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(முதல் பாகம்)

பொருளடக்கம்.

I. எண் மானமுள் எண் குறிப்பும் :—எண்கள் ; இலக்கங்களால் எண்களைக் குறித்தல் ; எண்களின் சுய மதிப்பும் வந்தான மதிப்பும் ; ரோமன் வழி. II. கோடுகளும் புள்ளிகளும் நீள அளவையும் :—கீழ்ப் ; ஸ் பெஸ்கன் ; கோடுகள் ; புள்ளிகள் ; கோடுகளின் வகைகளும் நேர்கோடுகளைப் பரீட்சிக்கும் விதமும் ; புள்ளிகள் குறித்தலும் கோடுகள் இழுத்தலும் ; நீள அளவு ; மூலவட்டங்களின் உபயோகம் ; எண்களை நீளத்தால் குறித்தல். III. கூட்டல் :—கூட்டலின் அர்த்தமும் உபயோகமும் ; கூட்டலைப்பற்றிய ஓர் உண்மை ; கூட்டலைப் படத் தால் காண்பித்தல் ; அடைப்புக் குறிகள் ; கூட்டல் ; பெரிய கணக்குகள் ; கழித்தல் ; கழித்தலைப் படத்தால் காட்டுதல் ; பலவகை கழித்தல் வழிகள் ; கூட்டல் கழித்தலைப்பற்றின சில விதிகள் ; கலப்புக் கூட்டலும் கழித் தலும். IV. பெருக்கல் :—பெருக்கலைப் படத்தால் காண்பித்தல் ; ஒரு ஸ்தான எண்ணால் பெருக்கல் ; பாக்டர் களால் பெருக்கல் ; எந்த எண்களைக் கொண்டும் பெருக்கல் ; பெருக்கலில் குறுக்கு வழிகள். V. வகுத்தல் :— வகுத்தலைப் படத்தில் காட்டுதல் ; ஒரு ஸ்தானத்தால் வகுத்தல் ; பாக்டர்களால் வகுத்தல் ; 10, 100 முதலிய வகைகளால் வகுத்தல் ; நீள வகுத்தல் ; வகுத்தலின் இன்னொரு அர்த்தம் ; சில பெருக்கல் வகுத்தல் விதிகள் ; பெருக்கல் வகுத்தலில் சில குறுக்கு வழிகள் ; ஒன்பதுகளை நீக்குதல். VI. பலவின வெண்கள் :—அளவை வாய்ப்பாடுகள் : நாணய அளவுகள் ; நிறை அளவுகள் ; நீள அளவு ; பிடித்தல் அளவு ; கால அளவு ; காசு அளவு ; எண்ணிக்கை அளவு ; இனமாற்றதல் ; பலவின வெண் கூட்டல் ; கழித்தல் ; பலவினவெண் பெருக்கல் ; பலவின வெண் வகுத்தல். VII. கோணங்களும் அவற்றின் அளவும் :—திசை, திசைமாற்றம் ; கோணம், கோணங்களை ஒப்பிட்டுப் பார்த்தல் ; நேர்கோணம் ; சதுரங்களும் ரெக்டாங்கிள்களும் ; வட்டங்கள் ; கோணங்களின் அளவு ; கோணங்களின் வகைகள் ; ப்ரொட்டாட்டரைக் கொண்டு கோணங்களை வரைதல் ; ஒரு புள்ளியிடத்தில் உள்ள கோணங்கள். VIII. டெஸிமல்கள் :—டெஸிமல்களின் அர்த்தம் ; டெஸிமல் குறிப் பில் ஸ்தான மதிப்பு ; இரண்டாவது டெஸிமல் ஸ்தானம் ; டெஸிமல் குறிப்பு பொது விவரம் ; ஒரு டெஸிமல் ஸ்தானமுள்ள எண்கள் ; டெஸிமல் கூட்டல் ; டெஸிமல் கழித்தல் ; எந்த எண்களையும் கழித்தல் ; 10, 100 முதலியவகைகளால் பெருக்கல் ; ஒரு ஸ்தானமுள்ள முழு எண்ணால் பெருக்கல் ; ஒரு ஸ்தானமுள்ள முழு எண் ணால் வகுத்தல் ; பல ஸ்தான முழு எண்களால் பெருக்கல் ; பல ஸ்தான முழு எண்களால் வகுத்தல். IX. உயர்ந்த பொது அளவும் தாழ்ந்த பொது மடங்கும் :—அளவும் மடங்கும் ; பொது அளவும் மடங்கும் ; உயர்ந்த பொது அளவும் தாழ்ந்த பொது மடங்கும் ; பாக்டர்களால் இரண்டு அல்லது இரண்டிற்கு மேற்பட்ட எண்களின் உ. பொ. அ. உம், தா. பொ. ம. உம் கண்டுபிடிக்கும் வழி ; உ. பொ. அளவைக் கண்டுபிடிக்கும் பொது வழியைப் படத்தாற் காட்டல் ; உ. பொ. அ. பொது வழி. X. சாதாரண பின்னங்கள் :—பலவின அளவுகளின் பின்னங்கள் ; ஒரு கான்சீட் அளவை இன்னொரு கான்சீட் அளவின் பின்னமாகச் சொல்லுதல் ; சமமான பின்னங்கள் ; சமமான பின்னங்களைப் படத்தாற் காட்டுதல் ; பின்னங்களின் சமத்துவம் ; தாழ்ந்த

உறுப்புகள் ; பின்னங்களை ஒப்பிடுதல் ; பின்னங்களின் கூட்டலும் கழித்தலும் ; ஒரு சாதாரண பின்னத்தை ஒரு முழு எண்ணால் பெருக்கல் ; சாதாரண பின்னத்தை ஒரு முழு எண்ணால் வகுத்தல் ; ஒரு பின்னத்தால் பெருக்கல் ; பின்னத்தின் பின்னம் ; ஒரு பின்னத்தால் வகுத்தல் ; ஒரு எண்ணை ஒரு குறிப்பிட்ட டிஸிமினே டர் உள்படி மாற்றல் ; பின்னங்களைச் சுருக்கல். IX. வாடிக்கை முறை :—பலமாதிரிக் கணக்குகள். பரீட்சைக் கேள்விகள். விடைகள்.

முதல் பாகம் 1-வது வகுப்புக்கும் 1-வது பாரத்திற்கும், கிரௌன் 300 பக்கங்கள், விலை அணு 12.

Approved as a Text-Book suitable for School use,

vide Fort St. George Gazette, Part I-B, p. 546, dated 1-11-27.

(இரண்டாம் பாகம்)

பொருளடக்கம்.

பரீட்சைக் கேள்விகள். I. டெஸிமல்களின் பெருக்கலும் வகுத்தலும் : ஒரு ஸ்தான டெஸிமல் எண்ணால் பெருக்கல் ; சமமான பரிசோதனை ; எந்த டெஸிமல் எண்ணாலும் பெருக்கல் ; டெஸிமல்களால் வகுத்தல் ; சமராய்ச் சொல்லல் ; சாதாரண பின்னங்களை டெஸிமல்களாக மாற்றல் ; டெஸிமல்களை சாதாரண பின்னங்களாக மாற்றல். II. சராசரி, டிவிடியா முதலானவை : சராசரி ; ரேஷியோ ; மாறாத ரேஷியோ ; ரேஷியோவின் உபயோகங்கள் ; ப்ரோபோஷன் ; ஸாப ரஷ்டம் ; வருமான வரி ; கடன் மிகுதல். III. பாய் பளவு : பாய்பளவு ; ரெக்டாங்கிள் ; இங்கிலிஷ் பாய்பளவுகளும் ப்ரெஞ்சு பாய்பளவுகளும் ; பாய்பளவு வாய்ப் பாடுகள் ; பினான் வரைதல், அதாவது அமைப்புருவம் வரைதல் ; தரையின் பாய்பளவும் நாற்காலங்களின் பாய் பளவும் ; கட்டக் காகித்தின் உபயோகம். IV. பொது எண் கணக்கு —சமீகாணங்கள் : அக்க கணிதமும் பீஜ கணிதமும் ; சில பெயர் விளக்கங்கள் ; சமீகாணங்கள் ; இன அக்கங்கள் ; அடைப்புக் குறிகள் நீக்குதல். V. முக்கோணங்கள் : அவற்றின் பக்கங்களும் கோணங்களும் : முக்கோண விரிப்பு ; முக்கோணங்களின் கோணங்கள் பக்கங்களுக்குள்ள சம்பந்தங்கள் ; ஒரு புள்ளியிலிருந்து நிகழ்தனைக்கிணங்க மற்றொரு புள்ளி குறித் தல் ; இரண்டு புள்ளிகளிலிருந்து நிகழ்தனைகளுக் கிணங்க மற்றொரு புள்ளி குறித்தல் ; கொடுக்கப்பட்ட அளவு களைக் கொண்டு முக்கோணம் வரைதல் ; வட்டங்களின் சில தன்மைகள் ; முக்கோணங்களின் வகைகள் ; ஓர் புள்ளியிலிருந்து ஓர் கோட்டிற்கு பெர்பெண்டிகுலர். VI. கோடுகளையும் கோணங்களையும் இருசமபாகங் களாக்கல் : இருசம பக்க முக்கோணங்களின் சில தன்மைகள் ; நேர் கோடுகளை இருசம பாகங்களாக்குதல் ; கோணங்களை இருசம பாகங்களாக்குதல் ; காட்டினையும் வட்ட பாகங்களையும் இரண்டு சம பாகங்களாக்குதல் ; பெர்பெண்டிகுலர்கள் இழுத்தல் ; ஸிம்மெட்ரி. பலமாதிரிக் கணக்குகள் ; முதல் பாரப் பாடங்களில் புதிய கணக்குகள் :—கூட்டல் கழித்தல் ; பெருக்கல் ; வகுத்தல் ; பலவின எண்கள் ; கோணங்களும் வட்டங்களும் ; டெஸிமல்கள் ; உயர்ந்தபொது அளவும் ; தாழ்ந்த பொது மடங்கும் ; சாதாரண பின்னங்கள் ; பலமாதிரி. இரண்டாம் பாரப்பாடங்களில் பலமாதிரிக் கணக்குகள். பரீட்சைக் கேள்விகள். அறுபத்தாம். விடைகள்.

