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School of Arts, Madras
Reviewing the report on the
working of the — during
1897-98

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JANUARY.

School of Arts, Madras.

Reviewing the report on the working of the --- during 1897-98.

Formerly the percentage of mofussil students was somewhat greater, but the establishment of technical schools in certain districts has rendered it unnecessary for the pupils of those districts to go to Madras for what can now be obtained locally :—

Districts.	Number of students.	Districts.	Number of students.
Madras	482	Mysore	4
Gódvári	11	Kistna	2
Tanjore	10	Tinnevely	2
Chingleput	8	Salem	2
North Arcot	7	Bellary	1
Coimbatore	6	Nilgiris	1
South Arcot	4	Malabar	1
Madura	4	South Canara	1
		Total	546

8. The following table gives the general educational attainments of the pupils which show distinct signs of improvement, but the statement that only 14 are ignorant of English is scarcely correct, as the majority of those who are stated to be able to "read and write English" are simply learning to do so. It is to be feared that little real progress will be made with technical education among the artisan classes till the standard of general education among them is materially higher than it is at present :—

Examination passed.	1896-97.	1897-98.
B.A. Examination	2	1
B.A. Examination	1	1
Matriculation Examination	4	9
Higher Examination for Women	3	7
Lower Secondary or the late Middle School Examination	28	47
Primary Examination	549	418
Can read and write English	47	14
Ignorant of English		
Total	633	546

9. In the subjoined table are given the numbers attending each drawing class, from which it will be seen that the falling off in attendance is entirely in the elementary and pre-elementary classes :—

Division.	Class.	Number on rolls on 31st March 1897.	Number on rolls on 31st March 1898.
Division I	1. Pre-Elementary or standard drawing class	280	222
	2. Elementary drawing class	220	180
	3. Group certificate class	120	126
	4. Advanced class	12	18
Division II	5. Special or painting class	1	..
	Total	633	546

10. *Industrial classes.*—The number of paid and unpaid apprentices in each of the industrial classes is shown in the next table. The number of paid apprentices increased during the year by 16, and the number of unpaid apprentices diminished by 26. Of the 190 apprentices in the school at the end of the year, 93 or nearly one-half of them were sons of artisans :—

Class.	1896-97.			1897-98.		
	Paid apprentices.	Unpaid apprentices.	Total.	Paid apprentices.	Unpaid apprentices.	Total.
Wood-carving	41	14	55	43	14	57
Carpet-weaving	11	7	18	10	5	15
Metal-work	19	33	52	27	22	49
Jeweller's work	7	14	21	9	8	17
Pottery manufacture	11	10	21	13	8	21
Decorative painting	11	22	33	14	17	31
Total	100	100	200	116	74	190

In the following table the classification of the parents of apprentices according to occupation is given.

Departments.	Officials.	Inferior servants.	Traders.	Land-holders.	Artisans.	Coolies.	Mendi-cants.	Others.	Total.
Wood-carving department	7	6	7	6	27	4	..	..	57
Carpet-weaving	..	3	2	1	4	5	..	..	15
Metal-work	2	9	2	1	29	6	..	..	49
Jeweller's work	3	9	..	..	5	..	..	..	17
Pottery	..	2	..	..	15	4	..	..	21
Lacquer work	..	16	2	..	13	..	..	..	31
Total	12	45	13	8	93	19	..	..	190

Wood-carving class.—In this class wood-carving and cabinet-making are taught, and the bulk of the work turned out is of a very high quality, the chief defect being at times a want of finish in the fitting and a general massiveness of construction that is not always appropriate. The woods chiefly employed are Burmese teak, black wood and a little satin wood. It is always difficult in Madras to get even moderately well-seasoned timber, and it would be a great advantage to this class if a fairly large stock of timber could be maintained, as it would then be possible to ensure that it was properly seasoned. It would probably be of advantage, if the Forest Department could supply the school with logs of some of the great variety of what are generically termed jungle woods, with which trials and experiments in joinery, cabinet-making and turning could be made, and the results from time to time made public. The equipment of tools and plant is moderately good.

Carpet-weaving.—The utility of this class is very doubtful, as the pupils who work in it seldom if ever keep up the trade when they leave the school. If the class paid its expenses or nearly so, there would be some justification for keeping it open; but it does nothing of the kind, and except that it maintains an indigenous but nearly extinct industry and art, I fail to see of what advantage it is.

