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[Despatch Abstract.]

College Education.-

Communicating to the Syndicate of the University of
Madras letter from the Government of India forwarding copy
of an abstract of the proceedings of a sub-committee which
was appointed to consider certain questions relating to the
improvement and expansion of

Department.

Date.

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தமிழ்நாடு ஆவணக்காப்பகம்

பாதுகாப்பு (Pr1) பிரிவு

பணி எண்: 78/51

செப்பனிட்டவரின் பெயர்

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ஆவணத்திலுள்ள மொத்த தாட்கள்

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செப்பனிட்டு முடிந்த நாள்

: 13.05.2015

செப்பனிட்டவரின் கையொப்பம்

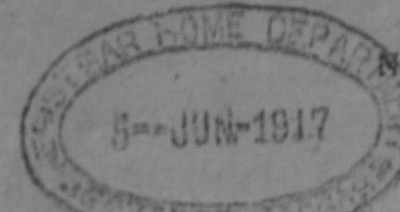
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FROM

THE HON'BLE SIR E.D. MACLAGAN, K.C.I.E., C.S.I.,

Secretary to the Government of India.

TO

The Secretary to the Government of Madras,
Home (Education) Department.

Simla, the 26th May 1917.

Education Department.
Education.

SIR,

In connection with the conference of Directors of Public Instruction held at Delhi in January last, I am directed to forward a copy of an abstract of the proceedings of a sub-committee which was appointed to consider certain questions relating to the improvement and expansion of collegiate education. The chief subject considered by the sub-committee was the possibility of arriving at a proper relation between the number of teachers at a college and the number of students to be taught by them.

2. The question has attracted some attention of late and the enclosed copy of a statistical memorandum on the subject prepared by the Bureau of Education will probably be found of interest to those who are concerned with the organization of college teaching. I am accordingly to request that, if there is no objection, copies of the enclosed proceedings and memorandum may be forwarded to the Registrar of the Madras University for communication to the authorities of the University.

I have the honour to be,

SIR,

Your most obedient servant,

Smalley

Secretary to the Government of India.

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Abstract of the proceedings of a sub-committee of the Conference of
Directors of Public Instruction held at Delhi in January 1917.

Improvement and expansion of collegiate education.

Sub-Committee.

28. The directors were agreed that there was a largely increasing demand for collegiate education, which was in excess of existing facilities. The Chairman asked whether this big increase in numbers was due to any deterioration in the standard of the matriculation. Mr. Hornell was of the opinion that the change from the entrance to the matriculation had not resulted in the improvement which was anticipated, and especially in English. He found it difficult to believe that the standard of admission to university courses had not been lowered somehow or other. This was partly due, he thought, to the new arrangements regarding prescribed and recommended books. Mr. Stone said that in *Madras* candidates for matriculation were expected to make a detailed study of the prescribed books and a general study of the recommended books, subjects for composition being drawn from the latter. Mr. Hornell replied that this was not the case in *Calcutta*. Mr. A. L. Covernton said that the chief difficulty in *Bombay* was to be found in the big fluctuations in the standard of admission to colleges from year to year. Mr. Stone said that arrangements had been made in *Madras* whereby the law classes were held during the middle of the day and therefore students were unable to undertake two courses of study concurrently, but Mr. Hornell thought that the adoption of a similar practice in *Calcutta* would not be appreciated.

Increase in the
numbers of
collegiate students.

29. The Chairman then asked what standards are now imposed by the universities for the affiliation of new colleges and whether any definite proportion between students and teachers was insisted upon. The general condition of things in provinces was explained by several of the directors. The *Calcutta* University allows classes of 150 students and sometimes makes exceptions in excess of that number. A class is usually divided up into sections and therefore a teacher may be called upon to deliver the same lecture to three sections, each of 150 students, on the same day. By this means, the number of students can be multiplied without a corresponding increase in the staff; and this can be done without the knowledge of the affiliating authorities. The *Punjab* University considers that a class of a hundred students is excessive, but has laid down no definite maximum. Mr. Godley said that in practice intermediate classes are usually sub-divided if they exceed a hundred, and that for science and English composition groups are formed. The *Aligarh* University demands that when a class exceeds sixty, it should be split into sections; and in science when a class exceeds sixteen, a demonstrator should be entertained. The *Bombay* and *Madras* Universities lay down no definite proportion or limitation, save that in the case of the former university the total number of students attending two new second-grade colleges has been limited.

Standards imposed
at present for the
affiliation of
colleges.

