that "philosophic radicalism," sometimes called Benthamism but more happily represented in Stuart Mill and Bright, which ruled progressive political thought during the middle decades of this century.

The fact of the change few can deny; the wisdom of the change many may doubt; the causes of the change we may discuss.

(a) *Knowledge alone insufficient for national well-being.*

There seem to me to be at least two causes of sufficient prominence to demand a passing notice. The first

one is simply a new form of that which brought forth the systems of national education.

Statesmen long ago recognized how necessary it is for a democracy to provide a system of national education. "We must educate our masters," said they. National unity, national safety, national supremacy, are bound up with national intelligence. Supremacy in trade, supremacy in national councils, vigour and wisdom in national actions are possible for a democracy only when statesmen are supported by intelligent and patriotic citizens.

The most conspicuous need which the educational reformers perceived, was want of information. "More knowledge" was the demand of the artisan who was obliged to meet foreign competition by the introduction of new machinery and cheaper processes. "More knowledge," was the cry of the trader who sought new markets, cheaper means of transportation, and more economical methods of exchange. "More knowledge" was the cry alike of young men of talent, without influence or wealth, and of the powerful statesman whose acts must be submitted to the people for their approval or disapproval. The moral reformers also believed that crime and vice would disappear before increase of knowledge. They believed that men strove for that which would ultimately give them the greatest pleasure, and accordingly they were inclined to believe that where ignorance was dissipated, and men saw the inevitable consequences of wrong doing, they would turn from vice and crime to virtue and right living. Perhaps the most cheering vision suggested by the prospect of a wider diffusion of knowledge, was that of a state comparatively free from crime and misery.

These are some of the demands which made for national education—demands prompted by industry, commerce, government and morality.

The passion for national greatness has not become less, rather it has increased. Witness the race for territory in Africa, the federation of states and provinces, the federations of dominions into empires, the insane jealousies between nations. The changes in the popular demands for instruction is not due to the disappearance of the longings of national greatness. The change, I think, are due to the same national aspiration. But men have found that increase of knowledge does not decrease crime, does not make men patriotic—in a word does not, necessarily, make better men and citizens. Rather, at times, increase of knowledge means increased capacity for crime and for vice.

The first cause, then, making for instruction in morality and patriotism in the national school, is the conviction that national prosperity cannot be secured by increase of knowledge alone. Crime and vice do not disappear before knowledge. Something more is needed.

(b) *The Return of Faith.*—Another cause of this notable change seems to be the return of faith. The rationalism which was popular and prevalent in the middle of this century, has been superseded by agnosticism. At first sight, this may not seem a victory for faith. But look closer. Rationalism is dogmatic. It affirms the truth of that which can be seen, heard, felt, or demonstrated by reason and *denies* the truth of all else. It denies all mystery—all beyond the realm of

sense and understanding. The agnosticism which has superseded it, is not dogmatic. It is cautious, canny. It refuses to deny or assert anything about that which is beyond the realm of sense and reason. It simply says, "I know not." This is the agnosticism of recent science. It is critical, not polemical.

Signs of this change in the popular attitude towards religion are not difficult to find. In the books which meet with greatest popularity we find a spirit of faith or at least an absence of hostility to faith. Religions, theologies, are no longer spoken of as delusions. For those who once denounced them, they have now attained the respectability of phenomena—phenomena which have a right to be explained. Some scientists even go farther and assign to them a beneficent function. Mr. Kidd believes religion to be the great force holding society together. Some even go so far as to assign to religion the most beneficent of all social and personal functions. Does not Prof. Drummond make it the crown of evolution? Others have the temerity to assert that religion rests on a basis no less rational than that of science. Is it not Mr. Balfour who bases our faith on our moral religious needs—needs which are as ultimate—nay more fundamental than those upon which science rests?

These books of the times indicate the trend of popular opinion. The movement towards faith is bearing in upon our schools. It demands instruction in those truths in which men have growing confidence. This, it seems to me, is one of the causes making for the introduction and extension of moral instruction in schools.

I have said enough about tendencies now observable in the opinions of the public on educational matters. It is for you to decide upon their value and the advisability of opposing or favoring them. Let us now turn to that phase of the question which we are more particularly concerned.

"MORAL TRAINING IN THE PUBLIC SCHOOLS."

The passing of Individualism. We are fast moving away from the position of the moralists of the middle of this century. Individual rights, individual liberty, individual initiative, individual excellence, are not so highly prized now. We think less about the individual and more about society. We trust more to co-operation—more to social action—more to collective endeavors. The individual is fast sinking into insignificance.

If we want prosperity we appeal to governments for tariffs, for subsidies, etc.; if we want advice we apply to conventions and associations; if we want information we apply to commissions, popular verdicts, etc. In short, we rely less on individual effort, individual reason and individual industry, and more on the wisdom, industry, and charity of communities.

Consequently, our life is more public. We organize committees, associations without number. We spend much of our time in attending meetings, and persuading others to join in our enterprises. We have one virtue. We are excellent in organizing. We get our food through complex organizations; we supply all the wants of the natural man by elaborate systems of organizations;

we must organize a society if we wish to find out something about the plants in our neighbourhood; we must form reading clubs, literary clubs, if we wish to acquaint ourselves with the literature of the day. We can hardly do anything without the presence and sympathy of others. We even reform ourselves by making solemn promises in the presence of each other.

It is simply surprising how little time an ordinarily busy person, who tries to do his or her duty to society, has left for private reading, or private thinking. We live on the streets.

The training of the young is in too many cases handed over to the public school, the Sunday school, juvenile bands of hope, juvenile meetings, juvenile associations. Parents and their children are in many cases sealed books to each other. Perhaps we do not realize this sufficiently. A few weeks ago, a newspaper report set many thoughtful men and women writing. A young lad of fourteen, in Albany, N. Y., was sentenced to imprisonment for life for attempting to wreck a train. His father was a prominent lawyer, absorbed in the race for wealth; his mother a distinguished society woman, overwhelmed by her social duties. The boy, an energetic, high spirited lad, had found companionship in trashy boys' literature and a boys' club, and had formed the glorious idea of looting a wrecked train. He knew little better, for he had been left too much to himself. This is an abnormal case, but it makes us reflect. Are we not to-day in danger of leaving too much to our schools, secular and religious? Should all religious teaching be left to Sunday schools? Should we expect the public schools to do anything towards the formation of the characters of the young? Collective action, complex organizations are doubtless best for the production of those commodities which supply our physical needs; but the moral life is personal. Every man is largely what he makes himself. We are not the chance products of a heedless society. This instruction in the mass cannot take the place of personal supervision, personal contact, personal sympathy and personal inspiration. It is only in the family that that intimate personal relation, so necessary for pure morality, can be constantly maintained.

This fact I wish to emphasize before passing on to the consideration of the influence of the public school. The public school can never discharge the functions of the home. Its work must of necessity be subsidiary. It can only assist. If the home neutralize the influence of the school, little can be expected. I think that too often our schools are blamed for results which are really the work of the homes.

"But," some one says, "the state intends the school to provide those surroundings, those influences which too many homes now lack, and we fear will lack, as long as man remains man. The schools in many cases are moral dispensaries established in the midst of communities suffering from moral diseases." That is true. Those schools are the state's sole hope. Kindergartens in poor quarters of our great cities are doing wonders for the moral education of the young. Those social influences which emanate from Christian associations, men's reading clubs, children's meetings, are working great changes in the lives of the morally destitute.

True as all this is, it does not lessen the truth of what has always been said—half a loaf is better than none. We, however, may and should try to secure a whole loaf. In our communities, there is no conformed criminal class. In our communities the great majority of the homes could be centres of great moral influence. The homes do not do their part because the parents are careless. They recognize the good work which is being done by social agencies, and they trust them so implicitly that they leave everything to them. They are overtaxing the schools. They forget that the work of the school is subsidiary, not primary. The schools are to assist—not lead—the homes. This, I think, is the truth which writers on morality should emphasize.

Moral effects of our Public Schools.—Mr. Justice Street, of Hamilton, Ontario, so it is reported, has denounced the public schools as hotbeds of vice and crime, as the sources of what he asserts is the increase in juvenile criminality. I cannot give you his exact words, but the tendency of his remarks was to throw upon the public schools the responsibility for the increase of crime among the young. Such an opinion coming from a judge who is supposed to be a calm and impartial observer of the public and private morality of the community, deserves careful consideration.

No facts are given us: nor do we know anything of the observer or of his opportunities for observation. He may be generalizing from a few instances or from a very wide range of observed facts. Of these things we are ignorant.

But he may have been misled. He may have noticed that all or nearly all the juvenile offenders which came before him, were or had been pupils of the public schools. If, however, public schools are to be truly national, they must try to educate all classes; and consequently all young men and women, whether they ultimately became excellent citizens or criminals, great successes or "ne'er-do-weels," must pass through the public schools.

Would we hold the churches responsible for the misdeeds of all those who attend them more or less regularly? No fair minded man does. Can any one, then, in fairness, hold the public schools responsible for the alleged increase of crime among the young?

We know nothing of Mr. Justice Street's facts, but all or nearly all of us have had some experience of the moral effects of our public schools, and are, in consequence, in some degree competent to express an opinion. So far as my own observation has gone, and I have seen the inside of school life in the country school where children of five and six mingle with young men and maidens of twenty and twenty-one—in the city schools both of the lower and the higher grades, where pupils from very different schools and different districts are brought together—in the university where representatives from nearly every kind of school in the province are to be found—so far as my observation has gone, I feel that I am understating the case when I say that the tendency of our public school training makes *not* for vice and crime, but for morality and patriotism; and that those who have been trained in the public schools are in general as good if not better morally, than those from other schools.

One might add, that the pupils who come to the university from the public schools, are on the whole much better trained, much better informed, and more industrious than those from other schools. Further, I believe, that a boy has much better chances of getting a sound education mentally and morally, if he be sent to a public school which he may attend *without leaving home* and the oversight of his parents, than if he be sent off to live for nine months in the year with a great number of boys of all dispositions, characters, and every degree of ingenuity and mischief.

Of course to all these general statements there are exceptions. For example, some parents are less capable of helping their children morally and mentally than a good master, even when handicapped by having a hundred such boys to look after. There are also public schools, which are sadly inferior both in moral tone and intellectual activity to many private schools. The fault here is due not to the system but to the *teacher*.

Here I may remark that no fact needs to be pondered over more than the great importance of the personality of the teacher. We tinker away at our text-books, our organization, our regulations,—in a word at our educational machinery, until we become so pre-occupied with these mechanical devices that we forget the personality of the teacher. Teaching is not mechanical like sawing wood. It is really a process of inspiring, guiding and maturing a being, the most pliant, susceptible and delicate in creation.