இரண்டாம் பாகம் 2-வது பாரத்திற்கு, கிரௌன் 208 பக்கங்கள். விலை அணு 10.

(மூன்றாம் பாகம்)

பொருளடக்கம்.

பரீட்சைக் கேள்விகள் ; அத்தியாயம் I. நூற்றுக்குக் கணக்கிடலும் அதன் பிரயோகங் களும் ; II. நுண எண்களும் பீஜ சமீக்கைச் சேர்க்கைகளும் ; III. சமாந்தரக் கோடுகளும் அவற்றின் தன்மைகளும் ; IV. படக் குறிப்புகள் ; V. ப்ரோபோஷன்—நோனதும் மாறான தும் ; VI. முக்கோணங்களின் சர்வ சமத்துவம் ; VII. முக்கோணங்கள், சமாந்தர நாற்பக் கங்கள், வட்டங்கள் இவற்றின் பரப்புகள் ; VIII. பருமன் அல்லது கன அளவு ; IX. தனிச் சமீகாணங்களும் அவற்றிற்குக் கொண்டுவீடும் யோசனைக் கணக்குகளும் ; X. பலவகைக் கணக்குகள் ; பரீட்சைக் கேள்விகள் ; பலமாதிரிக் கணக்குகள் ; விடைகள் ; பலவின அளவு வாய்ப்பாடுகள். Cr. 8vo. 300 pages. விலை அணு 12.

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UNIVERSITY OF MYSORE—
CONVOCATION ADDRESS

By

MR. C. R. REDDY, M.A. (CANTAB.), BAR-AT-LAW,
Vice-Chancellor, Andhra University.

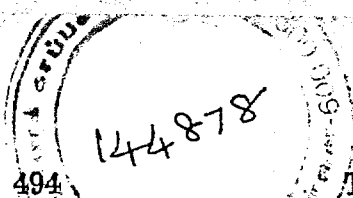
I OWE it to the courtesy of His Highness the Chancellor and other academic authorities of your University that I have the honour to participate in this auspicious function. They have shown me rare consideration for which I am profoundly grateful.

Seven years ago, under troubled feelings, I relinquished the privilege of belonging to the Mysore Service. But as my love for Mysore has known no abatement nor will know any, I rejoice to be back here in this happier hour. But the happiness of my homecoming is marred by the absence of my *Bhai Saheb*, as I used to call him, Mr. Humza Hussain, than whom I have not come across a more gracious or truer soul in all my varied sojourn through life. His courtesy, his urban-

ity, his loyal devotion to friends, his unswerving sense of duty, his unselfish and therefore bright, illuminating outlook on life, and energetic sympathy for the suffering, struggling masses in Mysore, are fast becoming, with lapse of time, twilight memories; and alas, I can no longer enjoy the effulgence of the living sun. Death has also robbed me of the friendly greetings of Professor Srinivasa Rao of the Central College. On his return from America, I did my little best to secure for him an adequate position, knowing how much salaried status counts in our bureaucratic atmosphere. And his career, so full of scientific promise and of inspiring popularity with the students, has been cut off in its prime. The sickle has mowed before the corn was ripe; yet man may not question or complain, but must bow his head in humble resignation.

The Depressed Classes Advancement Trust.

I am afraid I am falling into a reminiscential mood, which is but natural at family



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re-unions. But as a reminiscent mood has no conscience for the time it consumes or the audience it bores, I had better avoid the unavailing retrospect and turn to living themes. Every Indian is proud of the continuous and untiring progress made by Mysore in every direction and of the ceaseless vigilance with which public interests are promoted. The dynamic impulse imparted by Sir M. Visvesvaraya, who effected a rapid and fruitful revolution in the functions of Government, seem to be operating with undiminished, and I trust, more circumspect force. I can think only of one oversight. The scheme for a Depressed Classes Advancement Trust that I had the pleasure to propound has not yet materialised. I should not have mentioned this but for the fact that every one, not excluding the government of the day, gave it an enthusiastic welcome. But perhaps as a publicist I ought to have known that where there is unanimity of sentiment, there is hardly incentive enough for any particular person or set of persons to act, and the will is dissolved in unctious wish. Platitudes are never so effective as contentious truths; they do not give rise to sufficient friction for the generation of motive power.

University Organisation.

Speech is or should be action. The action in which I am now engaged with the generous co-operation of the Andhra academic authorities is University Organisation. And I am further impelled to deal with this subject by the irresistible attraction of the grand educational reconstruction adopted within the last two years by Mysore under the guidance of your famous Vice-Chancellor. It is one of the biggest achievements in Indian educational history; and it is bound to influence other Universities in no small degree.

I have read again and again the great speech in which Sir Brajendranath Seal introduced the new scheme in the Senate explaining its scope and how it was correlated with the psychology of our people and the needs of Mysore. It is a document in which constructive educational schemes have been thought out in every part and detail in terms of our life and conditions. To praise Sir Brajendranath Seal must sound like impertinence on my part. But that will not deter me from saying that in my humble judgment his speech deserves to rank with the greatest documents of our educational history.

Favourable Situation in Mysore.

In relation to University Organisation, Mysore has been exceptionally fortunate in at least two respects. You have a teaching University with a stable staff, immune from mercurial fluctuations of function and locality. And your Government is anxious to operate it in the closest possible co-ordination with its other departments of State, such as Industries, Railways, Public Works, Commerce, Banking, and all the range of its administration and economic enterprises. The University is not regarded as an interloper, and having created a University, they have not left it at a foundlings' hospital as their highest act of statesmanship, and liberally consigned it to thrive on private charity. No wonder then that in its organisation on the side of substantial education and the amplitude of its activities, the Mysore University is advancing and extending with a speed and momentum that breaks my heart with envy, though as an old Mysorean, I allow my humanity to prevail and rejoice unboundedly. Many faculties have been added, still more are in the process of being added; provision

has been made at the different grades for vocational, industrial, technical and technological training and education; archæology and history have been brought together under one roof; the critical and scientific study of Oriental Cultures and Indology have been provided for; the Entrance and First Year Examinations have been abolished to my entire, though belated, satisfaction; and in every way justice has been done to the essentials of an oecumenical University—which is my word for Dr. Seal's international—without neglecting regional needs.

The Oecumenical and Regional Types.

But indeed I fail to see how the two types could be entirely separated and whether there are two types at all anywhere instead of a composite one everywhere. Perhaps it is a difference of degree and not of kind. Regional elements may be found at Oxford itself, let alone Cambridge. The medium of education is English—a regional language; they don't neglect English History and Politics, and since the War, Applied Sciences are receiving increasing attention. Nor is Leeds, which on all accounts rendered the largest amount of national service during the Great War, without its elements of universality. Its woollen, leather and printing departments attract students from all parts of the world. The present Superintendent of your Government Press underwent, I believe, much of his training in Leeds. Even applied science is science and there cannot be a particular which does not imply a universal.

The State in Relation to the University.