30. The Conference then discussed whether some definite standard could be enforced. Mr. Stone doubted whether it would be advantageous to lay down rules and preferred to trust to the control of the University. Mr. A. L. Covernton said that an inspecting committee was appointed by the *Bombay* University every three years to inquire into the general condition of all colleges. The fact that such principals as were included on the Committee might overlook defects in their own colleges and possibly exaggerate them in others tended to detract from the value of the Committee's recommendations. Besides, as Mr. Hornell pointed out, the only real remedy in the case of proved inefficiency would be disaffiliation, and such a practice would entail the increased inability of the University to provide for the demands of students requiring admission to colleges. The existence of difficulties about admission, however, was beneficial to the extent that it might encourage private subscriptions and endowments. For example, five lakhs had just been subscribed in

The control of the
University.

Rangpur which, had there been no limitation in the other colleges, might not have been forthcoming.

A rigid limitation undesirable.

31. The Conference was generally of the opinion that it would not be wise to lay down any hard-and-fast rules or insist on a rigid limitation of numbers in any particular class. Mr. A. L. Covernton pointed out that in fixing the numbers of a class all sorts of matters should be taken into consideration, such as the size of the room, the capacity of the teacher, and the nature of the subject and of the standard. It was unwise, therefore, to lay down a rigid maximum for each class. He thought that the upper classes were necessarily small in numbers. In answer to the question whether it was necessary to limit the numbers in the lower classes only, he said that in his opinion there was a similar necessity for restriction in the upper as in the lower classes.

The necessity for tutorial instruction.

32. The directors were agreed that tutorial work was very essential for college students and that any rules that were laid down should take this fact into consideration. Mr. Hornell pointed out that in *Bengal* the intermediate classes required school teaching especially in English, and that there should be a proper correction of the written work. There was a general impression among the teachers in *Bengal* that many boys come up unfitted for collegiate instruction and therefore there was all the more need for suitable and effective teaching in addition to the lectures. In the upper classes, though the lectures might be delivered to a larger number of students mere lecturing is inadequate for B.A. instruction. There should also be proper provision for tutorial assistance. Mr. A. L. Covernton said that in *Bombay* an attempt had been made to split up junior classes into sections, so that the teachers might be able to teach in accordance with school methods. The experiment has proved only a qualified success. It has been difficult to obtain the services of trained graduates and there was an unfortunate tendency on the part of the teachers employed to lecture rather than to teach. Mr. Stone pointed out that it was certainly wrong to suppose, as was often done, that the tutorial work was inferior in importance to the lectures and could therefore, be entrusted to less qualified teachers.

The necessity of some general and flexible standard.

33. Mr. J. G. Covernton urged that it was possible to lay down some rough proportion between students and teachers. For example, Mr. Hunter had suggested to him that for physics and chemistry the proportion should be 20 to 1 for the intermediate and 15 to 1 for the bachelor classes. Mr. Sharp referred to the recommendations of the committees recently appointed to consider the creation of new universities by which taking the college as a whole there would be roughly one teacher to every 13 students, but there would be no definite limitation in the number of students attending any particular lecture. This was considered by the directors a sound principle. Mr. Cunningham dissenting. Mr. Hornell emphasised the importance of fixing some standard. The object should be not so much to limit the numbers of students attending any particular lecture as to ensure that the lectures were supplemented by some form of teaching in the lower classes and by tutorial supervision in all classes.

Possible economies in the organisation of collegiate education.

34. The Conference then discussed whether any economies are possible in the present organisation of collegiate education so that the available teaching resources might be used to their utmost capacity. The question of instituting an inter-collegiate system of lectures was first discussed. Opinions varied according to the position of colleges. Mr. A. L. Covernton said that the colleges in *Bombay* were too far apart for such co-operation and that, even if they were not, the time-table difficulties would be considerable. Mr. Hornell pointed out that the climatic conditions of *Bengal* would prove a big obstacle. On the other hand, Mr. Godley said that in *Lahore* colleges were close together and therefore inter-collegiate lectures could easily be arranged. Such lectures are given already in certain M. A. subjects, and higher science has become regarded as an inter-collegiate subject. Mr. Stone said that in *Madras*, inter-collegiate work was carried out in the small honour classes in the specialised subjects, but that such a system could not well be worked for large classes. Arrangements are made whereby the students do their work at one college

in the morning and at another in the afternoon. The lady students of the Government College attend the science classes at the Presidency College. Mr. de la Fosse said that in the post-graduate classes students could go to different colleges for their lectures, both at *Agra* and *Allahabad*. Mr. Mayhew said that the system of inter-collegiate lectures was carried out in *Nagpur* even in the undergraduate classes in science. Mr. Hornell then referred to the abnormal number of lectures which many of the students were expected to attend. It was agreed that the number might well be decreased without loss of efficiency and that by this means college teachers and students might have more time for tutorial work.