Aim and methods of moral training.—But let us consider more closely the *aims* and *methods* of moral instruction in schools. There are at least *two* distinct objects of moral instruction. One is to enlarge and correct the pupil's ideas of right and wrong; the other is to develop habits of right action. Increase of knowledge and formation of habits may in practice be held to be the joint objects of moral instruction. They are not necessarily antagonistic objects; but systems and methods of moral instruction differ with respect to the relative importance attached to knowledge and to habits. Those systems which make too much of dogmatic instruction in doctrines over-emphasize the importance of *knowledge*. Those, on the other hand, which lay too great stress on deportment, punctuality, neatness, etc., over-emphasize *habits*. Our methods depend largely upon our aims.

The question of the true objects of moral instruction cannot be answered without reference to the age of pupil. There are two, or perhaps three, distinct stages in the moral development of children.

The first stage yields habits. It is taken up with the practice of actions, sometimes good and sometimes bad. This stage of customary or habitual morality extends to the fourteenth or fifteenth year. Sometimes it does not end below the seventeenth or eighteenth year, less frequently does it close with the twelfth or thirteenth year. The second stage, which we may call the *jural*, begins to make its appearance faintly, yet persistently, generally about the fourteenth year, sometimes a year or two earlier, more frequently a little later. At first the boy delights in maxims which generalize his own experience. It is important here to note that he takes pleasure only in those ideas or maxims which express in a general

form the characteristics of those acts done by himself or those heroes whom he admires. Later, about the eighteenth, or, more frequently, about the twentieth year, the boy begins to be puzzled about the sanctions of morality and about such questions as, What makes honesty right? Why should I be just? In other words he begins to philosophize about moral principles. This stage is in full swing about the twentieth year. It is at this time the boy is apt to drift towards moral scepticism. This is the stage which Plato happily terms the "puppy dog stage," the stage when the developing critical faculty of the boy delights in tearing traditional maxims and principles to pieces. Fortunately for the public schools this outburst of destructive activity takes place in the university.

What conclusions are we to draw from these facts, facts which have been recognized since the time of Socrates. Well, first, our scheme of moral instruction must make the formation of habits its principal object until the pupil has reached his fourteenth or fifteenth year. Secondly, the critical or philosophical study of morality should be postponed until late in the boy's college course. There still remains a period of four to six years, from fourteen or fifteen to nineteen or twenty. What should be the aim of moral instruction during that period? Let me illustrate.

You are all familiar with the difference between Newton's and Kepler's scientific discoveries. Previous to Kepler's time the astronomers had recorded a vast number of observations of the movements of the planets. Kepler tried to bring order out of these facts. By prodigious industry he discovered three general laws. These facts in other words yielded three generalizations, but one of which I need mention. It is the first law, "The orbit of each planet is an ellipse, having the sun in one focus." This was a splendid generalization.

Newton asked the question, Why should the planets move in ellipses? His problem was to discover the cause or reason which made the general laws of Kepler true. The cause, you remember, was gravitation.

Here then, we see three stages in astronomical science. First, the stage of Tycho Brahe and others—the stage of accumulated facts. Second, the stage of Kepler—the stage of generalizations. Third, the stage of Newton—the stage of explanations. The first answers the question "what," the second the question "how," the third, the question "why."

Is there a correspondence between morality and astronomy in these respects? The Tycho Brahe stage—the stage of fact—corresponds to the stage of customary or habitual morality. The Newton stage—the stage of explanation—corresponds to the stage of the philosophy of morality. The Kepler stage—the stage of generalization—corresponds to this transitional stage, which extends from about the fourteenth or fifteenth to the twentieth year. For girls this period is longer. It begins earlier and closes later.

The stage of customary or habitual morality corresponds to the primary and about the first two years of the secondary school periods. The second stage—that of juridical morality—extends from the second or third year of the secondary to the third or fourth year of the college periods. The stage of philosophical morality

begins about the third or fourth year of the college period.

Let us now apply our facts. The predominant aim of moral instruction in the primary school and the first two or three years of the secondary school period should be the formation of habits. The predominant object during the later portion of the secondary and the first years of college period should be the formation of general principles or maxims of conduct. The object in the college period is of course the consideration of the basis of these laws.

(b) Methods. What methods are best adapted for moral training in schools? At present, attention seems to be attracted to a method which corresponds to text-book teaching in science. Several books on ethics for schools have been prepared. They consist of more or less exact and elaborate definitions and explanations of moral duties and rights. It is implied, that the pupil is to commit to memory this information on moral matters in the same way that he learns history or geography. This is doubtless the easiest way to teach something called morality. But it is, in my opinion, not merely useless, but positively harmful. We all know how distasteful history becomes to children when they are required to get up masses of facts and dates which have little connection with one another. We know how much they dislike chemistry learned from a book without experiments. In the same way this method of teaching morality will not merely be ineffectual, but it will arouse distaste for all things moral.

Possibly we can afford to allow the children to grow up with a dislike for history or geography or chemistry or any of the sciences, but we cannot tolerate such a state of affairs so far as morality is concerned.

Now it seems to me to be an incontestable axiom, that that method of moral instruction, which does not promote an interest in morality, must be rejected, even if we must abandon all moral teaching; we cannot afford to prejudice the child even in the slightest degree against morality.

But we are not reduced to the alternative of accepting this pernicious method or abandoning moral instruction. Text-book teaching in science is discredited and abandoned by the best teachers, and is today the refuge only of the incompetent. The method most favored there is the experimental. Begin with the concrete. Start from the pupil's experience. This method not only leaves the child with clearer ideas and a firmer grasp of scientific facts and laws, but it awakens in him an interest—a liking for such things.

The same method will produce and does produce like results in morality. It is the only method which will develop in the child permanent interests in morality and so predispose his character that right doing will be more natural and more pleasant, and more eagerly striven for than wrong doing.

Test of Moral Training. It is well to remember that the ultimate test of moral training is different from that of intellectual instruction. In intellectual instruction, the object is a greater number of ideas, greater clearness in ideas and a greater capacity for acquiring more ideas. Every method and instrument of intellectual instruction is tested with reference to the amount

of knowledge and the capacity for acquiring knowledge which it yields. Now in moral training, the ultimate test is conduct—the effect upon action. Correct ideas are valuable and necessary, but they are valuable and necessary in so far as they produce conduct. Consequently, the teacher must from the first of moral instruction look to action. The questions he keeps before him are “how can the child be influenced to right action? How can he be permanently interested in right doing? The question how can the child be given correct ideas of right and wrong is important, but only in so far as correct ideas are necessary and useful in producing right conduct.

Suggestion through environment. But back to method. The key note of the method of that moral training which has for its object the formation of habits is *suggestion through environment*. Let us look at that word “suggestion.” A distinguished French educational writer, M. Guyau, says in a most interesting and helpful book, “Education and Heredity,” “the state of the child at the moment of its entrance into the world is more or less comparable to that of a hypnotized person.” This remark puts a well-known fact in a very striking manner. We have often heard and seen sufficient evidence to establish beyond doubt the fact that imitation is one of the strongest instincts of the young. It is the most important instinct in determining the actions of the young. This method of moral instruction simply makes use of that instinct.

The object or action to be imitated is suggested to the boy or girl in the most effective manner. So far every teacher may be inclined to agree with us. Some, however, may contend that the best form of suggestion is by precept. But is it? Does the child grasp the exact nature of the act to be performed more easily from an abstract statement or from a concrete example? Further, is the child more disposed to imitate an act described in language or an act in the concrete? This disposition to act is an essential condition. I think you will all agree with me that suggestions from the concrete are more effective than suggestions through precepts. This is but a semi-psychological statement of the maxim, “Example is better than precept.”

But it may be said this method applies only to infancy and childhood, and further is greatly restricted as to the range of its suggestions. I would like you to carefully consider whether boys of thirteen or fourteen are not more often the victims of suggestion than cool, deliberate actors, who think first and act afterwards. One strong minded boy or teacher has more influence over boys' actions than volumes of wise counsels and sage precepts, though they be presented in never so attractive a manner.

The answer to the other objection, that the range of suggestion is limited, lies in this. For the very young the only effective suggestions are living personal examples. But for older pupils the examples of persons vividly portrayed in biography, history and fiction are very effective in their suggestions. Where command, sage counsels and wise precepts fail, stories will very often succeed. Admit the suggestiveness of stories and the objection that the range of suggestions is limited

where text-book instruction in rights and duties is omitted, ceases to be valid.

The best and most effective method of moral training, then, during the primary and first two or three years of the secondary school periods, is to so control the pupil's environment—the most important parts of which are his teacher, associates and books, that they may suggest only that which is morally good and pure. In a few words, maintain a healthy, moral atmosphere in the school and elsewhere. This cannot be done without great watchfulness on the part of the teacher. Indifference to trifles, such as loose talk, dubious acts, etc., will soon change the moral tone of the school.

The headmaster of a large public high school, which received a great number of pupils from different schools, once told me that he could tell the schools from which the majority of the pupils came, by watching the new arrivals for a day or two. The school mark was stamped almost indelibly in their conduct and conversation. He also added that in three or four years a great change had come over the pupils from one school. Formerly, though they excelled in intellectual attainments, they were given to loose talking or rather doubtful conduct. Latterly, their moral deportment was wonderfully improved. He said it was due to a change of teachers. Intellectually, the teachers were about equal, but the first teacher very frequently by act and sometimes by careless words, but never by direct statement, suggested conduct and ideas that modest children should be strangers to. The second teacher made no more pretence to direct moral teaching but was very careful to remove and prohibit everything suggesting even the appearance of evil.

Such an observation as this, which doubtless very many of you can parallel, speaks very eloquently of the effectiveness of the environment in moral training. There is another advantage of this method. It is not only very effective, but it gives clearer ideas than abstract statements of rights and duties. Those of you who have observed the difference between the knowledge of botany which a child acquires from text-books and that which he acquires from observation of plants, will readily admit that this concrete method is better for giving correct notions.

I have mentioned books as an important part of the pupils' environment. For the young, fairy stories of the right kind, Bible stories, and later the Homeric stories, biographies, etc., are the best and only kind of literature that is helpful. Valuable suggestions about such literature are to be found in Adlers' “Moral Instruction” in the international education series published by Appleton.

There still remains a short period of one or two years in the secondary school in which a change of instruction is admitted. What is the proper method of instruction during the jural period—the period in which the youth formulates laws, principles, and maxims?