But the regional idea is of inestimable value in India from another and more practical aspect. It suggests with compendious clearness the relations that ought to subsist

between the State and the University. No adaptation of a University to regional requirements is possible, unless Government, which is the largest employer of labour in India, actively encourages and promotes such an adaptation and is willing to use the University as its chief depot for supplying the human power required in all its departments and enterprises, as is done by every nation-State in the world. Government would then not merely help to lessen educated unemployment but would provide itself with an adequate motive for financing the University in order to enable it to maintain the highest world standards in all its departments and advance in the van of discovery and invention. When its own graduates are not wanted and overlooked, how is progress, material or moral, possible? Electrical, Railway, Mining, Marine and other forms of Engineering, etc. ought to be cultivated in India and to the highest degree possible, but then the State should not starve its own men in the name of an efficiency that it will not promote. Nor will throwing open this place or that place with fractional, niggardly hand meet the needs of University Organisation. We cannot organise courses for one man or two. We must admit as many as we can, consistently with efficiency of teaching and practical works; otherwise the facilities in Professors and Laboratories that we provide will not be utilised to the full. Let me quote what I said on another occasion, as I consider this point to be one of the vital elements of the regional idea:—

"National efficiency would require the organisation of Engineering and other technological courses. But even here Government policy is a big factor, and Government may either accelerate or retard progress by

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the manner in which it provides openings in its technical departments for our qualified people. Still, the University can do its duty. As regards the argument that Government can't provide places for every one, I consider it to be sound as far as it goes. But surely Government can do much to promote industry and commerce, and is itself the biggest industrial factor in India, and therefore its action is decisive even as regards the development of commerce and industry by private enterprise and the openings thus made available for Indians. Government need not *create* places for our qualified men; if it fills such places as there are with them, that will suffice.

"What I wish to emphasise is that Education and University are inextricably mixed up with society on the one hand and Government on the other, and cannot be regarded as factors which can function and produce results in isolation and abstraction."

University Autonomy.

Though thus the State should foster the University by providing adequate careers within the extent possible in its organisation and by the general development of the country as well as adequate funds, it should not convert either by law or administrative or financial pressure the University into a department of the State.

All the world over collegiate and higher education is organised almost without exception by Universities, though most of the modern Universities depend almost entirely on Government for their support. To create a University and then to treat it as a body to be either starved or enslaved appears to me to be what Euclid so eloquently styles *reductio ad absurdum*. The reason why Universities are financed by the State and allowed the

fullest autonomy is that world experience extending over centuries has proved conclusively that such an agency is better fitted to carry out the mission of higher culture and research than a department of the State. The finest academic growths are not possible under the shadow of bureaucratic authority. As Lord Bryce put it :—

"Freedom is the life-blood of University teaching. Neither the political opinions of a professor, nor the character of the economic doctrines which he holds and propagates ought to be a ground for appointing or dismissing him, nor ought he to be any less free to speak and vote as he pleases than any other citizen. And though it is right and fitting that the State should be represented in the governing authority of a University which it supports, experience seems to have proved that both the educational policy and the daily administration and discipline of a University ought, as far as possible, to be either left in academic hands or entrusted to an authority on which the academic element predominates."

Lord Balfour speaking more recently thus declared :—

"If the State be asked to subscribe great funds, either in this country or in any of the Dominions or indeed in any country, there will always be a natural and pardonable instinct on the part of the State to control and supervise the working of an institution which it is doing so much to support. *It is perfectly natural but it is extremely dangerous.* Cambridge, Oxford and the old Universities are receiving assistance from the State, but our University traditions are so deeply rooted that I do not think there is any symptom, as far as my judgment goes, of any Government

attempting to interfere with the University. *University autonomy, whether it be well-exercised or ill-exercised, is at all events at the worst far better than State control.*" (The italics are mine.)

I notice that in Mysore the Senate has been engaged in an invasion of the Syndicate and I wish the expedition every success. I hope the day is not far distant when the University staff will be omitted from the Civil List as being out of place.

The psychology of some of our Governments is at times baffling. They can't trust local bodies with power because there are not enough educated members on them. They won't trust the Universities because they have none but educated persons on them. The only category they confide in, is the Secretariat, which not infrequently functions in an atmosphere of transcendental authority mightily elevated above the reach of reason and criticism. If consistently benevolent and uniformly wise, bureaucratic absolutism may possibly make a people fat but it can never make them strong. And the weakness of the people is bound to result sooner or later in governmental debility.

But the transformation of the Mysore University into an autonomous corporation does not appear to me to be a simple process. It would involve a revision of the constitution in many respects including the system of elections now in vogue. As a way out of the dilemmas presented by the opposing considerations of liberty and prudence including the necessity for securing a predominant position to the academic element, a more complex and balanced type of constitution like the one originally recommended by some of us when the University was being founded, may,

after all, have to be adopted with the changes shown to be necessary by subsequent experience.

Andhra Autonomy.

If Mysore excels in educational content the Andhra University may legitimately claim to have the better academic form, thanks to the generous statesmanship of the last Ministry and the Legislative Council. It is easily and by far the most autonomous corporation of its kind in India. Only two are nominated, and that too by the Chancellor—which in practice is a real distinction from the Governor—to the Syndicate. And the nominations to the Senate do not exceed twelve, and these again are made by the Chancellor. The University has full control of educational regulation and all appointments in the University are entirely within the competence of the University authorities. If only this outburst of confidence in the Andhra genius to administer a University had been accompanied by an equally magnanimous financial confidence in its capacity to spend economically and efficiently by the adoption of the system of block grants and by the transfer of Government Colleges as contemplated in the Act, so that the Teaching University intended by Government might be realised, the Andhras too would have attempted constructive educational policies. But the head-quarters problem blocks the way.

The Vernacular Medium.

It is with no small hesitation and nervousness that I venture to remark that the very essence of the regional idea is education as far as possible through the vernacular. I don't belittle the importance of the oecumenical or international ideal. I dismiss the oecumenical

as impossible of achievement in this respect, because there is as yet no universal language. And the international presupposes that we should be a nation first and take part in world exchanges of thought and culture as an equal. Thus both the international and the regional ideas involve instruction through Kannada.

Mysore here again is fortunate to a degree that will not be possible in British India until provinces are reconstituted on a linguistic basis. Mysore is almost unitary in its language, for the Telugu that you have in your Eastern districts is twin sister to Kannada with indistinguishable lineaments. Nor is there any need or necessity for having an official language different from the people's. But we lack self-confidence on this subject. In theory we all agree that it is easier to master and spread knowledge by employing a natural instead of a foreign medium. But we are afraid of impairing the estimation in which our educational efficiency is held by others. It seems so easy to borrow the ready-made clothing of Europe; so difficult to produce the raiment ourselves. We seem to lack the imaginative power to view things in the growth. And we are obsessed by the possible discount to which our degrees would be subjected. As regards researches and original work, nobody holds that their value would depend on how excellently they are narrated in English or French; and when our Universities put forth a sufficient amount of higher work, the credit that they will thereby achieve will extend to all the degrees they confer. But I don't wish to say more on the theory of vernacularisation, which has been discussed threadbare. Only one observation may be repeated: That it need not produce a lowering in the standard of English

and that every care should be taken that English is properly and adequately studied as a language. With this caution I don't see why we should not vernacularise to the utmost possible extent immediately. The Calcutta University Commission was of opinion that up to the Matriculation standard all subjects except English and Mathematics should be taught in the vernacular; and this recommendation has, I believe, been widely adopted. Since then vernaculars have made a fair amount of progress and it should not be beyond the capacity of an expert Committee to determine what subjects in the Intermediate grade could be taught in the vernacular. Instead of vernacularisation by grades, may we not begin vernacularisation on a subject basis? May not Indian History, for instance, be taught in Kannada, from the lowest up to the B.A. and M.A. standards?

Lack of text-books is no doubt a difficulty, but men are more important than books. If the proper lecturers are forthcoming, the lectures will be forthcoming, and the books will automatically follow. Professors at Oxford and Cambridge have a working knowledge of a number of European languages, and they are able to base their lectures on world contributions to their line of study. In the same manner those who lecture in Kannada in the University grades might be required to possess a sufficiently good knowledge of English and perhaps one other language, for them to be able to consult with advantage authoritative books written in those languages. The methods of teaching and training prevalent in the great Universities of the West proceed on the view that the mind is a vital growth to be fostered and strengthened and not an emptiness to be

mechanically stuffed. They concentrate on the development of faculty and acquisition of knowledge and not on the attainment of a tongue.

In fairness to the Andhra academic authorities, who are considering this question, I must say that these are my personal opinions which it would be my duty to change if convincing arguments to the contrary are forthcoming. Further, there are some special complications which have to be taken into due account in the Andhra area, namely, correlation with competitive examinations and service conditions and the existence of other vernaculars.

Women's Education.