35. It was thought by some of the directors that if a reference on the subject were made to the universities, the reply would be that improvements could only be made through increased expenditure and that the colleges had no money at their disposal. Mr. Godley said that the D. A. V. College, where the number of students to each teacher was high, might object to the acceptance of a Government grant. Mr. Hornell similarly instanced the *Ripon* and other colleges in *Calcutta*. Mr. Stone and Mr. Hornell both thought that the reference to the universities might be beneficial, if only as a means of promoting a discussion. The present tendency was one of drift, and an effort should be made, at any rate, to evolve some sort of policy. Some of the other directors were not so hopeful of beneficial results, but they did not think that the universities would have any objections to such a reference.

36. Mr. Hornell considered that the recommendation of the Universities Commission that second-grade colleges should be discontinued was a mistake, and this was the general opinion of the other directors. Mr. Stone said that in *Madras* there were a number of such institutions which did useful work, but he pointed out that they were usually attached to high schools and were not separate institutions. Mr. Jennings urged that if high schools were thus extended, the lower classes for small boys should be detached as preparatory schools. The directors were agreed that some kind of institution was required between the present school and the college which would relieve the congestion in the colleges and provide a form of instruction suited to the needs of the boys. Mr. de la Fosse and Mr. Godley urged that the work carried out in such institutions was school work and should, therefore, be conducted as such. Mr. A. L. Covernton also considered that there should be a class of school, such as there is in *Scotland*, quite divorced from the university but leading up to the university system. He considered that if such higher grade or collegiate schools were established, colleges might continue to admit matriculates direct and that the two systems might for a time work together, the system of direct admission gradually lapsing in favour of a system of intermediate institutions. Second-grade colleges *qua* colleges were undesirable, but they should be encouraged as schools. Mr. Stone considered that schools should be so extended and improved as to cover the present intermediate work. Mr. de la Fosse agreed and remarked that in that case the B. A. course could be made one of three years. There was a very general feeling that the present position is unsatisfactory in that it leads to congestion in the big centres and an unsuitable form of instruction in the lower college classes. The general conclusion thus arrived at was that the present college course begins too soon, that the school course should be prolonged, and that the intermediate course should as far as possible be relegated to schools. Mr. Mayhew dissociated himself from any expression of opinion in favour of second-grade colleges as an extension of the schools in view of his local Government's general university policy.

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Memorandum by the Bureau of Education on the proportion of students to professors in Arts Colleges.

The table attached to this Memorandum shows the average number of students to each professor in the Arts Colleges of the various provinces in India in 1912 and 1915, respectively, and the results may be summarised as follows :—

				1912.	1915.
Government Colleges	...	...	...	15.6	18.6
Board and Municipal	...	...	...	10.1	18.1
Aided...	...	...	...	20.8	21.8
Unaided	...	...	...	21.6	22.2
				—	—
			Total	19.5	22.6
				—	—

There is no definite information regarding the proportions existing before 1912 but it was estimated in 1902 that the average number of students per professor in India was then 17.

2. From the most recent reports regarding the modern universities and a number of university colleges in England it has been calculated that the proportion in these institutions is 1 teacher to 9 students. There is considerable variation—from 1 to 3 at University College, Dundee, to 1 to 22 at King's College, London, the next institution after King's College being Sheffield University with a proportion of 1 to 14. There is a good deal of difficulty in dealing with the figures for these modern universities because the staff are not in all cases full-time teachers; nor are all of the students properly speaking University students, large numbers of them being teachers under training or students attending evening classes, etc. In certain cases precise information can be obtained as to the number of students and staff that are full and part-time respectively. Thus, in the Birmingham University the proportion of full-time students to each full-time professor would appear to be 10, in Bristol University 7, in Leeds University 6, in King's College, London, 9, and in the University College of Wales (Aberystwith) 10.

The average proportion of full-time teachers to full-time students for these institutions is 1 teacher to slightly over 8 students.

3. It would be difficult to prepare an exhaustive list to show the proportion of students to professors in all the universities throughout the world: but a few figures have been collected at random from various countries in Europe and America. These shew a variation in the number of students per professor from 5½ to 20. Too much importance should not be attached to these figures because it is difficult to obtain information regarding the status of the professors, whether they are all full-time or not and also regarding the studies of the students.

4. The only University in India which has special regulations for the limitation of classes is Calcutta. Chapter 19, Regulation 5 (b), of the Calcutta University Regulations runs as follows :—

" Save with the permission of the Syndicate no professor or lecturer shall be allowed to lecture to a class or a section of a class which has on its rolls more than 150 students."