Already the boy has been making generalizations of a practical kind and for an immediate object. Now he begins to do so in a more systematic manner. He begins to enlarge, revise, and correct his notions about right or wrong. Shall we now resort to the text-book? The teacher may get great assistance from text-books—

but the pupil should not be sent to books on practical morals. The method best adapted for our immediate object, is the Socratic method—still a method of working from the concrete.

Let me illustrate. Nelson refused to remove his decorations, etc., from his breast during the battle of Trafalgar, and was in consequence a conspicuous object for the sharpshooters on the French ships. Was this a really brave act? Or was it a piece of vanity? There is not a boy or girl who will discuss this question without greater interest and profit, and moreover who will not remember it. Such problems as these are to be found by the score. I need not mention more, but they are to be found on every hand in public and private morality.

The teacher in these discussions should not be anxious to impart information, but rather to draw the pupils out and to set them thinking. He should act as a judge drawing opinions from the counsels, and only after a good discussion should he give his opinion, and then let it always be reasonable but not doubtful. The doubts, which may trouble him, should not be pressed to the front: but he should decide for that precept or principle which is commonly recognized as right, and which has made for a better moral tone greater regard and devotion to right.

Above all, he should avoid moralizing. The moral of the discussion should be suggested and kept in different forms before the pupil not by direct statement but indirectly. In a word, the pupil should be set thinking about it. This the teacher cannot accomplish if he begins to sermonize. For some reason young folks are particularly averse to being lectured.

Of the method suitable to moral instruction in the third or college period, I need say but little. Text-book teaching is not the best method. I have tried both. Here as before, the best way is to start from the concrete. The concrete in this instance being moral difficulties—conflicts of duties—many of the problems of casuistry, or, briefly, anything in the experience of the students that may lead, if followed, to the fundamental problems of a philosophy of morality. This method alone prevents ethical theories from being unreal.

Summary.—To sum up. Moral training in the schools should not be hap-hazard, but regular and systematic. For it is more important for national and individual well being than intellectual training. The best way to secure good results is not by teaching, day by day, so much moral doctrine from text-books, but by so modifying the environment of the pupil that from the persons he meets, the objects he looks at, the books he reads, the school and home in which he moves and lives, he may receive at every turn suggestions of that which is noble, pure and good. Place the pupil in a healthy moral atmosphere and he will grow up a good man and a good citizen.

I do not believe that young people are predisposed to evil, and that the process of education is really a reformation—a re-casting of human nature. Rather it is a process of drawing out the good now latent, but soon to become so prominent that evil will be choked by the rank growth of general impulses, pure thoughts, and noble aspirations.

No better description of the methods and results of that system of moral training, advocated above, can be desired than the following, taken from Nettleship's essay on "Plato's Theory of Education," (published by Longmans in a volume of essays entitled "Hellenica.")

"Literature and the arts, by presenting to the soul the true principles of human life in the sensuous material which it is able to assimilate, prepare it unconsciously for assimilating those principles when presented at a later stage in a more rational form. They teach it how to live by telling how divine beings and great men live and have lived: they teach it what to love by surrounding it with what is really lovable: they develop its tendency to order and law by accustoming it to recognize severe symmetries of sound and form: and finally, they introduce it to manhood endowed with an instinctive capacity of doing and saying the right thing at the same time, and with an instinctive perception of what is right and wrong in the deeds and words of others."

To accomplish this, Plato has said those entrusted with the education of the young must see that "the children do not grow up amid images of moral deformity as in some noxious pasture, and there browse and feed upon many a baneful herb and flower day by day, little by little, until they silently gather a festering mass of corruption in their souls, but dwell in a land of health, amid fair sights and sounds, and perceive the good in everything: and beauty, the effluence of fair works, shall flow into the eye and ear like a health giving breeze from a purer region and insensibly draw the soul from earliest years into likeness and sympathy with the beauty of reason." (Plato's Republic, Sec. 401. Jowett's Translation, 3rd edition).

Prof. Murray's paper was discussed by Principal Mullin, the Chief Superintendent, and others.

THE HOLIDAY.

Wednesday, July 1st, was spent by members of the Institute in various ways. A large number visited the University in the morning, where Dr. Bailey gave an instructive address on Light, illustrated with experiments: others went on excursions to different points about the city. In the evening the Fredericton teachers entertained the visitors at a conversazione in the Normal school hall, where refreshments were served and a very enjoyable musical programme was carried out.

LAST DAY'S SESSIONS.

The first business on Thursday morning was the election of an executive committee and a representative to the New Brunswick University senate. There were two nominees for the latter office: B. C. Foster, M. A., and Elden Mullin, M. A. Mr. Foster was chosen. J. M. Palmer, A. M., of Mount Allison, Dr. Cox and Dr. Bailey addressed the institute.

The following were elected members of the Executive Committee: G. U. Hay, Prof. Bridges, Miss Thorne, B. C. Foster, Geo. A. Inch, Frank Good, Miss Burt, Geo. Oulton and Miss Fraser.

CORRELATION OF STUDIES.

PAPER BY ELDON MULLIN, M. A.

This paper has not been furnished the REVIEW at time of going to press.

PAPER BY G. U. HAY, M. A.

Mr. President, Ladies and Gentlemen, I had hoped when this subject of correlation of studies was put on the programme that some one would have found time to outline to the different writers of papers what phase of it each was expected to take. As that has not been done, and as we have had no opportunities to exchange opinions among ourselves, I fear that we may encroach upon each other's territory and not take out of this important subject all that we otherwise would have done. If this be so, I hope in the discussion to follow, the speakers will have ample opportunity to supply omissions.

The proper correlation of studies in our schools is looked upon as of absolute importance, and one demanding our thoughtful consideration in planning, and our best executive ability and earnest co-operation in carrying into effect. For though we may place on the school programme a carefully planned course of study, giving to each subject the allotment of space and time which, in the wisdom of educators, past and present, its importance seems to demand, there must ever remain the supreme difficulty of reconciling differences of opinion between the administrators of education themselves and between them and the many minded public. As the people pay the bills they are eager in demanding a voice in what should and should not be taught in schools, and their eagerness is too often in inverse proportion to the amount of their bills.

Let us first start with an attempt to define that much defined term—*correlation*—and I hope we shall find that we have all been correlating or attempting to correlate from the days of our entrance into school, whether as pupils or teachers. Simply it is the attempt to bring into relation the facts and principles of different subjects so that the whole curriculum may not be a chaos of odds and ends, but an organic and well arranged body of knowledge that may be adapted to the spiritual, intellectual and practical needs of life. Such a correlation, or interrelation, is seen in any well conducted primary school where reading, number, writing, composition, spelling, drawing, are all vehicles to one common end—language. Further on, other groups of closely related subjects fall naturally together, such as history and geography, physiography and plant and animal life, and so on with other subjects, thus making our knowledge useful and available, as well as giving it a logical unity. Every teacher who has any faculty at all for teaching will combine and bring into relation more or less the facts and principles of kindred subjects.

There are those who insist on the subordination of all studies about one main subject, or about at least a few subjects. Dr. Harris, in his report of the Committee of Ten, makes language the centre around which all other studies are grouped. Another would let history be the central point, dictating more or less the work in

reading and other subjects. While with others science-work takes the lead. Miss Arnold's course of study for the Minneapolis primary schools follows this plan. The outline is as follows: "The child studies corn, for example, in his science lesson. He learns more about it in his reading lesson, writes the description of the plant for his language work, draws leaves and tassels in the drawing lesson, and learns to spell the terms necessary for his description. He sings the 'Harvest Hymn,' commits to memory Whittier's 'Corn Song,' or reads Longfellow's version of the Indian myth. The farmer's life, with its strong and manly labor, and our dependence on it is made the subject of frequent talks. In this way nature and human life furnish the themes for a series of lessons." This plan seems a good one if not allowed to become a fad, and if the teachers have sufficient resources to give variety to the selections, and common sense enough to know where and when they should end. A writer who heard a series of lessons on the crow gives his experience: "The children studied the crow, read about him, wrote about him, drew him, counted him, added him, subtracted him, multiplied by him, divided by him, bought and sold him, and for aught I know, carried him out on a crow bar."

It is easy to see that correlation on any rigid and unnatural plan will simply weary and disgust. There must be a clearer apprehension of correlation; that it does not mean the *subject* to be taught so much as it means the *one* who is taught, and what is best for that one. When we have satisfied ourselves that that is the central point, we may then work to attain that end. We can never attain it by having a school course loaded down with many subjects, we can never attain it by having a number of miscellaneous subjects, and teaching these in the scrappy and ineffective way that most of our advanced schools have to do in order to overtake all that is required in the curriculum. We want a limited number of substantial subjects, each treated with some thoroughness, with sufficient time for the student to think, to familiarize himself with things, not names only. No superficial and hasty treatment of a long series of subjects, each treated with equal fulness, will ever commend itself to a teacher or satisfy the cravings of the scholar. Let us take the study of geography; of what use is it as studied in many schools where it is given in set lessons, one country after another, until the dreary voyage round the world is accomplished. Should it not early be merged with history and the two be treated from a common standpoint. And so it is with the English language. Let reading, spelling, grammar, analysis, composition, be correlated, let them be sub-ordinated to an overmastering desire to have a knowledge and appreciation of English literature. Some time ago I was asked to look at a piece of English composition that was almost faultless in form, the writing was perfect, so was the spelling, there was no grammatical blunder, and perhaps every sentence could be analyzed exactly. But there was nothing in it. Would you not sooner see a mistake in spelling, a blunder in syntax, here and there, rather than a lack of individuality, a lack of appreciation of the subject studied. The truth is, the English language in our schools is made too much

the vehicle of parsing, analysis and other mechanical methods. The tendency when a piece of good English is presented for study is to apply the dissecting knife to it, to make its various sentences and clauses fit into a form of tabular analysis rather than to enjoy it as an intellectual treat, to make an artificial use of what was intended to be a lasting record of some real human experience.

In the oversight of a large graded school I have been frequently struck with the naturalness and excellence of compositions written in the lower or intermediate grades, while in the higher grades I have found them without this expression and naturalness. The cause of this is not difficult to see. The pupils in the higher grades are daily acquiring a mass or mess of special information on grammar which they are not assimilating, or only assimilating in part, and that gives them, in the attempt to reconcile all this technical information, a stilted and unnatural style. Perhaps it is in the nature of things that this should be so. But I think we should all like to see the easy and natural style of the earlier grades carried on through the advanced grades, fortified as it goes by just as much—and no more—technicalities of grammar, analysis, parsing, as may be necessary to help develop the pupil's power of expression. Do we not violate every principle of correlation when we toil separately at grammar, analysis, parsing, spelling, and even reading through a book for the sake of learning to read? Is there not some simpler way in English as well as other subjects, not some *other* way, for there is no royal road to learning, by which we may discard much of the rubbish of technicality and replace it by something that will appeal rather to the student's reason than to his memory, that will interest him to gather up and combine, and be able to use what he learns.