Metal-work.—Till quite recently the work done in this class was entirely confined to ornamental copper and silver work chiefly repoussé. From time to time exceedingly fine specimens were executed, and a good deal of the hammered work was used in the wood-carving department in the form of panels and plaques for cabinet work. A certain amount of hammered brass work was also done, but except in silver practically no castings were ever made, and the boys were taught nothing of the art. During the latter part of the year under review, the services of the instructors and pupils in this class were specially placed at my disposal to carry out experiments in the manufacture of articles of aluminium, and it did not take long to demonstrate the possibility of working up that metal into marketable forms in this country. It will, however, be convenient to deal with these experiments separately at the conclusion of this report.

Pottery.—From an educational point of view, this is a small and unimportant class, and the work done is exceedingly unsatisfactory. The manufacture of pottery by paid workmen is, however, an important part of the industrial work done in the school, and there is but little doubt that the pottery department is a very useful part of the institution. It is, however, a long time since any advance or improvement in the art was made in the school, and it would certainly be advisable to place the department for a few years, say five, under the superintendence of a practical English potter specially got out for the purpose. The kilns are worn out, the machinery old and the tools both out of date and badly erected. There is no one in the school capable of effecting a change, and it appears to me very undesirable to continue as at present, and I am strongly of opinion that expert assistance would be able to greatly increase the effectiveness of this department.

Jeweller's work.—This class appears to be of doubtful utility, and since the manufacture of gold ornaments was given up, the quality of the work has degenerated. During the present year (1898), the class has been working chiefly in aluminium, which, in some respects, is a very much more satisfactory metal than copper to practise with. Unfortunately it cannot be easily soldered. At the present time

this class is principally employed in doing the lighter and finer work of the metal-work class, and in this way the boys are learning something that will probably enable them to earn a livelihood in the future.

Decorative work.—This class continues to do good work, chiefly lacquered trays, screens and panels, painted fans and occasional work for churches. The lacquer work unfortunately fades after a time, and it will be desirable to carry out some experiments with a view to preventing the discoloration of the ground which invariably takes place.

11. *Special classes.*—In the following table the number of students on 31st March 1898 in the modelling, engraving, architectural drawing and evening classes is compared with that of the previous year. There was an increase in all the classes except the evening drawing class. From this class eight passed the elementary examination in freehand drawing, seven in geometrical drawing and one in design:—

Name of class.	1896-97.	1897-98.
Modelling class	21	26
Engraving class	41	48
Architectural drawing class	30	33
Evening class	21	12

12. *General education classes.*—At the end of the year there were 127 pupils in these classes distributed as per marginal statement as compared with 176 on the corresponding date in the previous year. The Assistant Inspector of Schools, Presidency Division, examined the classes on the 28th March and reported satisfactorily upon the work done. Personally I am inclined to think that the results hitherto attained are not good, and chiefly because sufficient stress has not been laid on the extreme importance of giving a good general education to such artisans as we are trying to bring up in our technical institutions.

13. *Examinations.*—The results of the various Government technical examinations held in November 1897 are compared with those of the previous year in the following statement:—

Subjects.	Grade.	1896-97.		1897-98.	
		Number appeared.	Number passed.	Number appeared.	Number passed.
Freehand outline drawing	Elementary	114	59	101	77
	Intermediate	83	34	53	11
	Advanced	11	4	4	..
Geometrical drawing	Elementary	81	37	88	46
	Intermediate	36	10	27	14
	Advanced	5	1	..	..
Design	Elementary	69	35	41	15
	Intermediate	12	6	2	1
	Advanced	..	..	1	1
Painting	Elementary	52	24	36	14
	Intermediate	11	6	5	4
	Advanced	1	1	..	..
Modelling	Elementary	11	8	6	6
	Intermediate	1	1	2	2
	Advanced	1	1	..	..
Wood-engraving	Elementary	6	2	6	4
	Intermediate	..	..	..	..
	Advanced	4	4	..	..
Copper-plate engraving	Elementary	9	7	8	6
	Intermediate	10	9	7	7
	Advanced	1	1	2	2
Cabinet-making	Elementary	9	6	6	6
	Intermediate	3	..	..	..
	Advanced	1	1	2	2
Silversmith's work	Elementary	4	2	3	2
	Intermediate	2	2	1	..
	Advanced	6	4	8	5
Pottery manufacture	Elementary	..	..	2	2
	Intermediate	..	..	..	..
	Advanced	1	1	..	..