The regional idea can't receive its fullest application unless it includes women within its scope. And in view of the very early age at which girls are withdrawn from schools and bundled into matrimony, I don't see how the maximum amount of knowledge could be imparted unless the vernacular medium is employed, even allowing for the natural and superior sharpness of their tongues. If one of the objects of an educational system is to broadcast existing knowledge, to carry it to every household including those in the remotest villages and irrigate our darkness by channels of light, and if it is further conceded that in the conditions in which they are placed, the imparting of the maximum of knowledge in the minimum of time to girls is possible only under the regime of the mother-tongue, it is a matter for consideration whether India should decide for a differentiation of her media of instruction on a sex basis, making English the medium for boys and the vernacular the medium for girls!

Women's education deserves to be remodelled. There should be no compulsion

in the matter, and women wanting to take the general courses prescribed for the boys should be at perfect liberty to do so. But it is a mistake to think that the best possible intellectual training could not be given to women in ways better adapted to their general mode and mission in life.

During my second European tour, Sir Arthur Smithells of Leeds University drew my attention to the King's College for Women, which provides a three-year course in Household and Social Sciences of a collegiate grade, and qualifies for a degree in the London University; the degree, mind you, which ought to reassure ladies who want to become Bachelors! The art of household regulation requires a knowledge and application of a large number of sciences, Physics, Physiology, Chemistry, Biology, Economics, and certain portions of law, to mention a few.

Household science is a field still to be organized and explored in India. Mrs. Sidney Webb once remarked to me that we were the most unhygienic nation in regard to food. The poor have little to eat and the rich don't know what to eat and how to prepare or preserve it—too much ghee, too much sugar, too much spices, too ill-assorted and ill-conditioned food, diabetes, and an early break-up of health and strength—that has been the routine of Hindu existence.

There is a vast literature on the values of the foods that Europeans consume. Indian foods remain to be scientifically investigated.

A woman is also an administrator and domestic economist. She must be able to prepare her domestic budgets with intelligence and forethought.

In India the widow is too often a helpless dependent and victim of her male relations

with no idea of her rights and the laws pertaining to inheritance, division of property, etc., and incapable of defending her interests. Now that political rights are being conferred on women, her development as person and citizen has to be given due consideration in our curricula. To rescue our sisters from their condition of helpless dependence is a mission that educated India ought no longer to delay.

The State in Relation to Women.

The organisation of the State in relation to women's interests and advancement should be planned out boldly and comprehensively. And I know of no State in India that is likely to take up this task in real earnestness and carry it to a chivalrous success, excepting Mysore. A survey should be made of the number of child-welfare centres, women's hospitals, primary and middle schools with proper provision for vocational training, institutes for imparting a knowledge of household sciences, cottage industries, hygiene, nursing, etc., to the grown-up women, and on that basis the necessary educational and administrative staff and other provisions should be made. Administrative arrangements with special reference to women's needs and progress have not been sufficiently developed in our country. And when developed, they will absorb all the women power that could be produced from our schools and colleges. And they will be absorbed too in ways more natural and healthful to themselves and to society than has been the case till now with the one-sided education they have been getting—an education which does not fit in with the scheme of life of the vast majority of women.

I am deeply impressed by the methodical manner in which the Missionaries as at Hassan and other centres are not merely

imparting book knowledge but building-up morale and civilisation amongst the lowest of our social orders and raising them to the status of efficient, self-respecting humanity. If education and government are conceived in some such broad spirit, as charged with the mission of building-up life and civilisation, the importance of a systematic organisation of the State in relation to women will be easily understood.

Women's Enfranchisement.

But women's enfranchisement depends ultimately on two factors, the abolition of early marriages and the granting to them of equal property rights with men. So long as she remains an economic outcaste with no property rights in the parental home and nothing more nourishing of body and mind than a maintenance allowance in the husband's, she can never realise her essential humanity. And where woman is not allowed to be fully human, the mentality of society is bound to be, in some degree at least, inhuman. Give her the cash and she will obtain the credit for herself!

Control of Technical Education.

Not infrequently doubts are expressed whether the Vice-Chancellor and the Director of Public Instruction are the best authorities to be entrusted with the management of vocational, industrial, technical and technological institutions that are now generally conceded as being within the scope of the composite, full-blooded modern educational organisations. I am in favour of keeping them within the purview of the Vice-Chancellor and the Director of Public Instruction. For this reason, management by the Vice-Chancellor in effect means management by the Syndicate on which technical authorities are

bound to be represented and appropriate Faculties and Boards of Studies. Nobody proposes that the Medical College and the Engineering College should be taken out of the jurisdiction of the University.

As regards the Director of Public Instruction, what with the large number of technical and sectional assistants with whom he has been provided, his administration has in fact become administration by a Board of Education. This machinery may be improved by including on the Board representatives of the technical departments of the State. That co-operation and correlation between the Railway, Industries and other departments and the educational administration is desirable and necessary, nobody will dispute. In the principle of the Board system of administration, which ought to be diligently explored, some way may be found for bringing about more expressly that co-ordination. All things considered, it seems best not to remove industrial and technical education from the highway of the State's educational organisation and consign them to departmental blind alleys, which would impair their popularity and efficiency.

Medical Colleges and the University.

As regards medical education, the following extract from the report of Sir Norman Walker and Colonel Needham is evidence of the superiority of a University organisation with its fixed staff of specialists over Government organisation with a floating and miscellaneous staff.

Speaking of the Madras Medical College and Hospitals they say: "The staffs of the College and the Hospitals are provided from the Madras Medical Department; the system is unsatisfactory; it restricts the field of

recruitment, and in practice involves too frequent changes in the staffs."

Speaking of the Vizagapatam Medical College they say: "The training in clinical medicine has been seriously prejudiced by frequent changes in the post of Professors of Medicine.....The facilities for training in the special department have not been developed."

The General Medical Council while dissatisfied with the old state of affairs, appears to be still more apprehensive of inefficiency resulting as a consequence of the Indianisation of the I. M. S. and the appointment of more Indians as Professors in the Medical Colleges. It would seem to any fair-minded enquirer that the real sin consists not in the nationality of the teacher but in the defective organisation, perhaps inevitable, under Government management. This aspect has been dealt with in the reply to Sir Norman Walker's criticisms prepared by the Medical Faculty of the Bombay University. They cast the blame on the governmental system and append statistical tables to prove their point. Not a few men seem to have been appointed as Professors while yet of twenty-six years of age or under. And not a few of the Professors had held as many as six Professorships before they retired. Even in the period between 1900—1910 there have been instances of I. M. S. officers who have held six, five and four Professorships respectively. Pluralism in Professorships seems to have been the rule. Even some of the younger men who were appointed in the period of 1910—1927 as Professors have already held as many as three Professorships; and at this rate before they retire they are likely to box the entire compass of the Medical Chairs going. The

Bombay Medical Faculty comments as follows: "When a vacancy arose in one of these Chairs a man had to be found, from amongst the service men, regardless of the fact that none may be available who had special training to fit him for the appointment." The example quoted by Sir Norman on page 5 of Appendix XV: "where the fact that a man had passed the primary examination for the F.R.C.S., England, ten years before was regarded as sufficient proof of his capacity to act as Professor of Physiology," emphasises the fact that this practice still obtains in colleges where the teaching staff has to be found from the service. Such mutations, or is it mimicries? are to be met with in the field of the Indian Educational Service also, though not to anything like the same extent.

It is impossible to deny that there is some point in Sir Norman Walker's pessimistic outlook. Defective as the old arrangements had been, Indianisation without regard to the right system of recruitment and management, may not improbably result in a graver situation. The saving grace is not to be found either in Indianisation as such or in Europeanisation as such or any other type or variety of racialisation such as Mysoreanisation, but if I may venture to say so, in direct University management of medical education which will guarantee a specialist and stable staff with every incentive to keep up their studies and engage in research. And paradoxical as it may sound, some Governments are inclined to adopt University principles without University management.

In the United Provinces, Government have handed over their Medical College at Lucknow to the University, one result of which

has been the spiriting away of one of the ablest of your medical men, Dr. Acharya, from your midst. Other Governments are organizing in response to the criticism of the General Medical Council bodies of specialists for their Medical Colleges. That is to say, while they will not trust the Universities, they will become Universities themselves: Is this a case of imitation being the sincerest form of flattery or one of stealing their robes while Universities are still slumbering over their rights?

Once disentanglement from the Services is decided upon and the organisation of a specialist corps adopted in principle, there can be no rational ground for refusing to take the more natural and efficient step of making these colleges integral parts of a teaching University. Let me not be misunderstood. I am deeply grateful to the Services and the organisations that I would like to see supplanted, for the eminent way in which they helped our country in the past and brought her up to a state at which further developments have become inevitable. But gratitude should not be allowed to obstruct duty.

Technological Colleges and the University.

The moral of this is applicable to other technological institutions also. That is why in the Andhra University Act express provision has been made for establishing all the technological institutions to be organised in the future under the direct control and management of the University, of course, with the aid of Government funds.

If it is wisdom to start all future technical colleges under the immediate auspices of the University, can it be folly to transfer the existing ones to the self-same management?