Let it be granted that a proper correlation of studies has been successfully laid down already in our curriculum. There are two who must be the main instruments in carrying it out—the teacher and the examiner. They must work together. Perhaps the teachers of our secondary schools would do better work if the sword of immediate and remorseless examination was not suspended over their heads. It was pointed out in the discussion on Tuesday that our primary schools are doing excellent work, but not so our secondary. This may be so, but I cannot see that it is the fault of the teachers. We have a body of earnest and intelligent teachers in these schools as well as in the primary schools, who are teaching in season and out of season to get their pupils up to the proper standard. If the standard is low in these secondary schools we must look to other causes than inability and lack of effort on the part of the teachers. I can only point out and leave for discussion a few of the causes. There are undoubtedly too many subjects in our course to be successfully taught even in the best equipped of our high schools, unless the principle of correlation comes in, unless the different subjects are taught with plenty of time on the part of teachers and pupils to make them effective means of training. Now can all these subjects in our secondary schools be taught together, so that the pupils, without being crammed, and with some ease and

comfort to themselves, as well as to their teachers, may have their school life so rounded out that their knowledge may be serviceable to them in a life, that it may leave them with a desire for farther knowledge, to know more, for instance, of that literature which throughout their whole school course they have been brought in contact with. Do our pupils leave school with this over-mastering desire to continue their reading of English literature?

Does not the school programme with its long list of subjects suggest that the teaching is scrappy and ineffective? And as long as the examiner persists in demanding information on all these subjects, it will be ineffective. Could we not have our closing examinations so arranged that fewer subjects, and these of a more substantial and fundamental character, would test the pupil *how* he has been taught rather than *what* he has been taught? Could not these examinations be so arranged so as to give the pupil time to express himself clearly and intelligently? Then those blunders of examination with which we are so familiar, and which are laid to our charge, would cease to be, we hope. In short, if the examiner will begin the much needed reform in secondary education, he will find a willing staff of secondary teachers ready to aid him in his efforts.

And let teachers of all grades meet and freely discuss their work so that they will have a comprehensive and accurate knowledge of the work done in all departments below and above their own. If not, real correlation is impossible. There will be vain repetitions and encroachments. It is quite true as a recent writer has affirmed, that "As educationists we are apt to overestimate the difficulty and importance of our own work, and underestimate that of others." I have never known, he continues, "a teacher in a public school who felt thoroughly assured that the work of the grade below was properly done. We should remember that there is imperfection in our school work which cannot justly be charged anywhere, but which belongs to outside influences over which we have but a slender control, and to the weakness of human nature."

In short, there should be a closer cooperation, a unanimity, a sympathy between teachers, and between teachers and examiners, so that their aims and methods may be the same.

PAPER BY E. W. LEWIS, B. A.

The subject assigned to me is the Correlation of High School Studies. By the term correlation in its widest sense, as I understand it, is meant that arrangement of studies best adapted to accomplish the aim of education. Without entering into a criticism of the various definitions of education, it may be said briefly to consist of the harmonious development of the whole being of the pupil, and of the acquisition of a certain amount of knowledge.

In order that the subjects of study should assist in accomplishing this purpose, they should be so graded as to suit the various stages of the pupil's mental growth, that is they should follow in the order of development of those faculties to which they chiefly appeal.

To produce a *harmonious* development the subjects of study should be so arranged as to call into exercise

ALL the faculties. Otherwise mental growth will be one-sided and abnormal.

Again, certain subjects presuppose an acquaintance with others upon a knowledge of which they are dependent, *e. g.*, algebra and geometry presuppose an acquaintance with a certain amount of arithmetic and drawing, while on the other hand many subjects are so intimately connected and bound up together that they can be best studied *together*. Each emphasizes what is important in the other, distinguishes essentials from non-essentials, lights up the whole more clearly and enables us to get a finer grasp of underlying principles.

As examples of close correlation, we may take history and geography. History lends an additional charm to the study of geography of places. Without a knowledge of geography history loses a great deal of its interest and soon becomes confused. Again, the study of arithmetic becomes more interesting and more easily understood when practical application of it is made in other subjects, mathematical geography, chemistry, physics, etc. Some rules of arithmetic we find are very important, others of relatively little importance, and a wise teacher or examiner will lay very little stress on them.

The subject matter upon which a pupil spends so many valuable years of his life is a matter of great importance. He ought to know something of the great world in which he lives, and its arts and civilization, and especially of that which most closely affects himself, that is his environment. He must know what man has done and is doing now, in order to fit himself for taking some useful part therein.

The course of study should also be such as to give the pupil in a general way as broad and comprehensive a view as is possible under the circumstances, taking into account his mental development. Not that a smattering of everything should be taught in a superficial manner, but no great field of learning as *e. g.* science or literature, should be neglected entirely. If this is done his view of things will be one-sided and imperfect. There remains an unknown and unexplored field of thought from which he is shut out, of whose advantages he is ignorant.

Besides these positive evils there are also negative ones. Children, as is well known, are usually highly imaginative. It appears to be impossible for the human mind to abide in a passive and contented state of ignorance. Where it does not know it imagines. Hence the ample room superstition has always found to grow in. It may be said, therefore, that in the course of his education a student has almost as much to unlearn as learn. Wrong ideas have to be displaced and right ones implanted.

The correlation of studies, therefore, includes the relation of studies to the child's mental growth, to his environment, to the state of learning in general, and also the relation of studies to one another. A course of instruction should take in all these principles, as they lie at the base of common school education as well as the high school. I have referred to them but briefly. My paper has to do with high school work, and I have thought it best to confine myself principally to the relation of high school subjects to ONE ANOTHER in

order to be as practical as possible. I will try to show their more or less intimate connection with each other and how use may be made of the fact to quicken the pupil's progress.

By correlating subjects in this way, I do not think the intention is to attempt to teach two things at the same time, *e. g.* teaching geography by means of the history lessons, but rather that while history and geography are taught separately, the knowledge gained in geography may be used to assist the pupil in his history. There is, no doubt, considerable condensation implied in correlation, but that is not the principal advantage. Studies naturally run into one another. There are no natural sharp lines of division cutting off the province of one study from another. It is impossible to say where one subject leaves off and another begins. Simple axiomatic truths are the foundation of every study. Many of these are common to a number of subjects. There are differences as well as resemblances; but no subject can be completely isolated from all others. The teacher who can readily detect these underlying principles and points of resemblance and make use of them in his teaching, can do much towards clearing away the air of mystery and strangeness that cling round the introduction of a new subject *e. g.* in teaching equations and explaining the change of signs, in removing quantities from one side to the other, it could be shown to be merely an example of some of the axioms in geometry. If equals be added or taken away, the wholes or remainders, as the case may be, are equal. In the same way multiplying and dividing both sides of an equation by the same number can be shown to be merely an extension of the same axioms. This helps to connect the two subjects in the pupil's mind and so makes the easier to grasp.

Another important effect of the correlation of subjects is the shortening of time. This is a very important point, not only for the pupil's sake but also for the teacher, especially in high schools with three or four grades and only one teacher.

Before proceeding to take up the various studies in particular, I may perhaps be allowed to call attention to the differences in organization among our high schools. The work of the high school is supposed to begin with the ninth grade, but it is quite a common thing to find the seventh and eighth grades in the department supposed to be doing high school work. Several of our high schools have three or four teachers; others have only one. It is evident, then, that the work must vary in amount and also in the degree of thoroughness with which it is done. As, however, none of our schools are too well equipped, it is to the interest of teachers as well as scholars to have the subjects of study run together and help one another as much as possible, and all superfluous matter be eliminated from the course and only matter of essential importance be dwelt on.

Of all the subjects of study in the high school language, including literature, grammar, composition, other related languages have, by common consent, been reckoned of very great importance. Everyone should have as complete command of his mother-tongue as possible in order to understand the thoughts of others and to express his

own. He cannot, indeed, even think without the use of words to render his thought intelligible to himself. In the study of literature he is introduced to the thoughts and feelings of the best of mankind. Grammar in its various divisions is intended to familiarize him with the elements of language as the vehicle of thought. Composition gives him practice in expressing his own ideas by imitating the style of those considered the best writers; while the study of other languages, by their similarities and contrasts, helps him to understand his own more clearly, as regards its construction and derivation of words.

For reading purposes in my own room I have taken the whole school together, about forty altogether, in eighth, ninth and tenth grades. During the past year we have read *Evangeline* and *Julius Caesar* for the benefit especially of those who wish to take the college matriculation examination this summer. We have usually three lessons a week, and I have always found the lower grades intelligent readers, and quite as interested as the higher. It may be objected that this makes a large reading class, and each pupil does not get sufficient practice, but on the other hand I think that that perhaps is quite fully compensated by the greater interest manifested in a connected piece of literature like *Julius Caesar* than in the bits and scraps found in the readers.

The grammar work of the high school can easily be related to the literature of the course, and the value will be then more apparent. The pupil sees that it assists him to understand the finer shades of meaning of the thought of the passage. *Meiklejohn's Larger Grammar* could be used as a book of reference and the more important parts taken down in brief notes to be learned by the pupil. As soon as the pupils are able to parse quite easily, I think more attention should be paid to the analysing of complex and compound sentences. This will prove a more interesting and profitable exercise and requires, and therefore cultivates, a deeper insight into the meaning of the passage. Continuous parsing is likely to prove monotonous and should, I think, be continued only for the sake of drill or to explain a new construction.

It is almost unnecessary to point out the close relation existing between such similar studies as Greek or Latin grammar on the one hand and English grammar on the other. They all deal with the structure of language and though the first two are highly inflected and the latter a comparatively uninflected, their very differences brings into clearer light the construction of English sentences. A student, therefore, ignorant of any other language but his own, cannot be said to have a good understanding even of his own.