During the year one student, W. C. White, obtained a group certificate in drawing. The results of the technical teachers' certificates examination in drawing were as follows:—

Examination.	Number appeared.	Number passed.		
		First class.	Second class.	Total.
Freehand drawing, Elementary	14	..	7	7
Do. Intermediate	4	..	4	4
Geometrical drawing, Elementary ..	2	..	1	1
Total ..	20	..	12	12

14. *Employment of students.*—The names of all the students who left the institution during the year after passing a public examination are given below. Of the 18 students included in the list, ten obtained employments during the year:—

Names.	Highest examination passed.	Period spent in the school.	Present occupation.	Salary.
1. A. Arokiasami Asari.	Jeweller's work E.	About 4 years.		..
2. J. Devarajulu Nayudu.	Geometrical Drawing E. Design E. Painting E. Freehand Drawing I. Freehand Outline Drawing I. Design—II class E.	About 5 years.	Drawing master, Chicacole ..	Rs. 25.
3. P. Arumagiri Nayakar.	Geometrical Drawing E. Freehand Drawing, Technical Teachers' Certificate Examination E.	About 5 years.	Drawing master, Gudiyattam Municipality.	.. 15.
4. P. Rungiah Nayudu.	Silversmith's Work E. Freehand Drawing E. Silversmith's Work E.	2 years ..		..
5. K. N. Doraiswami Mudali.	Freehand Drawing I. Geometrical Drawing I. Painting I.	5 years ..		..
6. A. D. Pushpanadani.	Freehand Outline Drawing E. Painting E.	4 years ..	Designer at Messrs. P. Orr & Sons, Madras.	Daily wages.
7. R. Thomas Asari.	Jeweller's Work E.	4 years ..	Goldsmith, Messrs. F. P. Bhungara.	Do.
8. C. Varadarajulu.	Group certificate and Advanced Geometrical Drawing	6 years ..	Student in Draftsman class, Engineering College, Madras.	..
9. T. Shanmuga Asari.	Jeweller's Work E. Freehand Outline Drawing E. Freehand Outline Drawing A.	5 years ..	Employed under a private goldsmith.	Rs. 7.
10. K. Swaminda Rau.	Design I. Painting I. Group certificate	3 years and 6 months.	Drawing master, High School, Chicacole.	.. 25.
11. T. Madavan Pillai.	Freehand Outline Drawing E. Geometrical Drawing E. Design E.	3 years and 4 months.		..
12. M. Govindarajulu Pillai.	Freehand Outline Drawing I. Wood Engraving I. Copper-plate Engraving I.	4 years ..	Drawing master, Technical Institute, Madura.	Rs. 30.
13. E. J. Venkatachalam.	Jeweller's Work E.	3 years ..	In a private shop.	.. 7.
14. C. Singaravelu Asari.	Cabinet-making E.	6 years ..	Carpenter in Messrs. Vest & Co.	On daily wages.
15. A. Arumuga Mudali.	Cabinet-making I. Freehand Outline Drawing E.	4 years ..		..
16. E. J. D'Costa.	Cabinet making E. Group Certificate in Drawing	7 years ..	Draftsman, Revenue Survey.	Rs. 10.
17. T. Shanmuga Asari.	Diploma in Drawing	6 years ..	Nil.	Nil.
18. Gulam Mubiddin Khan.	Freehand Outline Drawing I. Geometrical Drawing E.	1 year and 6 months.	Nil.	Nil.

E. = Elementary. I. = Intermediate. A. = Advanced.

The demand for drawing masters in mofussil schools still continues to absorb a considerable number of the passed pupils of the school, but beyond this particular sphere of employment it does not appear that there are any satisfactory openings for them. It is true that the records of past pupils have not been accurately kept, and it is doubtful if it is possible to keep them; but it is almost certain that hitherto the training given in the School of Arts has not been sufficiently superior to that which