One can't follow easily the logic of this hesitation or rather unwillingness. Apparently Universities can be trusted to do the following: to formulate syllabuses; to inspect and ascertain if the teaching is up to standard; to hold examinations and to grant degrees. But Universities may not be trusted to appoint the proper teachers and manage institutions; I mean Universities in India, for Universities abroad are of course absolutely trustworthy. If direct University management is held to be less efficient, then would it not be better for the departments to award their own diplomas instead of making it incumbent on their students to seek effete University degrees?

The Essence of a University.

Desirable as all these reforms are and necessary, the essence of a University remains to-day what it has always been, namely, a corporation of teachers and taught, a spiritual and cultural entity pursuing knowledge for its own sake, extending the boundaries of Science and Art and functioning as one of the source-powers for increasing humanity's hold on the good, the true and the beautiful. It is this creative spirit that distinguishes a University from the merely distributive function of High Schools. Where that creative spirit is lacking, where it is not conserved and promoted by proper organisation and the necessary institutions and facilities inspired by teachers of genius, there we can have nothing more than a Continuation High School.

Sir Ashutosh Mukherjee.

No one can deal with this, the very soul of University organisation, without invoking to his aid the spirit of Sir Ashutosh Mukherjee, the pioneer genius who introduced genuine

University education in India. Until he established his Post-Graduate College under direct University management, there were in the true sense of the term neither Universities nor Colleges. Our Universities were more examining and affiliating Boards; our Colleges glorified High Schools.

Young men fresh from Oxford and Cambridge selected on the lax and false test of their college record were started off as Professors, put in charge of responsible University work, were provided with careers for life and then by sheer force of sumptuous seniority exalted to the headship of departments. No wonder that, as Dr. C.V. Raman has remarked, in most of our Universities, Honours and Post-Graduate courses proved a failure. Even the syllabuses and curricula were not up-to-date. In many cases they did not represent to any extent growth from within the University but were mechanical importations from the curricula of Western Universities, scissors and paste work! Universities that introduced the distinction between the Pass and Honours Courses were hardly able to maintain that distinction in actual work. Occasionally they tried to enliven the spirit of local teaching by getting a foreign Professor touring in India to deliver a few lectures. If a candidate submitted a thesis for the Doctorate Degree, it had to be exported for adjudication to foreign lands. Even some of our teaching Universities have not come up to standard in their staffing arrangements. They are trying the speculative expedient of sending out brilliant graduates—gold medallists I suppose, though some one or other is bound to get a gold medal every year—to England, and this educational pilgrimage for a foreign degree suffices to make them Professors for the rest of their lives. Such is the system of out-door relief of our

pauperism in organisation that many of our Universities are not only content to live on but flaunt before an ironical world as symptoms of the high efficiency from which they are suffering. Until the patriotic genius of Sir Ashutosh Mukherjee struck the note, the elementary idea of introducing in our Universities conditions of life and work and staffing, which are the routine of the organisation of successful Western Universities, did not suggest itself to the rulers in India, though Gokhale as a member of the Royal Commission on the Public Services had with his usual power of constructive criticism hinted at the rightful measures. Sir Ashutosh had to found his limited but genuine University, so famous to-day all the world over as the Post-Graduate College in Calcutta, on the slender basis of private benefactions though governmental moneys were never lacking for uneconomical diversions and projects. The old Calcutta University could not be transformed into a real University. Ashutosh's College had therefore to be made a Post-Graduate institution, something super-imposed on the University and not so much as the University itself.

Sir Ashutosh's example has not been without a following. Lucknow and Allahabad have reconstituted themselves as Universities true to type. The Andhra Desa is in the throes of a similar labour, but the agony has been too prolonged.

Principles of Staffing.

If Colleges are regarded as continuation High Schools, in which what is aimed at is detailed lecturing, the pumping of copious information, digested into notes, into the minds of students, preparing them for examinations, mass production of graduates qualifying for nothing more in-

spiring than clerical jobs, the Professors too would be recruited on the same principle as High School teachers. They would be chosen merely on their college record and appointed for life. They would be given graded appointments on the assumption that the older they grew the more efficient they became, and there would be talk of graduates of ten years' standing and twenty years' standing, though very often it is a case more of stooping than of standing, as though intellects mature by sheer process of time, like wine in wood.

It was with a view to prevent the miscarriage of the objectives of University education that the following recommendations, which have served as the basis of the staffing scheme now adopted, were made by the Andhra University Committee so early as 1921 :—

"The University should be manned by Professors of high standing who would be able to stimulate the character and intellects of the students and inspire them to enquiry, research and propaganda.

"In the Honours and Post-Graduate courses, students should be more guided than taught and they should be made, as far as possible, to discover knowledge for themselves rather than have it crammed into them by notes and text-books.

"It is desirable that Professors should be appointed for a period of ten years but subject to eligibility for re-election. But if the limitation of the term to such a period cannot secure the proper type of Professors, *it would be better to make the conditions of service more attractive as by higher salaries, etc., than to abrogate the principle of limited tenure.*

"Where specialists have to be employed, the best men should be secured irrespective

of nationality, though other things being about equal, preference should be given to Indians, and in the case of such specialists the University should pay whatever sum is necessary to get their services."

The actual scheme adopted in principle by the Andhra academic authorities is as follows :—

(1) University appointments should not be made on the basis of the college record of the applicants but on the basis of their original work and research.

(2) Nor should they be on life tenure but on a limited tenure of five to seven years according to the nature of the subject, but with eligibility for reappointment. (This was one of Gokhale's main points.)

This means, of course, that only specialists should be appointed, the educational consequence of which is that the courses should become more diversified and greater choice given to students to specialise. Optional courses should be enormously increased, the result being small classes, less lecturing, the students being left to work for themselves under general guidance, mental and moral development of the students to a greater extent than is possible under the system of detailed lecturing and mass production of graduates, and hopeful preparation for genuine intellectual life.

(3) As at Lucknow, the Syndicate may, for special reasons, appoint a Professor on special terms.

There will be no Assistant Professors and the word Assistant connoting some kind of personal subordination to a superior has been abolished from the Andhra classification. Professors, Readers, etc., will have their own

spheres of work, arranged by the Faculties and all will have enough leisure to pursue their researches and satisfy their moral craving for name and fame. Even though there may be differences in material conditions, there ought not to be any in the fellowship that should prevail. The Vice-Chancellor himself should function as a brotherly elder without assumption of superior authority or superior wisdom. Nothing is so destructive of the integrity of University life as the mandarinism of mediocrities, breeding jealousies, producing an atmosphere of self-centered calculations, and breaking-up comradeship. With a genuine University staff, segregated from the Civil List and intent on high-souled pursuits, this will not happen, but a fraternal spirit will prevail.

In Western Universities, Professors not uncommonly lecture sometimes only one hour a week but never more than three to four hours a week and they lecture on the subjects of their own research and not necessarily on examination topics. These latter are attended to by the Lecturers and Readers but even they are not so heavily worked as High School teachers, because, since all are appointed on account of their original work, they must be given time and scope for carrying on their researches as otherwise it would result in a criminal waste of talent. There should be far less lecturing in our colleges and great many more lecturers to do that less lecturing!

The way to Lecturerships, Readerships and Professorships must be prepared by a large scheme of Fellowships. The most brilliant men, men with clear promise of originality, should be made Fellows on an adequate allowance, say Rs. 150 a month, the

allowance adopted in the Andhra University, so that they may be saved from the worry of creature necessities. The Fellowships should be tenable for a period of, say, three years, and such of the Fellows as fulfil expectations should be drafted on to the teaching posts.

In the recruitment of the staff, merit should be the only consideration. Students should not be defrauded of their right to receive the best and most inspiring training under the plea of localism or communalism. A University organisation of this type would obviate the evil of what Sir P. C. Ray has called mass production of graduates and consequent unemployment of the educated. Once High School methods are discontinued at the College stage, students incapable of working according to University standards will drop out. Employment of specialists, diversified courses, increased options, smaller classes, self-help and self-reliance on the part of students, the joy of research work, the disinterested pursuit of knowledge, and daily contact with noble souls—all these go together, and they will help to obviate both mass production of graduates and sterile, insignificant careers. It is mis-education, not over-education, that has been the bane of the country.

I think the ideal University will in its form and constitution be as democratic and autonomous as the Andhra University and in the field of substantial work covered, an amalgam of the Calcutta Post-Graduate College and the Lucknow and Mysore Universities. Has not Sir Ashutosh's College been a glorious success? Are not the Palit, Ghosh, Hardinge, King George V and other Professorships a world-asset to-day, and if the Calcutta College could succeed in producing such an amazing amount of research in every branch of learn-

ing, why should any one doubt the success of an institution of the kind imagined here—it may be a dream to-day but I trust it will be a reality soon—thus organized and having a wider range of activities?