The practice of the art of composition is required, either orally or in writing, in every subject of study. The pupil is constantly under the necessity of expressing himself clearly as well as think clearly, indeed the processes are inseparable. He cannot even think without words to clothe his thoughts. This, I think, points out the way to teach composition. Train the pupils to express themselves properly in all their oral and written exercises. Written examinations in all the subjects of the course, especially history and geometry, which require longer and more connected answers, will be

found, if rightly used, an excellent field for practice in composition. It should be well understood that marks will be deducted for poor style of answering, bad spelling, etc. Of course these should be supplemented by occasional formal exercises to be done at home when he will have more leisure. Few pupils, however, are found to take much interest in a set essay.

Another means, and a very valuable one, is the written translation of their classical writers. The criticism has been made that this is liable to teach foreign idioms and hold up wrong models for him to imitate. This, I think, is a criticism of the manner of teaching rather than of the subject taught. Correct translations into idiomatic English should be insisted on.

The study of classics is usually considered one of the most important if not the chief one in our high schools. As has just been shown, it is in itself intimately correlated with English grammar, composition and literature. The fact also that so many technical terms, etc., in all the sciences, have been derived, and still are in ever increasing numbers, from Greek and Latin words shows the advantage of an acquaintance with these languages to scientific students as well as others. It helps him, to some extent, perhaps unconsciously, to understand his work. The student of English literature in his reading frequently meets with allusions to classical writings. For these reasons and on account of its value as a means of mental discipline in habits of observation, concentration of mind, accuracy, reflection, a knowledge of classics is of great importance to all who wish anything more than a mere elementary education.

I think, however, that much time is frequently spent on Greek and Latin that could be more usefully employed. Too much time is given to drill in exercise book and grammar beyond the pupil is put to connected reading of some author, as *Caesar* for example, in Latin. The custom of taking up the exercise book, Robertson & Carruthers, or Bryces, and going through it from first to last, frequently perhaps, learning everything whether important or unimportant, exceptions as well as rules, spending two years or more in this fashion, is more apt to disgust a pupil with classics altogether, and resemble the old way of plodding through the arithmetic, learning rules and working questions of no earthly use to the pupils. The work might be made more interesting, I think, and much time saved by a more intimate connection between the grammar and reading of a text. In connection with this, I might say that it would be a great gain to the study of classics if some instruction were given in normal school about how to teach classics.

Caesar, Book I, is the first Latin book put into the hands of our scholars to read. I could wish we had one more interesting, especially for girls. Now over one-half of the words used in Bryces's Exercise Book do not occur in *Caesar*. I am not so well acquainted with Robertson & Carruthers. There is not a first or second person of any verb in *Caesar*. If the pupil's first course in Latin consisted of a thorough drill of the regular declensions and verbs (omitting first and second persons) and the translation of Latin into English, he might be set at *Caesar* after a few months of such drill. I have

found the translation of English into Latin in seventh grade to be hindered by a lack of sufficient knowledge of *English* as well as Latin grammar on the part of the pupil. I have taken it up in the eighth and ninth and tenth grade, giving them exercises based on the text, where they are more capable of doing the work and take more interest in it.

In our seventh grade during the past year the class went over the regular declensions and verbs in Bryce. They did a few of the English sentences into Latin. They skipped some of the exercises altogether, especially in the third declension. In the verb they omitted first and second persons. For the grading examinations (in which the papers are set by myself) they were not expected to have much of a vocabulary they were drilled in the declension and conjugation of representative nouns, adjectives and verbs.

In the eighth grade last September we began Caesar at once. At first their progress was slow. The grammar had to be referred to constantly and studies as was needed. This habit of referring to the grammar and investigating for themselves is a valuable one in itself, producing accuracy and attention to details. I have found it a useful practice to have a written exercise precede every class recitation, either writing out a verb, parsing, or translation. This insures a more careful and thorough home preparation of the lesson.

In Greek the same method is pursued. Here we attack Xenophon at once in ninth grade, learning declension and verb as we go along. The pupil's familiarity with Latin enabling him to grasp the method more easily.

The time required I do not think excessive: three lessons a week in Latin and two in Greek in each class of twenty five or thirty minutes each, together with their exercises on paper.

The classical studies are naturally connected with many of the other subjects as I have already pointed out. The *Caesar*, *v. g.*, calls for reference to Roman history on the one hand and English on the other. The pupil will be interested in knowing that the events he reads took place only three or four years before the invasion of Britain and by the same general. Varying the work of the lessons by calling attention to English words in common use derived from Greek and Latin words he is learning, referring to history and geography connected with his classical work, he will be led to think classics is not after all mere matter for analysing and parsing.

While classical studies exercise especially the powers of observation, memory, accuracy and thoroughness, mathematics appeal most strongly to the reasoning faculties. The pupil has already had a good training in this respect in the arithmetic of the common schools. There, however, he has only dealt with numbers in the concrete as was suited to his stage of mental growth. The next step is to train him to reason about space and quantity in the abstract, which requires a greater degree of mental power.

By the time the pupil is through the seventh grade he should know all the principal rules of arithmetic and make some of the simpler applications of them to practical uses. The rest of his work in arithmetic should

consist of questions arising out of other subjects of study and from commercial transactions, etc. I think, however, the mental capacity of many pupils, even of those going up to normal school or matriculation examinations, are rather overtaxed to comprehend some questions in what are called business transactions. The subjects of stocks and shares, the involved and intricate questions that may be made in interest and discount are so remote from their daily life, that it requires great powers of abstraction for pupils who have no practical knowledge of such subjects to reason about them.

In algebra some difficulty is found at first in acquiring the language of the subject. Most of the signs he is familiar with in his arithmetic. There is little difficulty in learning the four rules. After that his progress will be much quickened if he is introduced to equations and simple problems. Pupils like to see the practical uses of studies. He finds he can easily do questions in algebra which would be puzzling if not impossible in arithmetic. When he finds his progress impeded by lack of further knowledge, he will the more readily work the exercises previously skipped. Owing to the many demands on the teacher's time algebra and arithmetic do not receive sufficient attention, being frequently left to a large extent to be worked by pupils in intervals of his classes. Thus much of the valuable discipline obtainable from these studies is lost. There should always be some little time at least allowed for these classes in every time table, and in addition the teacher might easily omit a recitation in some other subject in which the pupils are well up and give further time to algebra and arithmetic.

Geometry follows the arithmetic and drawing lessons of the common schools. The pupils have already learned to draw lines, angles and other geometrical figures in the lower grades. So the subject deals with figures quite familiar to him. The practice of drawing the figures for propositions should be carefully attended to in the daily classes. It is a valuable training of the eye and hand in itself and is of great use in their geometry work. I have frequently found that when an exercise or a proposition could not be done, the fact was that the pupil was not in the habit of carefully attending to construction of the figures and so had failed to understand the proposition.

In addition to its value as a means of mental discipline, geometry is closely allied to the formal study of composition. One of the complaints most frequently made against pupils is their lack of power of expression. Now geometry, by requiring such close, logical reasoning and full explanation is well adapted to make the pupil think clearly and express himself correctly. His explanations in other studies have a tendency to be brief and laconic to a marked degree. But to go to the board, enunciate a proposition, give the construction and proof of it with references, etc., requires a greater effort on the pupil's part and teaches him also that valuable and useful habit of thinking on his feet.

The mental training in reasoning and making correct judgments in geometry prepares the scholar for reasoning properly on all subjects in life, and as an exercise in deductive logic prepares him for the study of that subject in his college course.

Mensuration and trigonometry are practical applications of the truths of geometry, algebra and arithmetic, and form a close bond of union of all the mathematical subjects.

In teaching geometry I think pupils are too quickly set too early at working out exercises. Time should be allowed them to get used to the new notions. Geometry presents them. He has little idea at first what is meant by proof. He is constantly mixing up hypothesis and conclusion. After he has got a somewhat clear notion of the methods of geometry he could then be put to testing his abilities to work out exercises. I have found this method useful, I think, in beginning every book. As regards time, I have found three lessons a week for each of two classes is as much time as I could afford.

Canadian history, outlines of British history, general geography of earth, and special geography of one's own country, are considered the work of the common school. More advanced work in geography and history are usually taken up in the high school.

The history of the world, *i. e.*, of the progress of civilization, is one of the most important in a high school course. It alone enables us to understand the present state of the world and civilization as it is. History is, or ought to be, one of the most interesting subjects of study to all intelligent boys and girls. Much more interest might be aroused in all the studies as well as in history in particular, if there was more of the historical treatment observed. There is scarcely a study not closely correlated with history. Languages, mathematics and sciences, with all their discoveries and inventions connected with them, have existed or taken place in time, and pupils should know something of the order of their growth and expansion. Some history might be correlated in this way in the daily recitations. This, of course, cannot always be done, owing to pressure of time, but it is well to notice these methods of enlivening school work.

Geography, especially, should be connected with history. Without exact ideas of place, as well as of time of events, history must always appear hazy and misty. Frequent drawing of maps to illustrate the political condition of a country at different periods, tracing out the movements of races and armies upon them, should be continually practised.

Physical geography—the description of the earth's surface—can hardly be called a single science. It is rather a number of sciences combined and forms a convenient starting point from which to proceed to the study in detail, of botany, chemistry, geology, etc.

Too much time, I think, is spent on geography as it is usually studied in schools, learning and drilling over long lists of coast waters, capes, islands, rivers, mountains, towns, with their population, etc., which are soon forgotten in after life. Some knowledge of these things are, of course, useful and very interesting. They afford mental training and develop the pupil's imagination. A good plan would be to cultivate the habit of looking up every place of importance as they meet it in their other studies—history, for example—and the time thus saved in school could be devoted to other

science subjects which are closely correlated with geography.

Chemistry, physics, and botany, are the sciences most usually studied in our high schools. They require and consequently cultivate habits of close, accurate observation and generalization, and in this respect resemble classical studies. Most of them, especially physics and chemistry, require more or less expensive apparatus. Classes do not. Few of our schools have the necessary apparatus, though I am glad to see some improvement in this respect is taking place. Again, science subjects require a good deal more of the teacher's time than most other subjects, classes *v. g.*, for supervision of pupils work and for conducting experiments. This is an important point, considering the amount of work that one teacher of the average high school has to do. So as far as mental training is concerned, classics are better suited to our high schools than science work, if the latter is made, as it sometimes is, mere memory work from a text book, which is worse than useless.

I do not wish to minimize the practical advantages of scientific knowledge, on the contrary the more the student can get in a school or college, the better perhaps in this age of astonishing and marvellous discoveries and inventions. But the mental training pupils in our schools usually get from their science work is, I think, relatively little. What is needed is more teachers and more apparatus.