can be got either in private firms or in the bazaar to enable its passed pupils to do anything for themselves out of the ordinary. The wood-carving, the lacquer work and the repoussé work are exceptionally good, but the demand for such work is locally limited, and the skilled carvers, painters and metal-workers find their services are not wanted. As pure artisans or tradesmen they have many rivals in the bazaar equally good. The fact is on the industrial side the School of Arts is training up a class of workmen for whom it will have to find employment within its own walls, and there is no doubt that if commercial considerations were more thought of on this side of the work of the school, a very considerable export business might be worked up. If the artisans from the School of Arts are to do anything beyond the requirements of the bazaar, they must be trained to so high a standard that they will be competent to take the place of the imported workmen and foreman who are brought out at great expense from home. This can only be done by working up the industrial side of the school till its operations involve the turn over of tens of thousands or even lakhs instead of thousands of rupees, by re-modelling the workshops and fitting them up with suitable machinery and by the employment of instructors or managers of each department who are acquainted with the local peculiarities of the country and its people and at the same time are fully abreast of the times in the matter of labour-saving machinery and modern methods of working. Agencies for the sale of the outturn would be required in England, Australia and America, and a careful study would have to be made of what will sell and what will not. Advertising would also be a necessity in some form or other, and in time a sufficiently big market would probably be created for the productions of the school as would enable it to give its pupils a proper training and to employ men who would be in a position to really assist in the development of the material resources of the country. Of course it goes without saying that the present class of uneducated pupils are not the best material to work on, and a system ought to be devised whereby the best pupils of mofussil schools would be given an opportunity of getting a deeper and more thorough insight into the trades they are learning. I am of opinion that one trade at a time should be taken in hand, and for reasons which need hardly be stated here, I think a beginning should be made with the metal-working class. It may perhaps be advisable to clearly point out that such a development as I contemplate can never be carried on but at a loss, yet I see no reason why that loss should really amount to more than the salaries of the educational staff, managers or foremen and the office establishment. To avoid as much as possible competition with local firms, every effort should be made to create an export trade. Under proper conditions it does not seem at all impossible that the cheap labour of India, like that of Japan, should be able to compete with success in the markets of the world for such things as still require manual labour and manual skill in their production.

15. *Library and museum.*—At the close of the year, 80 new books were added to the library, which now contains 701 volumes. The technical sections of the library are very deficient, and it is a pity that some arrangement cannot be made with the Trustees of the Victoria Technical Institute, whereby their technical library, which is now stored away in a go-down, could not be made available for use. By the time the cases are unpacked and the books set up, they will probably be more or less antiquated. No additions to the museum have been made during the year, and to make it of any real educational value will require the expenditure of a large amount of money. It seems to me that it would probably, for the present at any rate, be better to make the School of Arts museum a branch of the Central Museum and place it practically under the management of the Superintendent of that institution. Some of the best specimens of work done in the industrial departments might fittingly find a permanent place in the museum, but so far everything made in the school has been sold, and though in Calcutta and Bombay specimens of Madras work are to be found, in the place where they are made none are retained. An annual allotment of Rs. 1,000 to each of the more important industrial departments would do much to remedy this defect. The number of visitors to the museum was 67,180 as against 53,168 in the previous year. From observations extending over the last six months, I find that the majority of these so-called visitors belong to the cooly classes and simply come in to rest themselves. There is no particular objection to this, but the recording of all their names seems a useless work, and the figures relating thereto which are given every year in the annual report are absolutely valueless. Since last January specimens of aluminium work have been on exhibition in the museum and have undoubtedly attracted a large

number of visitors from the educated classes. If the annual report gave only the numbers of those who are able to sign their names in English, the figures might be of some value as an indication of the extent the museum was patronized for legitimate purposes.

16. *Furniture, tools and plant.*—No additions were made to the furniture in the school during the year. The steam engine and boiler used for driving the edge runners in the pottery department was condemned by the Inspector of Boilers, and as a temporary expedient a small engine has been hired from the Public Works Workshops. Recently the installation of a gas plant and gas engine has been sanctioned by Government, but pending the passing of definite orders as to the future working of the school, it has not been thought advisable to take any steps to install the plant. At the end of the year a considerable sum was expended on small tools for the metal-working department to enable the manufacture of aluminium utensils to be taken in hand, and some money was spent on the tile press to render it suitable for metal stamping. The alterations were made in the College of Engineering Workshops and proved successful, and a large number of half-pint tumblers have been made with the machine. At any time it can be re-converted into a tile press in less than a couple of hours.