Even a crore of rupees is not the limit of useful expenditure on a University. Our Governments are not spending on their Universities a tenth of what they should—not even Mysore.

Lord Goschen on the Ideal of the Andhra University.

His Excellency the Chancellor of the Andhra University in laying down his policy thus expressed himself in his inspiring address to the last Andhra Convocation, an address which has been hailed as the Magna Charta of the University :—

"The ideal that we have set before us is the development, not of a University in the sense of a brick and mortar structure, but a University community—a large and mutually stimulating and inspiring community of Professors with an assured standing for creative output, and Researchers and Scholars. It is only by evolving such a community that we should be contributing our solution or rather the academic factor in the solution of the problem of building-up a healthy, strong, well-balanced judgment and character in the youth of our country."

Ah, if only institutional reality could soon be given to these noble aspirations.

Character and College.

If the youth of our country are lacking in judgment, will and character, it is to some

extent because of the defective nature of the education they receive at the University. We prolong their boyhood from High School to College and then we wonder that they don't grow up into manhood but remain boys with all the attractions and weaknesses of boyhood. At one moment they would be going about as though they were possessed of all knowledge and could bring about the instantaneous salvation of India if only their way was not barred by their elders, whose wisdom and experience they treat as naught. To such I can only repeat the scornful admonition of the old moralist, who was apparently thinking of graduates in their academic caps: "Remember thou art a chicken just hatched with the shell still on thy head." Anon these same graduates at the first icy touch of life's sharp realities will be seen going about or rather drifting about with helpless look and hopeless outlook beseeching people to advise them as to what they should do. They know how to prepare themselves for examinations but the series of examinations having ended, they do not know what to do with themselves. If there were examinations and parental financial assistance till they reached 55 years of age, when they could retire on a pension, that would be near to their notion of an earthly paradise. If the intellectual and social discipline—I hope they have had both—connoted by a four-years University career has not helped them to find their bearings in life, has not given them judgment, taste and will sufficient to enable them to determine their careers, no Convocation Address could avail to save such ineffectual craft from foundering miserably. This is one reason why I have avoided the tone of moral exhortation customary on these occasions. I am tired of the annual letting off of idealistic fireworks

in the Convocation sky and sentimental adoration of the departed glories of Nalanda, Takshasila and Amaravati. The Hindu mind revels in myth-craft; and once you are departed, you can safely reckon on becoming a glory! It is the duty of those that are not amply confident of building a big future to reverse their attention and create a glorious past; and this duty we have always fulfilled to our entire and exclusive satisfaction.

Our True Task.

The true task before us is to bring these ideals down to earth and give them body, shape and functioning power in organisation, institution and administration. True, their working can never be automatic—either fool-proof or knave-proof—and must depend on character and personality. However much we may give institutional regulation to our moral aspirations, there is always an elusive soul beyond the reach of analytical grasp and administrative envisagement which can be felt only by intuition; a mystic surd, racial and individual, which cannot be resolved into rational factors but which is the source of all power and vital virtue, the grace and salvation of life. Where that soul is lacking, institutions like bodies will decay. The recent history of India shows that the soul of our people is not dead but alive and capable of expressing itself in spite of the debris and disabilities heaped upon it by ages of disastrous history. Whoever would have thought that Sir Ashutosh's College entirely staffed by Indians would in a decade produce such an astonishing amount of original work, astonishing alike in volume and quality and prove an acquisition of world-culture? "United like word and meaning," like beautiful word and soulful meaning, that pregnant

phrase of Kalidas aptly describes the happy conjunction needed for realising the fulness of life. The power of thought is there in our countrymen; the soul, imperishable, sublime; only the instrumentality of institutions is lacking. It is for the rulers and leaders of India not to be content with sentimentalising over ideals and providing merely verbal incentives to lofty conduct but to bestir themselves with vigorous and honest purpose

to the task of establishing the requisite secular conditions and organisations. Then would our spiritual revival be assured and abundant.

Mr. Vice-Chancellor: Let me conclude by conveying to you and Mysore University the greetings of the Andhra University and wishing the graduates assembled here useful and happy careers.

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STUDIES IN SANGAM HISTORY

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THE FIRST TAMIL SANGAM.

THE long period of six centuries which elapsed from the advent of the Mauryas to the advent of the Guptas was probably the age when the Sangams of Tamil literature flourished in the south and produced those numerous and wonderful works which form subjects of close and popular study in the present day. It was the period when the three sister-powers of the South—the Chōla, Chēra and Pāṇḍya—were opulent centres of culture and civilization. These three powers and their feudatories were exercising their powers or hostilities throughout the period, with no definite result in the form of a particular dynastic ascendancy or the establishment of a homogeneous unity. The boundaries of the different States often shifted; the frontier chiefs often changed sides with momentary changes in the fortunes of the hostile powers; but subordination or supremacy was hardly a constant feature of any dynastic or local history.

I

The only sources of information we have got about this period are the classical works of the Tamil literature on the one hand and the accounts of Western geographers on the other. The Tamil literary traditions, recorded by later writers,* speak of the existence and activities of three Sangams or Academies. The founder of the first Sangam is said to have been Agastya himself, the traditional author of the Tamil tongue.

* These traditions are found, not in the so-called Sangam works themselves, but commentaries on them acknowledged by all to be centuries later, e.g., the commentary on *Irayaṇar āhapporūl*, Nachchirārkkiniyar's reproduction of it in his commentary on Tolkāppiya's *poruḷadihāram* and Adiyārkkunallār's commentary on the *Silappadihāram*.

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He is said not only to have given Tamil a grammar—the *Agattiyaṁ*—but founded an academy, the first of those renowned Sangams, in which Śiva and Subrahmanya themselves were, it is said, members. This Sangam is said to have been patronised by 89 Pāṇḍyan kings from Kāyśiṇa-vaḷudi (lit. the highly angry king) to Kaḍuṅgōn (lit. the severe king). It is said to have lasted for 4440 years, to have had 546 poets and approved the works of 4449 authors. The chief poems attributed to it are the *Paripāḍal*, the *Mudunārai*, the *Mudukuruḥu*, etc., which have been lost. The *Paripāḍal* has been so called from the metre of the verses composing it. It is supposed that the *Paripāḍal* of 'the first Sangam' is dead and that the existing poem of that name is different and was composed in 'the third Sangam' period. This poem contains 70 stanzas, 8 of which are devoted to the praise of Viṣṇu (Tirumāl), 31 to Kumāra, 1 to the sea, 26 to the *Vaigai* and 4 to Madura. The different stanzas are said to have been composed by different poets. The poem is thus an anthology regarding the editor of which as well as his royal patron nothing is known. Of the 70 stanzas, only 20 are now available. The *Mudunārai* and the *Mudukuruḥu* are apparently musical treatises so called after the musical instruments which resembled the *nārai*, and the *kuruḥu* in their formation. Everybody knows that the *Vīṇa* is adorned with the figure of a *yālī*, the mythical lion, at the end of its shaft. The Tamil musical instruments were apparently ornamented in a similar manner. The names *yālī*, *mudunārai* and *mudukuruḥu* give a clue to this feature. The musical treatises assigned to the 'first Sangam' are lost. But it is a remarkable point to be noticed that some of the earliest works mentioned by the legends relate, of all things, to music. We shall presently see that the legends are not quite trustworthy; but we need not be sceptical about the fact that even in the earliest period of Tamil history of which we

have any knowledge, the higher culture was advanced enough to include music. Whether this music was purely indigenous or whether it was 'Āryan' is a question which will be discussed later on and which need not engage us at present.

The termination of this Śaṅgam is said to have been brought about by the destruction of its seat Dakṣiṇa-Madhura by an irruption of the sea and the consequent disappearance of the 49 Nāḍus which are said to have been once south of Cape Comorin.* A few poets of this Academy figure in the anthology called *Puranānūru* which was compiled later on at the end of "the third Academy." These were Vālmikaṇār, Mārkaṇḍēyanār, Gōtamanār and Muruṇḍiyūr Muḍirāgarāya. Vālmika is said to have sung *Puṇam* 258 about the glory of penance; Mārkaṇḍēya has sung *Puṇam* 395, besides a *kāñchi*; and Gōtama has addressed in *Puṇam* 396 a panegyric verse to Yudhisṭhira, the first of the Pāṇḍavas. Muruṇḍiyūr Muḍirāgarāya addressed *Puṇam* 2 to a Chēra monarch, Udiyan-Chēralādan, wherein he praises his graciousness to his enemies, his valour in overcoming the obstinate, his generosity to the conquered, his mastery over a land which had as many places as the waves of the sea which touches its shores, and his feeding the Pāṇḍava and Kaurava forces in the *Mahābhārata* war; and it ends with the poet's prayer that the king

* The tradition of the convulsion of the sea is referred to in the *Silappadhikāram*, the commentaries of Ilamṇāṇar, Iṇṇaṣiriyar, Aḍyākkunallār and Nachchirākkiniyar and apparently in *Kalittōhai* 104. The reference is thus by all later writers, except in the case of *Silappadhikāram* and *Kalittōhai*. The *Silappadhikāram*, however, in my opinion, is a late, if not a post-Śaṅgam work, though it is usually regarded as one of the Śaṅgam works and so must be regarded, so far as the present point is concerned, as a late authority. With regard to the *Kalittōhai*, the reference is rather doubtful and cannot be held to be conclusive.

should live as long and firm as the Himalayan and Podiya mountains, so rich in sacrifice-loving Brahmans, surrounded by ministers whose mind would be more constant than the sweetness of milk, the light of the sun and the truth of the Vēdas.