Calcutta University has also other regulations limiting numbers, accommodation, etc., in laboratories. It is also understood that in the Allahabad University, although there is no definite regulation, it is an accepted rule that college classes are limited to 60 and it is stated that a demonstrator is required for a class of more than 16 students doing practical work. In the Bombay and Punjab Universities, although there is no rule of limitation, annual returns are required showing the teaching staff and the number of students.

5. Certain proposals which have recently been made in India are briefly described as follows :—

(i) In 1906 the University of Calcutta appointed a Commission to inspect Mofussil colleges and on page 22 of their Report the Commission wrote as follows :—

"A lecturer can lecture to as many as his class-room will hold and his lung power can reach. For the lecture proper classes of 100, or even 200, are not too large. But if the lecturer is also to practise his class with exercises and examinations, the case is altered. The class of 100 or more becomes seriously excessive."

Further on in the same Report the Commission wrote :—

"We, therefore, definitely press this point on the consideration of the Governments of Bengal and of Eastern Bengal and Assam, and recommend that for the present a proportion of 1 to 15 between the staff and students should be regarded as the lowest proportion of teachers to students that is compatible with efficiency."

(ii) In dealing in 1906 with a suggestion for the establishment of a College at Ranchi, the Government of Bengal wrote as follows to the Government of India :—

"At German Universities, which are non-residential, the average number of students to each professor is about 14. At the Tokio University the proportion is approximately one to twelve; and at Oxford colleges it is believed that it is somewhat similar. At the Universities of Michigan and Toronto it is one to six. It follows from what has been said above that, at a college of the stamp of that proposed at Ranchi, the staff should, properly speaking, be considerably stronger than is thought necessary in European Universities. As, however, it is impossible to provide funds to that extent, it has been decided that the ratio of professors to students shall, as nearly as possible, be one to fifteen."

(iii) The proposals of the Dacca University Committee as modified by the local Government give a total of 203 teachers to 2,770 students or one teacher for every 13½ students.

(iv) Under the proposals of the Patna University Committee, it is intended that the University and the constituent colleges excluding special departments, the training college and the external colleges, should have one teacher for every 12 students.

(v) The report which has been prepared by the Central Provinces and Berar University Committee suggests that for Arts and Science courses at Nagpur itself, there should be just over 10 students per teacher and at external colleges about 14.

6. The question of the number of professors required is closely bound up with that of the provision of tutorial teaching in the colleges; and the present state of the latter question has been described on page 161 of the last Quinquennial Report on Education, to which a reference is invited. It has been urged that the chief need of the average student in a college is to be shown how to work and to use his intelligence. It has also been pointed out that one among the advantages of the tutorial system is that the staff is thereby much better informed regarding the work and abilities of each student and the students at the same time are made more conversant with the qualities and mental outlook of the professors.

7. In this connection it is worth noting what the committees of new universities have recommended regarding the size of classes :—

(i) The Dacca University Committee did not object in principle to large classes. But they said as regards the junior classes, "such instruction should be given only in comparatively small classes,

and we think that they should not contain more than 40 students. But for the great expense involved by the multiplication of junior classes, we would have suggested a lower figure" (page 37). For B. A. pass, there are to be lectures (page 38) possibly to a 100 or more at a time (page 36). But the tutorial work, which will take up most of the time, is to be in small classes of 20 (page 38). For B. A. honours, the classes will be comparatively small. Students will get 12 lectures and 1 hour's tutorial work (in groups of two) once a week.

(ii) The Patna University Committee recommended, though not unanimously, junior classes of at most 40, with one weekly lecture in larger classes (page 34); for the B. A. pass and honours the same arrangement as at Dacca.

(iii) The Central Provinces and Berar University Committee said that instruction to Intermediate classes of Arts should be of a personal nature, given to classes of not more than 20 students, though lectures might also be delivered to as many as 150 students. As regards Physics, Chemistry and Biology, instruction should be by means of lectures, tutorial work and laboratory classes, tutorial classes not containing more than 20 students and laboratory classes not more than 15. B. A. pass instruction should be by means of lectures and tutorial work in classes of not more than 20 students. Instruction for B. A. honours and M. A. should be by means of lectures and tutorial instruction to groups of two.

Number of students per teacher in Arts Colleges.

* There is only 1 college with 67 pupils and 12 teachers.
† There is only 1 college with 2 teachers and 25 pupils.
‡ Includes 3 Native Bazar colleges.

Collegiate education

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Communicating to the Syndicate of the University of Madras
letter from the Govt. of India forwarding copy of ~~the~~ an abstract
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To the Registrar, University of
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