17. *Finance.*—I have thought it desirable to present the accounts of the schools in the form No. V prescribed for technical, industrial and art schools. Unfortunately the accounts have not been kept in such a way as to render this statement absolutely accurate when the details of each department are scrutinized, but the totals are correct. In the three tables below are given the usual statements of the value of work turned out in each department, the amount actually realized by sales during the year and the receipts and charges. Also in the next table is given the number of coolies and daily workmen employed in each department, with their total daily wages on the 31st March 1898. It will be seen that nearly half the men so employed were specially taken on for the aluminium work:—

Departments.	Value of work turned out in the year	
	1896-97.	1897-98.
	RS. A. P.	RS. A. P.
1. Wood-carving	1,573 15 6	1,748 2 7
2. Carpet-weaving	560 14 10	646 7 5
3. Silversmith's work	1,807 2 9	671 14 0
4. Pottery	2,900 1 9	3,015 1 4
5. Lacquer work	436 1 0	722 13 6
6. Jeweller's work	250 1 6	175 7 0
7. Engraving	111 2 0	61 6 0
8. Drawing and miscellaneous	437 1 9	40 8 6
9. Aluminium work		150 14 8
Total ..	8,076 9 1	7,292 11 0

Manufactures.	Receipts on sales of manufactures.	
	1896-97.	1897-98.
	RS. A. P.	RS. A. P.
1. Wood-carving	1,789 14 0	422 4 3
2. Carpet-weaving	666 1 11	407 0 11
3. Silversmith's work	1,257 13 8	708 7 1
4. Pottery	2,741 15 1	2,887 0 5
5. Lacquer work	556 11 0	552 3 0
6. Jeweller's work	226 2 1	159 12 9
7. Engraving	128 3 6	50 8 0
8. Drawing and miscellaneous	21 2 0	7 4 0
9. Aluminium work		0 12 0
Total ..	7,377 15 3	5,195 4 5

Receipts.					Charges.				
Drawing Class.					Drawing class.				
	RS.	A.	P.	RS. A. P.		RS.	A.	P.	
School-fees	1,700	6	6	1,753	2	6	609	0	6
Sales	57	12	0		Do. temporary		1,215	8	7
					Clerks		204	0	0
					Scholarships		1,273	1	7
									3,292 8 2
Cash sales	1,370	9	7						
Realization upon bills	3,555	14	10						
Advances	241	0	0						

Department.							Number of coolies.	Daily wages.		
								Rs.	A.	P.
Pottery department	..	..	..	..	..	..	35	8	7	6
Silversmith's work	..	..	..	..	..	..	4	1	10	0
Wood-carving department	..	..	..	..	..	..	3	1	10	0
Carpet-weaving department	..	..	..	..	..	..	5	1	14	6
Aluminium department	..	..	..	..	..	..	47	33	0	0
General	..	..	..	..	..	..	2	0	8	3
Total							96	47	2	9

The work turned out during the year decreased slightly and the receipts from sales very considerably. I am not in a position to give any definite explanation of the causes of the reduction in sales, but it is probably in part due to the general decrease of expenditure throughout the country owing to the famine. The total charges, including liabilities and excluding the amount for repairs to the school building, amounted to Rs. 40,362-14-11 as compared with Rs. 34,900-15-5 in the previous year. The increase is entirely due to a special grant of Rs. 3,800 for the aluminium work which was made at the end of the year, and to the inclusion in the accounts of the sum of Rs. 2,251-5-4 for technical scholarships which for the first time have been included in the accounts of this institution. The liabilities on the 31st March 1898 were Rs. 167-0-4 compared with Rs. 188-9-10 in 1897, whilst the outstandings were Rs. 2,139-4-4 against Rs. 1,020-8-7 in the previous year.

Rs. 2,139-4-4 against Rs. 1,020-8-7 in the previous year.

18. The different registers and accounts were properly kept. The provisions of the Educational Rules were carried out as far as possible. The service-registers of the non-gazetted officers and the inventory of valuable stock have been written up to date.