II

It will be seen from an examination of the above tradition that 'the first Śaṅgam' was aware of the *Mahābhārata*; that its chief members (Vālmika, Mārkaṇḍēya, etc.) were Brahmanical; that the Pāṇḍyan and Chēra kingdoms and presumably the Clōla, were already active; and that there was a real pride in the prevalence of Brahmanical creed and culture in the Tamil land. The whole presupposes the existence and activity of the Brahmanical civilization in the south.

Now, when did this advent of the Brahmanical culture take place? One thing is certain, that it cannot be as old as the traditions assert. They give 4440 years to 'the first Śaṅgam,' 3700 to the 'second Śaṅgam' and 1850 to the third, thus assigning nearly 10000 years to the whole. Even if we accept the latest date assigned to the Śaṅgam literature—the 8th century—which, we shall see later on, errs on the side of lateness by a few centuries, we shall have to place the beginnings of the Śaṅgam about 9000 B.C. This is confessedly absurd. The Pandit School of old and the fanatical anti-Brahmanical school of the present day blindly uphold this date. The former did not deny the Brahmanical influence, but literally accepted the traditional chronology as they were ignorant of historic chronology in general, of the chronology of Indian history in particular, as well as the general principles of the evolution of the Aryan and Dravidian cultures. The latter deny the Brahmanical influence which is patent in the very face of the legends, but accept their chronology. The old Pandit school were misled by ignorance of historical science and fact. The present anti-

Brahmanical school are misled by ignorance as well as an insane prejudice which runs amuck against all truth and science.

A more rational view was inaugurated among the Pandits by Pandit Raghava Aiyangar of the Madras University. From the facts that the author of the *Rāmāyaṇa* is traditionally associated with the 'first Śaṅgam,' that there was a Gōtama, who eulogised Yudhisṭhira and that a Chēra fed the combatants of the Bhārata war, Pandit Raghava Aiyangar concludes that the 'first Śaṅgam' was contemporaneous with the events of the Epics, that is, 11th century B.C. He even surmises that, as according to the *Rāmāyaṇa*, Vālmiki was a *Vādah* (hunter), he might have been a Dravidian or Tamilian.†

But to attribute the 11th century B.C. to the Śaṅgam is impossible for the reason that, according to the best-informed research, the advent of the Āryans into the Dakkan took place about B.C. 700 and into the further south in the century which followed. I am inclined to think that the infusion of the Āryan element in the Dakkan and South India must have commenced centuries earlier than 700 B.C.; but I am also inclined to believe that it was only about the seventh and sixth centuries that the Āryan civilization became firmly planted in the cis-Vindhyan soil and naturalised itself so completely as to give rise to Āryo-Dravidian cultural fusion. It must be also remembered in this connection that the dates of the kernels of the *Rāmāyaṇa* and the *Mahābhārata*, though they embody traditions of an earlier age, are nowadays believed to go back to B.C. 700 or 600 at the most. Again, the compilation of the chapters in both the Epics which refer to the Dravidian lands and peoples, has usually been brought down by scholars, on entirely independent grounds, to the first or second century A.D., some even going (incorrectly in my view) to the 4th century. To arrive at a

chronological conclusion based on the face value of the legends is therefore dangerous.

If 'the first Śaṅgam' cannot be attributed to B.C. 1100, the question arises as to what date its commencement can be assigned to. The Āryans planted themselves firmly in the extreme south of the peninsula by perhaps 600 B.C., and then developed an Āryo-Dravidian culture of a unique type in the centuries which followed. Their greatest service was the cultivation of Tamil as a literary tongue by Sanskritising it as much as possible or as much as it was necessary. They gave Tamil its alphabet*, its literary vocabulary, even a considerable part of its grammar.† It is only after the development of centuries that we can expect an expert body of literary censors as formed the 'first Academy' to come together and exercise scrutiny into literary compositions. Attributing a reasonable period of three or four centuries for this development, we can believe that the 'first Śaṅgam' must have been organised about B.C. 300. Indeed, the very currency of the term Śaṅgam, though its *idea* was earlier, was in all probability due to Jaina or Buddhistic influence; and it is not improbable that the Tamil kings of the age were influenced by the Jaina and Buddhistic preachers who came to the

* The theory that the Tamil alphabet had an independent origin cannot, in my opinion, stand scrutiny. The resemblances between the Vatteluttu, the earlier Tamil script, and Brāhmi is too close to allow the theory of an independent origin.

While it is recognized that the post-Śaṅgam Tamil has more Sanskrit words than Śaṅgam Tamil, the Sanskrit influence in the latter has generally been unduly ignored.

† See R. Swaminatha Aiyar's Tamil pamphlet on *The Origin of Tamil*. In this very valuable treatise the writer points out how, both from the standpoints of vocabulary and the rudiments of grammar, Tamil was almost entirely dependent on Sanskrit, and that the common theory of Tamil originality is considerably mythical.

south in the reigns of the early Mauryan emperors between 300 and 250 B.C., and carried the principle of corporate censorship from the usual field of religion to that of literature. It is remarkable to note, however, that the earliest Tamil writers are Brahmanical in their convictions and not Jaina or Buddhistic. At any rate, that is what we infer from the traditions. But this can be explained in two ways—either the Buddhistic references are lost, or the Brahmanical counsellors of the Tamil kings adopted the *methods* of their rivals while eschewing their faiths. It should not be forgotten however that the idea of the Śaṅgam *might* have been both Brahmanical and Buddhistic.

III

Tolkāppiyā.

It is very probable that the chief figure in instituting this body was a scholar who is generally known as Tolkāppiyar, literally the earliest writer, but whose real name is not known. Later traditions say that he was a native of Tolkāppiyakkudi, said to be somewhere in the Tanjore district, and that he was the son of Jamadagni and known as *Tṛṇadhūmāgni*, and so on. But these stories are obviously incredible and without demonstrable basis. We cannot say how far the story that he was the son of Jamadagni and that he was known by the peculiar name of *Tṛṇadhūmāgni* is true. It seems to be a distinctly paurāṇic creation of later times. Equally unreliable seems to be the story of his close connection with Agastya, the reputed father of Tamil. The common story is that Agastya, the father of the Tamil language and the composer of the earliest Tamil grammar *Agattiyam*, had 12 disciples* (including Tolkāppiyā), that

* These are said to be Tolkāppiyā; Adāṅgōṭṭāśiriyar (i.e., the āchārya or teacher of Adāṅgōṭṭu); Durāṅgar; Sembūt-śey; Vaiyāpikar; Vayppiyar; Paṇamṭāraṇār; Kaḷārambar; Avinayanār; Kākkai-āṇḍiniyār; Nāṅṭatār; and Vāmaṇār.

each of these composed a grammar besides contributing to a common work of 12 chapters, and that, on account of a minor domestic quarrel† between Agastya and Tolkāppiyā, the latter cursed the former's grammar to go into oblivion. After thus condemning his master's grand work to be put into disuse, we are told, Tolkāppiyā composed his *Tolkāppiyam* with its three parts and 1276 Sūtras, and introduced it before the first Śaṅgam. Agastya is said to have induced one of his other disciples to raise some objections to the new treatise, but as the critic was not very sincere, Tolkāppiyā came out triumphant and thus became the authority in place of his master—an authority not superseded even to-day!

There are obvious absurdities in this story of the alleged contemporaneity, relationship as master and pupil, and then rivalry. If Agastya was 'the father of Tamil' as he is pronounced to have been in the legends and if he composed a grammar—the earliest of the type—what reason was there for another and a rival one by his chief disciple? There would have been no scope for different *systems* in such an early stage of the linguistic development. Further, if Agastya represented the earliest Āryan colonist, he could not have been the contemporary of a writer like Tolkāppiyā, whose work meant the existence of an extensive literature already. The very theory that two contemporary persons, master and disciple, were the authors of distinct academies is

All their works are lost, except in regard to stray quotations in *Tolkāppiyam*, *Yāpparuṅḡalam*, etc. These works are on grammar, poetics and rhetoric. *Avinayanār* (cf. अविनय) means Naṭarāja. This name as well as Vāmaṇār is distinctly paurāṇic.