Chemistry is now required of all candidates for college and for license. For this reason more attention is probably being paid to the subject. Its novelty, the interest taken in working experiments, make chemistry one of the most popular in the course. During the past six months, by working experiments after school hours and on Saturdays, we have managed to get over the required ground somewhat carefully with two lessons a week. With the exception of one or two costly articles, a very full set of necessary apparatus and chemicals were provided by the trustees.

The use of formulae, equations, etc., similar to those in algebra, make that part of the subject seem familiar to students. The different proportions of elements in a compound requires the application of their knowledge of arithmetic. The Latin names of elements with some of which they were familiar, helped them to remember the symbols, and so showed a practical value of some knowledge of Latin.

Similar remarks might be made about the other sciences. They are all intimately correlated with one another and to other studies. They all have to do with man and his surroundings. I have now, I think, gone over the principal studies of the high school course, and have endeavored to show their correlation with one another, together with examples suggested by my own teaching experience, of how use may be made of this correlation in teaching.

In the details of school work the teacher can notice many points of similarity between the branches of study. Many instances where one subject overlaps another and impress the pupil without any special effort with the essential unity of his work, and so help him to digest and assimilate his fund of knowledge and give him a healthy appetite for more.

PAPER BY G. J. FREEMAN.

"To use an oft quoted phrase, it was in "a moment of weakness," I consented to read a paper before this institute. However, it was not till later on, as I cast my eye over the list of distinguished teachers who were to address you on this occasion, that I began to realize what an unfortunate step I had taken in complying with the flattering request of the committee. Of course it was too late to retract, and to-day you are to endure the consequences of the committee's unlucky selection, and of my ill advised haste in accepting the honors thus unexpectedly thrust upon me. I cannot pretend, from the short survey I have taken of the field of education, to give you any new or suggestive ideas on a subject so important as the one that has been assigned to me. There are those here who for years have given their best energies to the solving of educational problems, and it is to them we must look for any fresh enlightenment upon the methods of secondary education. But whatever complaints we may allege against that long-suffering body—the programme committee—we cannot at least complain that in the subject now before us we have not been allowed enough latitude. It is a subject affording wide scope for discussion, and it is impossible for me to present it in all its phases.

By secondary education I assume we mean that of the pupil's education, which begins where the work of the primary grades ends, and which continues to the close of his school life. How best to develop and foster the young intellect during this transition stage—from childhood to youth, and to adapt his training to his after needs, is one of the weightiest questions to be solved in any system of education, and one which merits our serious attention.

The fact that this subject of secondary education is before us to-day, is a proof of awakening interest in it on the part of our educationists. For years they have been contented to let things jog along much in the same old way, but now they recognize that it is at least a legitimate subject of discussion whether time-honored institutions and usages may not be improved upon. For some years in succession our Chief Superintendent, Dr. Inch, has been calling our attention to the unfavorable conditions under which our secondary education is being carried on, and to the apparent anomalies which our present system of grammar schools gives rise to. It is all too evident, from the tabular statements which he gives, and from the logical conclusions accompanying them, that secondary education in New Brunswick is not in as thrifty a condition as it should be.

It is to the grammar schools chiefly that we look to carry on the work of preparing the young for college and mercantile life, and we are very apt to judge the results by the number of pupils who pass beyond a certain standard. Thus when we learn from the tabular reports that the pupils in the grammar schools who reach Grade IX form less than one and a half per cent of the total number enrolled in the public schools—which simply means that only this small proportion of the school population gets even a slight smattering of English literature, Latin or advanced mathematics—we

are forced to ask, "Are these grammar schools of which we have been so proud doing the work they were intended to do?" But perhaps this is hardly a fair way of looking at the question; out of a comparatively small population, and that chiefly agricultural, the number who have the opportunity or feel the need for an advanced education, must necessarily be very small indeed. And while there are some who, through force of circumstances over which they have no control, cannot obtain the education they fain would have, there are others upon whom the best energies of teachers are being wasted in a fruitless attempt to impart to them instruction which they either cannot or will not appreciate. So in estimating the character of our secondary education we must not look merely at numbers, but inquire whether the opportunities for acquiring a good education are being extended to all who really desire and appreciate it, and whether the advanced subjects are being taught under conditions favorable to both teacher and pupil.

Of course, the purpose of the founders of the grammar schools was to give to all the best educational advantages. It seemed a very wise and beneficial provision to provide partial support for a grammar school in every county, to which the people of that county could send their children free of charge. But it has happened in some cases that these schools, having been established in localities where there are no candidates for advanced education, have sunk almost to the level of common schools, while still drawing the government grant appropriated for secondary education: the same remark applies to a great number of the superior schools. But this is not the worst feature of it. When these schools are situated in small villages there are not enough pupils to make it advisable to employ two teachers in the grammar or superior department, and consequently the time of the teacher is so much taken up with lower grade work that he cannot give proper attention to the few pupils who may be doing advanced work. And if the primary work is slighted ever so little the intelligent rate-payers come to the conclusion that they might almost as well have only a common school, and so the grammar or superior school, though suffered to remain, falls into disrepute. I think that we will admit that this is the case in quite a number of instances. So a number of advanced schools lose their reputation through being situated in unsuitable localities, and consequently being obliged to do the work of common schools in order to exist at all. It is vain to expect these schools to attract students from surrounding districts. I can say from my own experience as teacher of a grammar school where I have all the subjects of five grades—VII to XI inclusive—that it is a race for life every day to keep abreast of the work, and that a great many subjects of the syllabus I can teach but very imperfectly.

It will readily be seen, then, that a necessary condition of creditable high schools is a large number of students wishing an advanced education; and I think we will agree with our chief superintendent that the idea of distributing the grants for secondary education by counties and parishes is faulty, and that the concentration of energy and expenditure at populous centres

would yield much better results. About ten high schools, as he suggests, with an adequate number of pupils to support from two to four teachers each, and with suitable entrance examinations, should certainly do much more extensive and thorough work than the grammar and superior schools are able now to accomplish. Such schools when once established, would exert an influence which the majority of grammar and superior schools under present conditions cannot do. As I said before, high schools in order to succeed and establish a reputation must be situated where there are sufficient pupils to make a suitable division of the work among several teachers. Certainly a teacher can do his best work when he is free to devote his whole energies to one or two favorite subjects. We all know what a temptation it is to shirk a distasteful subject, and spend the time on something more congenial to ourselves.

As to the advanced work done in the school, I think it is on the whole very good when we consider the disadvantages under which a great many of the teachers labor. Still there is room for improvement in certain subjects, especially in Latin and Greek. The majority of the matriculants into the university are very deficient in classics. No doubt teachers are to blame in not insisting upon thoroughness; but the fault is, I think, largely to be attributed to the antiquated text books used. An alternative to Bryce's First Latin Reader has been provided in Robertson & Carruthers' Primary Latin Book, but it is not generally used, and I am of the opinion that far superior books are to be found. The books we use now do not arouse and retain the interest of the beginner as do the fresh and original books in use in the schools of the United States. With, for instance, Collar & Daniell's First Latin Book and White's Beginners' Greek Book I am persuaded that better results would be obtained. The Board of Education has already substituted modern text books in grammar and arithmetic for the ones formerly used, and it is surely not too much to hope that before long the powers that be will place better Latin and Greek books in the hands of teachers and pupils.

I am conscious that this subject of secondary education can be enlarged on very much further; but I shall not weary you any longer by my feeble attempts to explain what I mean. Without entering any further into the details of the subject I can sum up by saying that I believe our secondary education should not be education for the favored few, but should be based on the utilitarian principle of the best possible advantages to the greatest possible number.

I hope that the Institute will accept these observations as they are given, simply as the remarks of one who is making them with the rather selfish motive of provoking discussion from which he may learn something himself.

Dr. Chautemesse, of Paris, has it is said discovered an anti typhoid serum, with which he has experimented on three patients. After the first hypodermic injection they passed through the ordinary stages of the disease and became convalescent. *Scientific American.*

Summer School of Science.

The tenth annual session of the Summer School of Science was held at Parrisboro, N. S., July 9th to 24th. Interest in the work of the school shows no signs of abating, it is rather on the increase. There is a settled feeling on the part of those who have been with the school from its inception, that the school has not only come to stay, but that the time has come for making the work still more effective than it has been in the past.

The eleventh meeting is to be held in Yarmouth with Principal A. Cameron, of the Yarmouth County Academy, as President, and Principal J. D. Swanin, of Charlottetown, as Secretary.

The session opened on Thursday, July 9th, with a large and enthusiastic public meeting. The classes this year were well filled, thus maintaining enthusiasm in the work. The opportunities afforded by the surrounding country—Partridge Island, Blomidon, etc.—for the study of geology were utilized by the students and much useful, practical work was done. The natural advantages offered by Parrisboro for a Summer School of Science leads many of those interested in the school to look to Parrisboro as a permanent home for the school. However, nothing definite has been decided in this respect.

One of the most enjoyable evenings of the session was that one in which Dr. Theodore H. Rand, ex-Superintendent of Education of N. S., entertained the school by reading selections from his poems, chiefly descriptive of the scenery of the neighborhood. The beauties of the place were enhanced to many by the beautiful poetical descriptions of them given by the doctor.

The "Round Table Talks" instituted four years ago were maintained with increased interest. This year subjects of the class work were introduced by the several instructors and discussed by the school, giving an opportunity to all to form some idea of the several subjects composing the curriculum. The attendance, not only of the members of the school, but of the citizens, was large, and much interest was evinced in the discussions.

The address given by Dr. Dearborn, of New Hampshire, on Psychology in its Application to Education, was one of rare interest and profit to teachers.

The excursions laid down on the programme were all made and were found just as enjoyable as fancy had painted them. Those who for the first time saw Partridge Island were amazed at the geological formation there exhibited, and realized somewhat of the mighty forces that must have acted upon the crust of the earth to have produced such upheavals as were shown there.

Two Islands was visited, the views from the vicinity of which are truly magnificent.

Mount Blomidon again told its amazing story of wonderful change and upheaval. Eager searchers brought from it some of its store of amethyst, agate, etc., leaving well satisfied with the sight witnessed and the mementoes secured.

Hearty votes of thanks were passed to the citizens of Parrisboro for courtesies received; to the Board of School Commissioners for the use of their commodious school building; to A. E. McLeod, Esq. and his estimable lady for personal kindness; to the mayor, town council and

citizens of Wolfville; also the representatives of Acadia University for their hearty reception of the school and kindness in entertaining them on the occasion of their excursion to Wolfville; to Mr. Patterson, proprietor of Acacia Villa School for the hearty reception given and hospitality extended to the Summer School; to the railway and steamboat authorities for advantages of travel.