19. *Aluminium.*—The report for the year would be incomplete without some reference to the attempt I have been making through the agency of the School of Arts to introduce aluminium to the people of this country as a suitable material for their cooking and domestic utensils. For these purposes its superiority is undeniable, but the experiment has been made chiefly in the hope of creating a market for a metal which I think we shall ultimately be able to produce in the country. All the copper and brass used in India is imported, and it would undoubtedly materially add to the prosperity of the country if to any appreciable extent these imported metals could be replaced by one produced in the country itself. In November 1897, I returned from furlough and I brought with me 56 lb. of sheet metal and 56 lb. of ingots which had been presented by the British Aluminium Company in order that I might try the experiment of getting it manufactured into marketable forms by the metal-workers in the Madras Presidency. With your permission I was allowed to utilize the services of the metal-working class at the School of Arts. I commenced working with the metal on the 26th November 1897, and since that date this particular section of the school has been practically under my orders. The maistry of the class, K. Gangadhara Pathar, evinced great interest in the work and has materially contributed to the success which so far has been obtained, whilst later on M.R. Ry. M. Velayuda Asari, the acting Assistant Superintendent, has rendered very valuable assistance in the experimental work and in the subsequent arrangements which had to be made to start manufacturing on a scale comparatively large when the other work of the school is considered. Early in the new year, Messrs. Best & Co. took up the agency for the supply of metal, and a consignment of six tons was sent out to Madras, but it did not arrive till nearly the end of March, and it was not till the 22nd of that month that I was able to commence work on a practical scale. In February, whilst on tour inspecting the technical schools in the south of the Presidency, I delivered a number of lectures on the metal at Tinnevely, Madura, Trichinopoly and Kumbakonam and brought it prominently to the notice of a large number of the educated classes and later in Madras by lectures at the School of Arts and by occasional articles contributed to the press; this new departure in technical work has been fairly widely advertised. A grant of in all Rs. 3,800 was spent before the 31st March 1898 chiefly on metal and tools, but no sales were made till after the end of the official year. Since then till now (1st June) the expenditure has been roughly Rs. 6,000 and the receipts from sales

Rs. 3,000, whilst the stock of metal in hand mostly in the manufactured form is valued at an amount which indicates that so far we have incurred no loss, but probably a small profit. It is far too soon yet to express an opinion on the ultimate prospect of establishing the metal on a firm basis as a substitute for brass among the wealthier classes, but I have no doubt whatever that it will in future always be used to some extent in India. This attempt to create a market for a new metal has involved training a large number of workmen in its peculiarities which are many and has thrown a large amount of extra work on the Assistant Superintendent, the clerical staff and the maistry of the metal-working department, and I desire to bring to your notice the very satisfactory way in which they have met the additional calls which have been made upon them.

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Staff.—Mr. J. P. Lewis, Deputy Superintendent, Reformatory School, Chingleput, acted as Superintendent of the school from 11th June to 10th September 1897, when Mr. Holder was on privilege leave. Subsequently Mr. Holder fell ill and was granted leave on medical certificate from 28th November 1897 to 11th January 1898. Mr. Chatterton was in charge of the school only from 14th December. Owing to continued ill-health, Mr. Holder had to relinquish his duties on the 26th February and was granted six months' furlough.

2. *Accommodation.*—Pending the re-organization of the school, the temporary arrangements made to provide for the increased numbers had to be continued during the year. The Director has addressed Government to sanction a rent allowance of Rs. 50 to the Superintendent and to utilize the free quarters now provided for him for the industrial section.

3. *Library and museum.*—The Director fully endorses Mr. Chatterton's views regarding improvements to the library and the museum, except his proposal to place the museum under the control of the Superintendent of the Central Museum—an arrangement which would be impracticable. An annual allotment of Rs. 700 will be made in future budgets towards the development of the museum. This is all the Department can afford to do at present.

4. *Apparatus and appliances.*—It is noted with regret that the installation of gas plant and a gas engine has had to be deferred pending the passing of final orders on the future working of the school. The Director trusts that Government will be able to pass early orders on the re-organization of the institution, as its working is seriously hampered by the state of suspense under which the school and staff have been labouring for years.

5. *Strength and attendance.*—(i) There had been a considerable diminution in the total strength, the number on the rolls on the 31st March last having fallen to 546 from 633 on the corresponding day in the previous year. The decrease under general students attending the drawing classes was most marked. The average daily attendance was again very low when compared with the number on the rolls, and will perhaps continue to be so, so long as the school is resorted to by a large number of students attending other schools or engaged in some avocation in life. No information has been furnished regarding the punishments inflicted for irregular attendance and for absence without leave. The number of stipendiary scholars had increased from one to nine. The Superintendent should have specified the districts to which these students belonged. Muhammadans and Panchamas excepted, all the classes shared in the general decrease in numbers. Non-Brahman Hindus preponderated as usual. The number of Europeans fell from 45 to 39, the decrease being confined to female students. The absence of Native Christian female students is disappointing. Nearly 70 per cent. of the students belonged to the poorer classes. Mr. Chatterton's remarks on the fluctuations in the classification of students under the different occupations are noted. Every endeavour should be made to furnish reliable statistics in future reports. All the districts, with the exception of Ganjam, Vizagapatam, Nellore, Cuddapah, Kurnool, Anantapur and Trichinopoly, were represented on the rolls. Nearly 90 per

cent. of the students, however, belonged to Madras, and Gódvári and Tanjore contributed 11 and 10 students, respectively. It is satisfactory to note that the number of pupils who have passed a public test rose from 37 to 114, notwithstanding the general decrease in the strength. The Director is at one with Mr. Chatterton in thinking that technical education among the artisan classes cannot make real progress until the standard of general education among them is much higher than it is at present. The number of students ignorant of English fell from 47 to 14; but the majority of the students returned as able to read and write English have but a very scanty knowledge of that language.

(ii) *Drawing classes.*—Notwithstanding the decrease in the total strength, the group certificate and advanced classes were slightly stronger than in the previous year, and the advanced class contained the largest number on record. There was no student in Division II—Fine Arts branch—special class.

(iii) *Industrial classes.*—The number of apprentices in the industrial classes stood at 190 as against 200 at the close of 1896-97. The wood-carving class was better attended, while the strength of the other classes—that of pottery excepted—retrograded. The number of paid apprentices increased from 100 to 116, and nearly one-half of the apprentices were artisans. There was a considerable fall in the value of the work turned out in the silversmiths' and jewellers' classes, as these classes were working chiefly with aluminium. The receipts from the sale of manufactured articles in all the classes, the pottery class excepted, show a diminution. When addressing Government with regard to the appointment of a new Superintendent the Director suggested that the gentleman selected in England might be required to gain some experience in pottery before coming out. Mr. Chatterton's suggestion that the Forest Department might supply logs of various kinds of woods for experiment is a good one and will not be lost sight of. The Director has read with great interest Mr. Chatterton's account of his efforts to introduce aluminium. These efforts bid fair to give rise to a most important industry. Mr. Chatterton deserves the special thanks of all who are interested in the industrial progress of South India for the foresight he has shown in introducing this metal to the native public, for the unsparing efforts he has made to acquaint himself with the domestic requirements of the people; and for the intelligence and skill he has displayed in meeting those requirements.

(iv) *Special classes.*—The classes for modelling, engraving and architectural design and the evening classes contained 119 students against 113 in 1896-97, and all the classes, the evening classes excepted, participated in the increase.

(v) *General education classes.*—It is very disappointing to note that the strength of the general education classes dwindled down from 176 to 127. Mr. Chatterton has furnished no explanation for the serious fall. These classes obtained a fair report at the Assistant Inspector's examination, but better attention should be paid to translation and arithmetic.

6. *Examinations.*—As many as 194 out of 374 students passed in the several examinations in drawing: 157 for the elementary, 36 for the intermediate and one for the advanced grade; one candidate secured a group certificate in drawing, and 12 out of 20 secured technical teachers' certificates. From the industrial classes 21 passed for the elementary, nine for the intermediate and two for the advanced grade. These results show improvement over those of the previous year.

7. *Former students.*—Ten out of eighteen students trained in the school succeeded in getting employment during the year on emoluments ranging from Rs. 7 to Rs. 30. The Director has read with much interest Mr. Chatterton's remarks on the desirability of extending the sphere of work for skilled workmen. No attempt seems to have been made to open a register of all students leaving the institution after passing a public test in drawing or in an industry. The instructions on this important subject contained in the last review should be carried out as far as practicable.

8. *Physical education.*—The physical training of students appears to have received due attention, though no reference has been made to the subject in the report.

9. *Finance.*—Sales of school manufactures yielded only Rs. 5,195 and fees Rs. 1,764 as against Rs. 7,404 and Rs. 2,139 in 1896-97. Of the decrease under sales, Rs. 1,313 related to advances, and a sum of Rs. 896 represents the actual

decrease which, as has already been noticed, was brought about by smaller sales of manufactured articles in almost all the departments. The fall in strength contributed to the fall in the fee income of the drawing classes. Excluding the outlay on buildings, but including liabilities, the charges amounted to Rs. 41,047 as against Rs. 34,901 in 1896-97, and the outstandings were Rs. 2,139. The increase was partly due to the special grant of Rs. 3,800 sanctioned for the aluminium work and the increased outlay on stipends and scholarships. Taking stock and outstandings into account, the net cost to Government amounted to Rs. 31,767 as against Rs. 28,299 in the year previous.