The faculty for next session is as follows: *Botany*, C. B. Robinson, B. A.; *Chemistry*, W. H. Magee, Ph. D.; *Civics*, J. B. Hall, Ph. D.; *Elocution*, Miss Mina A. Reade; *English Literature*, A. Cameron; *Geology and Mineralogy*, A. E. Coldwell, M. A.; *Kindergarten*, Mrs. S. B. Paterson; *Music*, Miss Annie B. Hilton; *Physics and Meteorology*, W. R. Campbell, M. A.; *Psychology*, Prof. Davidson; *Physiology*, E. J. Lay; *Zoology*, G. J. Oulton, M. A.; *Entomology*, W. A. Hickman. *Director of Field Work*: Prof. J. Brittain.

Members enrolled during the Parrsboro session of the Summer School of Science: From Summerside, P. E. I., Alice Brehaut; Victoria Mills, Westmorland Co., N. B., Minnie L. Killam; Onslow, Colchester Co., N. S., Oressa McKinlay, Charlotte Purnam; Woodstock, N. B., Estella Lyons, Julia Neales; Lakeville, Kings Co., N. S., Berton J. Wood; Parrsboro, N. S., Bertha A. Cameron; Maud Dickinson, Lillian Wotton, Fanny Leitch, Leah Hoekin, Lizzie R. Kirkpatrick, Sarah L. Sproule, Ethel Wotton, Mary McDonald, Mary O'Mullen, Agnes MacKay, Mary J. Sproule, Alva Howe, Mabel Dench, Jos. Gillespie, Alice Gillespie, Clara Kirkpatrick, Effie Hatfield, E. Woodworth, Mary E. Woodworth, Mattie Woodworth, L. C. MacKay; Clifton, Kings Co., N. B., Elizabeth Wetmore; Liscombe, Guysborough Co., N. S., Hannah Pye; Point de Bute, Westmorland Co., N. B., Myrtle Fullerton; Port Elgin, Westmorland Co., N. B., Alice M. Read; Halifax, N. S., Isabel Brodie, Amy Saunders, Mary Moseley, L. Emmie Theakston, Frances Theakston, Mrs. Willis, S. A. Morton; East Leicester, Cumberland Co., N. S., Rena Gillis, Maud Trerice; Napan, Cumberland Co., N. S., Laura Shipley; Augusta Pipes, Lillian Shipley; New Canada, Cumberland Co., N. S., Rose Hetherley; Sussex, Kings Co., N. B., L. G. Folkins; St. John, N. B., Lily MacKay, Jessie Milligan, G. C. Hay, Mrs. G. C. Hay; Charlottetown, P. E. I., Lena McDonald, Mary Ashley, Christina C. Snadden, J. D. Seaman, J. M. Duncan; Windsor, N. S., Florence E. Johnson; Port Howe, Cumberland Co., N. S., Emma Lodge; Yarmouth, N. S., S. A. Starrat, A. Cameron, Mrs. A. Cameron, Annie B. Hilton; Moncton, N. B., Jennie Colpitts; Amherst, N. S., E. J. Lay, Lucy Lay; Pictou, N. S., Chas. B. Robinson, W. A. Hickman; New Glasgow, N. S., W. H. Magee; Wolfville, N. S., Mina A. Reade, A. E. Coldwell; Truro, N. S., Mrs. S. B. Patterson, J. B. Hall, W. R. Campbell.

It is almost an axiom of the legal profession that the law is clear and certain, and the judges know the law. It is one of the first principles of Blackstone that "law cannot make a mistake." And yet one of the most eminent of English judges, Lord Mansfield, once said, in deciding a case, "as to the certainty of the law, it would be very hard upon the profession if the law was so certain that everybody knew it. The misfortune is that it is so uncertain that it costs much money to know what it is, even in the court of last resort." *Scientific American*.

Teachers' Institute.

ANNAPOLIS AND DIGBY COUNTIES' INSTITUTES, N. S.

About one hundred teachers attended the seventeenth annual meeting of Annapolis and Digby counties' Teachers' Institute, which was held in the beautiful and commodious academy at Bear River, Annapolis Co., on Thursday and Friday, May 15th and 16th. Promptly at 10 a. m. the meeting was called to order by the President, L. S. Morse, M. A.

Mrs. J. M. Benson of Bear River, the only delegate who had attended the Provincial Educational Association held at Truro last year, gave a brief account of the proceedings of that body. She thought the papers read there were not as practical as they should be. Some sections of the meeting, however, were very interesting and helpful. At the close of Mrs. Benson's remarks Inspector Morse briefly referred to several matters discussed before the same convention, particularly the Teachers' Union and the Irving scheme of superannuating teachers.

Principals O. P. Goucher, W. Y. Woodman, S. C. Shaffon, J. M. Longley, Miss Jennie A. Hall and Miss L. Jean Harris were appointed delegates to the Provincial Association.

The following officers were elected for the ensuing year: Vice-President, Principal J. M. Longley of Digby. Secretary-Treasurer, A. L. Bishop. Executive Committee, W. Y. Woodman, Miss Winnifred McGill, Mrs. J. M. Benson, Miss Maggie Spurr and J. B. McCarty.

During the afternoon session while the question "How can Moral and Patriotic duties best be taught in Schools" was being discussed, Dr. MacKay, Superintendent of Education, arrived. He was received with hearty rounds of applause. In the course of the discussion Dr. MacKay said that in the absence of text-books, no doubt teachers experienced difficulties but the most effective way to teach this subject was incidentally. He cautioned the teachers against inculcating bad morals, but advised them to especially emphasize the noble and the pure.

At three o'clock the Principal of Yarmouth Academy, A. Cameron Esq., arrived. He was also received amid loud cheers.

Principal J. M. Longley, of Digby, then read a very practical and helpful paper on "School Life as affecting Character." He discussed the subject (1) in relation to the teacher. The teacher stands in new relation to his pupils. These relations give rise to new duties, to which he will be true in proportion to his estimation of their importance and their bearing on his success. These obligations are professional, social and personal. He discussed the subject (2) in relation to the pupil. Some of the results to be reasonably expected from a combination of properly adjusted forces are: (1) A waking up of the mind. (2) The development and fostering of a teachable spirit. (3) Proper motives for stimulating new activities are furnished.

At the close of this very able paper, complimentary and instructive remarks were made by Rev. J. T. Eaton and Dr. MacKay.

Principal Cameron, of Yarmouth, then gave the Institute a "Talk" on Physical Geography. Questions

had been handed to Mr. Cameron by several of the teachers present. These formed his subject. In this way an hour was very pleasantly and profitably spent.

A public meeting was held in the evening in the assembly room of the academy. The meeting opened at eight with singing by the bright faced choir of high school pupils, followed by prayer by Rev. Mr. Craig. Inspector Morse, in a few very appropriate remarks, expressed the pleasure it gave the Institute to meet with the people of Bear River. He congratulated them on having completed such a magnificent school building.

The finest in his inspectorial district. He then introduced Dr. MacKay, superintendent of education. For over an hour Dr. MacKay held the closest attention of his large audience. He had not come to give instruction in any particular subject, but to ascertain the difficulties of teachers and to aid them. He referred to the recent criticisms that had been made on the educational system of Ontario. He believed the educational authorities of Nova Scotia were taking steps they would not have to retrace. The great need of the times is men who understand the world. The authorities were trying to dignify labor. He then took up the prescribed nature lessons, and showed how these can be turned to great practical account, and gave many very helpful hints as to the method of teaching these lessons. His address was practical and inspiring. Every teacher who listened to it would go back to his work with renewed enthusiasm.

Principal Cameron was then called on and gave a very happy and characteristic address. Short addresses were also given by Principal Longley, of Digby, Principal Schoffner, of Paradise, and Revs. Eaton, Craig and Noble. The speeches were interspersed with appropriate and well rendered selections of music. The meeting closed by singing "God Save the Queen."

At the Friday morning session Principal McDormand, of Bear River Academy, gave a very interesting lesson on the circulation of the blood. A beef's heart was dissected and the lesson finished by reference to a black board diagram. At its close favorable comments were made by O. P. Gouche, W. Y. Woodman and Dr. MacKay.

Miss Bessie McNeil, of Digby, then taught a lesson on the Tonic Sol Fa system, to a class of young pupils from the Bear River Academy. Favorable remarks were made by Dr. MacKay, J. M. Longley, and Inspector Morser.

Mrs. J. M. Benson, of Bear River Academy, then taught a very interesting lesson on Mathematical Drawing. Dr. MacKay took quite an active part in this lesson, explaining difficult points in connection with the problems. Miss L. Jean Harris taught a lesson on Mineralogy to a class of young pupils. The minerals studied were mica, galena, lead, salt, asbestos, and gold. The lesson was very interesting and was complimented by Principals Woodman and McDormand.

Principal Cameron then gave a very interesting "talk" on English Literature. Extracts from various authors were handed in and considered. For over an hour the teachers were delighted with Mr. Cameron's original "talk."

The customary votes of thanks were given, and one of the largest and most practical meetings of the Institute came to a close.

W. C. PARKER.

N. B. Normal School Entrance.

Superior School Class. Time 1 hr. 30 min.

PRACTICAL MATHEMATICS.

1. Find $\cos 30^\circ$, $\tan 45^\circ$, $\sin 15^\circ$. Value 20.
2. Prove that in any plane triangle $\tan 3[A - B] = \frac{a - b}{a + b} \cot \frac{C}{2}$. Value 20.
3. Find the cosine of the greatest angle in a triangle whose sides are 7 feet, 8 feet and 9 feet. Value 20.
4. Find the area of a triangle whose sides are 20, 30 and 40 chains. Value 20.
5. Require the area of a field from the following measurements:

	to D	
	11	
	10	to C, 6.75
to E, 6.50	9	
	6.50	to B, 7.
to F, 6	4 chains.	
	from A	Value 20.

Class I. GEOMETRY. Time 1 hr. 45 min.

Work the first five and 7 or 8.

1. Describe a triangle the sides of which shall be equal to three given straight lines, two of which are together greater than the third. Value 25.
2. The perpendiculars to the three sides of a triangle drawn from the middle points of the sides meet in one point. Value 25.
3. If a straight line be bisected and produced to any point, the square on the whole line thus produced and the square on the part of it produced are together double of the square on half the line bisected and of the square on the line made up of the half and the part produced. Value 25.
4. To give a straight line to apply a parallelogram, which shall be equal to a given triangle, and have one of its angles equal to a given angle. Value 25.
5. The squares on the diagonals of a rhomboid are together equal to the square on the four sides. Value 25.
6. [a] What is a locus? [b] Find the locus of points equidistant from two given points. Value 25.
7. If A, B, C be a triangle, with the angles at B and C each double of the angle at A , prove the square on AB is equal to the square on BC together with rectangle A, B, BC . Value 25.