10. *General*.—Mr. Chatterton's important suggestions on the work of the industrial departments will have to lie over until orders have been received on the re-organization of the school.

(A true Extract.)

(Signed) D. DUNCAN,
Director of Public Instruction.

To the Superintendent, School of Arts.
„ Inspectors of Schools.
„ Inspectresses of Girls' Schools.
„ Principals of Colleges.
„ Managers of Industrial Schools.
Copy to Government (with C.L.).

ORDER—No. 1, Educational, dated 2nd January 1899.

The frequent changes that have taken place in the management of the school during the year under review have doubtless retarded to some extent its general development, but a new Superintendent has now been appointed and Government trusts that much progress and improvement will result from the reorganization of the school, which will shortly be carried into effect.

2. The fall in the number on the rolls and in the average daily attendance is noted with regret. As in the previous year the number of students from Madras itself largely preponderates. The decrease in the strength of the general educational classes is, as the Director observes, very disappointing, and should have been explained.

3. The results of the Technical Examinations compare favourably with those of the previous year, 54 per cent. of those presented having passed as compared with 49 per cent. in 1896-97.

4. There was a decrease in receipts, and an increase in charges, the former being attributed to the smaller sales of manufactured articles and to diminished fee receipts, and the latter chiefly to the special grant for the aluminium work. The net cost of the school to Government rose in consequence by Rs. 3,463.

5. In conclusion, Government observes that the most interesting feature of the report is the attempt made by Mr. Chatterton to introduce into this Presidency the working of aluminium. The success attained by him in the short time during which he has been engaged in the work is remarkable, and Government entirely concurs in the observations made by the Director on the subject in paragraph 5 (iii) of his review. Separate orders will issue on the future management of the aluminium industry.

(True Extract.)

H. TREMENHEERE,
Secretary to Government.

To the Director of Public Instruction.
„ Accountant-General.

Ed. P. Sesharam.

Educational (1898) Department.

CURRENT No. 1164



From

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Instruction,
Madras.

No. 10083

Dated 1st September 1898

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of 1898, dated 1st Sep, from the D.P. 1

" "

" 189 , "

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" 189 , "

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ORDER.

P.S.

No. 1872-1-99

I have kept this over pending a visit to the school & consideration of the future arrangements for working the aluminium industry. The present Ed. can now issue. I should like the aluminium question put up separately. I understand that an add'l grant has been made for the industry but don't remember to have seen the papers.

1. The frequent changes that have taken place in the management of the School during the year under review have doubtless retarded to some extent its general development, but a new Superintendent has now been appointed and I trust that much progress & improvement will result from the reorganization of the School, which will shortly be carried into effect.
2. The fall in the number on the rolls and in the

average daily attendance is noted with regret. It should have been reported what notice was taken of the irregularities in attendance of which ^{Mr. Challerton} ~~the superintendent~~ complains.

As in the previous year the number of students from Madras itself largely preponderates. The ~~decrease~~ ^{decrease} in the strength of the general educational classes is, as the Director observes, very disappointing, and should have been explained.

3. The results of the Technical examinations compare favourably with those of the previous year, 54 per cent of those presented having passed ^{compared with} ~~as against~~ 49 per cent in 1896-97.

5. There was a decrease in receipts, & an increase in charges, the former being attributed to the smaller

aluminium
MA

3.

smaller sales of manufactured articles and to diminished fee receipts, and the latter chiefly to the special grant for the aluminium work. The net cost of the School to Government rose in consequence by Rs. 3468.

5. In conclusion, Govt. observes that ~~perhaps~~ the most interesting feature of the report is the attempt made by Mr. Challerton to introduce ^{into} ~~the~~ ^{the working of aluminium} ~~the~~ ^{the} Presidency. The ~~measure~~ ^{measure} of success attained by him in the short time ^{during which} he has been engaged in the work is remarkable, & Govt. entirely concurs in the remarks made by the Director on the subject in para 5 (iii) of his review.

Separate orders will issue on the future ^{management} ~~conduct~~ of the ~~manufacture~~ aluminium industry.

22/10/98 H.T.
23-10-98

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