*A parallelogram with adjacent sides unequal and angles not right angles.

Class I. ALGEBRA. Time 1 hr. 45 min.

1. State in words five principles which you can apply in factoring; and illustrate each by an algebraical equation. Value 25.

2. [a] Factor and then divide $\frac{x^2 - 3x - 2}{x^2 - 6x - 9}$ by $\frac{x^2 - 5x + 6}{x^2 - 2x - 1}$

also $\frac{x^2 - a^2}{x^2 - 8x} \div 3\left(\frac{x^2 - a^2}{a^2 - x^2}\right) \cdot \frac{x - a}{x}$ by $\frac{x - a}{a - x}$

[b] Find the value of:

$$\frac{1}{x - y} - \frac{1}{x + y} - \frac{1}{x^2 - y^2} \div \left[\frac{1}{x - y} - \frac{1}{x + y} \right] \div \frac{1}{x^2 - y^2}$$

Value 25.

3. A cask B contains 12 gallons of wine and 18 gallons of water; and another cask C contains 9 gallons of wine and 3 gallons of water; how many gallons must be taken from each cask so as to produce by their mixture 7 gallons of wine and seven gallons of water? *Value 16.*

4. Solve: $\frac{m}{x} = \frac{n}{y}$, $m + n$, and $\frac{m}{x} = \frac{m}{y} m^2 - n^2$ showing that the result is $x = \frac{1}{m}$ and $y = \frac{1}{n}$. *Value 20.*

5. A railway train after travelling for one hour meets with an accident which delays it one hour, after which it proceeds at three-fifths its former rate, and arrives at the terminus three hours behind time; had the accident occurred 50 miles further on, the train would have arrived 1 hr. 20 min. sooner. Required the length of the line. *Value 21.*

Class I. ARITHMETIC. Time, 1 hr. 45 min.

1. [a] State the difference between simple and compound interest? *Value 18.*

[b] A sum of money amounts in 10 years at 3½ per cent. simple interest to £506 15s. 14d. In how many years will it amount to £703 15s. 6d at simple interest. *Value 15.*

2. [a] Find the difference between true and bank discount on \$1,000 at 6 per cent. per annum, for 125 days. — *Value 15.*

[b] State the distinction between true and bank discount.

3. [a] A cube contains 8 cu. ft. 631'458356 cu. in. Show that there are 2 sq. yds. 6 sq. ft. 104'4576 sq. in. in its surface. — *Value 18.*

[b] What is the cube root of a number?
4. By selling a house for \$2,340, I gain 17 per cent. What should I have received for it had I sold it at a loss of 17 per cent. — *Value 13.*

5. 6 men and 5 boys can do a piece of work in 7 days; they work at it till they have completed $\frac{3}{4}$ of it; then two of them leave and 2 more boys come; how long from first to last will the work be in hand, if a boy does half as much work as a man? — *Value 18.*

6. A has an income of $\frac{6}{35}$ of B's income. *Value 18.*

[a] Express in whole numbers the ratio of A's income to B's.

[b] If A, after spending \$645 per annum, finds that he has exceeded his income by .075 of it, find B's income.

N. B.—Show all the work.

TEACHERS' INSTITUTE.

St. John County Teachers' Institute.

The Eighteenth Annual Session of the Charlotte County Teachers' Institute will be held in the Marks Street School, St. Stephen, September 17th and 18th, 1896.

PROGRAMME

FIRST SESSION, Thursday, September 17th, 10 A. M. Enrolment. Address by President. Paper "Canadian History" J. Vroom.

SECOND SESSION, Thursday, 2 P. M. Lesson: Spelling, Grade VII. Miss Georgie B. Meredith. Paper: "Busy Work" Miss Emma Veazey.

THIRD SESSION, Friday, 9 A. M. Institute divided into sections. Primary, led by Miss Agnes Boyd. Intermediate, Mr. H. F. Perkins. Advanced, Mr. P. G. McFarlane. Lesson: number, Grade II, Miss Edna Daggett.

FOURTH SESSION, Friday, 2 P. M. Lesson: Reading, Grade IV, Miss D. H. Hanson. Paper: "The Kindergarten and the Primary School" Miss G. A. McAllister. ELECTION OF OFFICERS, ETC.

The usual Travelling Arrangements will be made.

F. O. SULLIVAN,
President.

GEORGIE B. MEREDITH,
Secretary.

The Eighteenth Meeting of the St. John County Teachers' Institute, will be held in the Assembly Hall of the Centennial School, St. John, N. B., on Thursday and Friday, September 24 and 25, 1896.

FIRST SESSION, Thursday A. M.—Enrolment and address by the President; Report of the Secretary-Treasurer; Paper, "Politeness," by Inspector W. S. Carter. Discussion.

SECOND SESSION, 2 P. M.—Papers and Class Work: "Spelling," Primary Section, Miss Jennie Hanson, St. John, N. B.; Intermediate, Miss Minnie R. Caryl, St. John, N. B.; Advanced, Clara Fullerton, St. John, N. B. Discussion. "Thoughts upon Introductory Geometry," by Mr. Wm. H. Parlee, St. John, N. B. Discussion.

THIRD SESSION, Friday, 9 A. M.—"Mathematical Geography," by Principal A. Cameron, Yarmouth, N. S. Discussion. "Papers on Busy Work;" Primary Section, Miss Etta Barlow, St. John, N. B.; Intermediate, Miss Octavia Stuart, Fairville, N. B.; Advanced, Mr. R. B. Wallace, Milford, N. B.

FOURTH SESSION, 2 P. M.—"English Literature," by Prin. A. Cameron, of Yarmouth, N. S. Discussion. Election of Officers; Miscellaneous Work; Adjourn.

JOHN MACKINNON,
President.

MALCOLM D. BROWN,
Sec.-Treasurer.

MCGILL UNIVERSITY, MONTREAL,

SESSION 1896-97.

The Calendar for the Session 1896-7 contains full information as to Conditions of Entrance Courses of Study, Regulations for Degrees Exhibitions and Scholarships, Fees, Etc., in the several Faculties of the University.

Matriculation Examinations, preliminary to the various Courses of Study will be held as under:

Faculty of Arts (including the Donalds Special Course for Women)	Tuesday, 15th Sept.
Faculty of Applied Science,	Wednesday, 17th Sept.
Faculty of Medicine,	Tuesday, 15th Sept.
Faculty of Law,	Tuesday, 8th Sept.
Faculty of Comparative Medicine and Veterinary Science.	Saturday, 26th Sept.

*In the Faculty of Arts, the various courses in Classics, English, Modern Language, History, Philosophy, Mathematics, Physics, Chemistry, Botany, Zoology, Geology, are open also to Partial Students without Matriculation.

*The Faculty of Applied Science includes Departments of Civil and Mechanical Engineering, Electrical Engineering, Chemistry and Architecture.

THE MCGILL NORMAL SCHOOL will re-open on 1st September.

Copies of the Calendar may be obtained on application to

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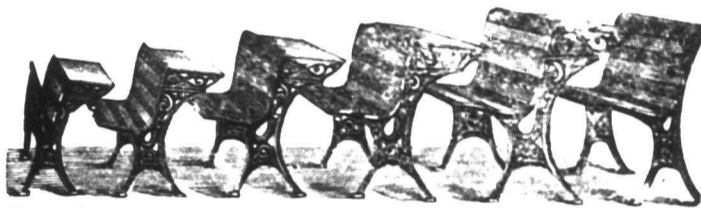
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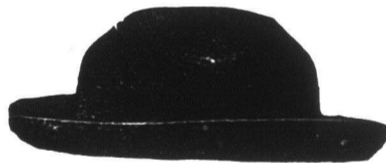
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A Gymnasium erected and furnished with all modern appliances for physical development, during the past year, has proved to be an important auxiliary to the educational work. Further efforts will be made during the present year to increase the efficiency of the Institution and to add to the comfort of students.

The new University Residence, constructed and furnished with every provision for comfort, convenience and health, is now ready for occupation.

The next term opens September 27th, 1894. Send for Calendar.

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REV. B. C. BORDEN, D. D., PRINCIPAL.

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Elocution is taught by one of the most accomplished graduates of the Boston School of Oratory. THE CONSERVATORY OF MUSIC is under the direction of a strong staff of experienced teachers, representing the best conservatories and teachers on both sides of the Atlantic. The courses of instruction embrace instrumental music (Piano-forte, Pipe Organ and Violin), Vocal Culture, Class Singing, Harmony, Analysis, Composition, etc. The Fine Arts Department is under the direction of Prof. John Hammond, K.C.A., an exhibitor in the Paris Salon; Royal Academy, London; National Academy of Design, New York, etc. Art students have the inspiration which comes with constant contact with the splendid paintings which constitute the Owen's gallery.

Mount Allison Wesleyan Academy.

JAMES M. PALMER, M. A., HEAD MASTER.

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The building is commodious, well heated throughout by the hot water system, and comfortably furnished.

Expenses very moderate.

For particulars apply to the Principal.

University of New Brunswick.

Full Information concerning these Departments is given in the Calendar for 1896. Copies of which may be obtained from the Undersigned.

At the beginning of the Academical year, 1896-97, on the first day of October next, the Scholarships for the Counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland, Albert, Charlotte, St. John, Kings, Queens, Sunbury, York, Carleton and Victoria will be vacant.

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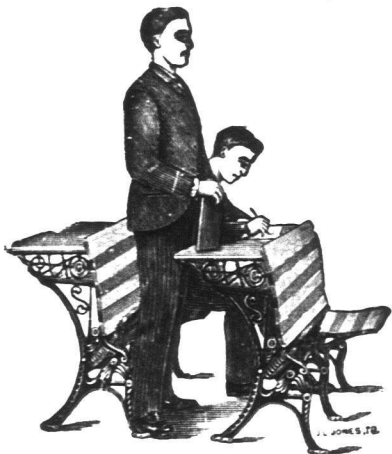
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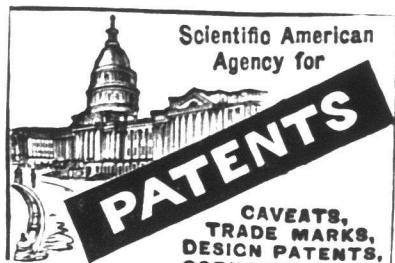
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