† Agastya once asked Tolkāppiyā to escort his wife keeping himself at a distance from her. The latter had to disobey the order while crossing the Vālgai. Agastya unjustly cursed him. Tolkāppiyā retaliated by cursing his grammar to be forgotten.

incredible. The tradition that the two men represented different schools of grammar and that they quarrelled with each other as to which of their works was to be in vogue, seems to warrant the theory that they were separated by a long interval. Granting that Agastya was a historic person, he could not have been earlier than 700 B.C. To connect him with the author of a grammar like *Tolkāppiyam* is absurd. The more critically we inquire into the legendary relation between the two figures the more sceptical do we tend to grow in regard to their alleged connection.

The fact seems to be that, knowing nothing of Tolkāppiyā except that he was the earliest star in the Tamil literary firmament, the later legends connected him with Agastya about whom traditions had already gathered as the earliest cultivator of Tamil as a literary tongue. The earliest literary figure and the earliest grammarian whose work they knew seemed to them to be contemporaries. It was in this way that men who lived centuries apart were brought together by tradition. And when once they were brought together, speculative stories of interpretation came to be coined. The story of Tolkāppiyā's escorting Agastya's wife, for example, is a puerile and childish myth which gives credit neither to Agastya, nor to Tolkāppiyā, nor to the coiner of it!

Two facts must be obvious from these traditions. First, the connection of Tolkāppiyā with Agastya is chronologically impossible. Secondly, there were no two Śaṅgams established by them at all, the story of their quarrel itself being untenable. All that we can rationally infer from the legends is that Tolkāppiyā, whoever he might have been, introduced a new epoch in the history of Tamil literature by preparing a much more elaborate grammar than that of Agastya and that he organized an Academy for censoring the works of poets and

scholars. Most of the names of the poets given in the legends, their alleged number and other details are not trustworthy. Even the names Kāysinavaḷudi and Kaḍuṅḡōn seem to be anachronisms made by legends who lived after Ugra Pāṇḍya of the earliest inscriptions. Similarly the legend regarding the seven Nāḍus south of Kumāri and their disappearance in the sea has got several incredible features, all that we can be sure of being that 'the first Śaṅgam' belonged to an age when convulsions of the sea were not uncommon. One of such convulsions, it is known, took place in the third century B.C. We have no positive evidence to say whether the original capital was south of Kumari.*

A consideration of these facts seems to warrant the inference that Tolkāppiyā lived some time in the 3rd century B.C. and founded an academy which has been generally called the second but which, we may believe, was only a continuation of a previous literary body. It is true that all scholars are not agreed in regard to this. The late Mr. M. Srinivasa Aiyangar† argued that, as Tolkāppiyā calls himself *aindrām-nīraṇḍa* in the colophon to his work and as he does not mention Pāṇini, and as Pāṇini himself refers to Indra as one of his predecessors, Tolkāppiyar must have been earlier than Pāṇini and later than Indra and that he can therefore be attributed to about B.C. 350. He further says that Tolkāppiyā uses the expressions *lyā, nya, mya, vya, mva*, which fell out of use by the time of Tiruvalluvar; that we must allow three centuries for the disappearance of this feature; and that, as Tiruvalluvar can be attributed to the first century, "it would not be too much to suppose that Tolkāppiyar flourished before 350 B.C." But

* The question is discussed in my article on the Geographical Data of the Śaṅgam Age in the 'Journal of the Madras Geographical Association' for September 1928.

† *Tamil Studies*, pp. 116—118.

the defects in these arguments are :—(1) There is no meaning in the reference to an *Aindra* grammar in contrast to Pāṇini's*; (2) the date of Pāṇini is not easily settled, there being scholars who place him as early as the 7th century and others who bring him down to 300 B.C.; (3) the interval assigned for the disappearance of the philological feature mentioned above is arbitrary; and (4) it is by no means agreed that Tiruvalluvar can be placed in the first century. For all these reasons the best possible conclusion seems to be that Tolkāppiya lived at the time when the idea of forming *Śaṅgams* for literary purposes as for religious propaganda was in general vogue and that this can be assigned to the period which immediately followed the advent of the Jains and Buddhists to the south. It is not meant that there were no assemblies of the Brahmanical order before this age. Indeed the Brahmanical *parishads* were earlier; but the very use of the expression *Śaṅgam* seems to warrant a Buddhistic-Jaina origin. It follows from this that the panegyric verse addressed by Muṇḍināgarāya to Udiyan-Chēralādan was the adulation of a late poet who attributed to his patron what had evidently become a proud family tradition. The surmise that Vālmiki, the author of the *Rāmāyaṇa*, was a member of the first Academy must be pronounced to be impossible. The legends that

* The *Kathūsaritsūgarā* does indeed refer to Pāṇini's defeating Vararuchi as the result of which the latter gave up the grammar of Indra. But Prof. Seshagiri Sastriar points out how this story is a myth, fashioned on a Vēdic passage referring to Indra's studying grammar under Bṛhaspati. Further, according to the later grammar *Prayōgavivēka*, it was the *Agattiya* that was based on Pāṇini while the *Tolkāppiyam* was based on the *Aindra*. In this case there is a chronological inconsistency demonstrating that the idea in regard to the systems of Indra and Pāṇini was confused even among Tamil writers of authority. See Prof. Seshagiri Sastriar's Report on Sanskrit and Tamil MSS. for 1896-97, No. 1, pp. 29-30.

there were 89 kings before the submergence of Dakṣiṇa-Madhura and that the so-called first Academy lasted for thousands of years, must be dismissed as pure myths. All that can be said is that Agastya lived long before 300 B.C.; that he was made the founder of a first Academy by pure legends; that he was brought into connection with Tolkāppiya, the real founder of an Academy, for purposes of a supposed continuity; that Tolkāppiya, the alleged connecting link between the first two *Śaṅgams* and the real establisher of the only Academy which existed—we shall see presently that even the so-called third Academy had no separate existence—must be placed about B.C. 250. The *Sūtra* style of composition, moreover, which the Tamil grammarian imitated, was in vogue in Āryāvarta in the pre-Buddhistic and Buddhistic epochs. This, together with the very naming of the Pāṇḍyan capital after Kṛṣṇa's birth-place and the connection of the Pāṇḍyas with Herakles (Kṛṣṇa) to which Megasthenes refers,—all this seems to indicate the 3rd century B.C. for the organization of the *Śaṅgam*.

IV

A word may be said about this great father of Tamil literature and his monumental work. As has been already said, there is no tangible evidence to demonstrate that he was a native of a Tolkāppiyakkūḍi—the village in fact seems to have been created after the poet—or that he was the son of Jamadagni. The only inference we can draw from traditions is that Tolkāppiya was a Brahman, and a profound scholar both in Sanskrit and Tamil, capable of giving the latter a systematic grammar in the model of that of the former—a task which he found quite congenial owing to the very exaltation of the Tamil tongue into a rich literary vehicle by the influence of Sanskrit in the three or four centuries preceding him. Paṇambāraṇār, the author of the prefatory stanza to the *Tolkāppiyam*, thus summarises all that was

known about Tolkāppiya. "He investigated the *lakṣhaṇa* of the letters, words and etymology of Tamil, current from Vēṇḍaḍam in the north to Kumari in the south. In order to understand the real truth about *Śen-Tamiḷ* he studied the literature (*nūḷ*) which was previous to him and which had begun with the language itself. He then compiled the rules of grammar as he was able to infer from it, for the sake of future students. The Pāṇḍyan Mā-kīrti, the valiant conqueror of others' lands,* introduced that spotless work into his sabbāvat, to the full knowledge of the Achārya (*āśirīya*) of Adāṅgōḷu, the great expert in the four Vēḷas (*nāṁmaṇai*) which have for their sole object the teaching of *dharma* (*aṇam*), and then revealed it to the world, giving it its natural divisions of *iyal* (prose), *iṣai* (poetry) and *nūṭaka* (drama). Such was Tolkāppiya, the expert in *Aindra* (*vyākaraṇa*), who established a permanent name in the sea-girt world." It is clear from this that there is absolutely no reference to Agastya or his grammar, or to any rivalry between them. If Tolkāppiya was Agastya's disciple, he would certainly have been mentioned as such. According to the traditions, Paṇambāraṇār was the contemporary and co-disciple of Tolkāppiya. We cannot say how far this is true. The expression *Tolkāppiya* reminds one of the expression *Ādi-kāvya* prevalent in Sanskrit about the *Rāmāyaṇa*; and if it came to be applied to the author of the Tamil grammar by analogy, then we have reasons to believe that Paṇambāraṇār might have been a later editor by whose time the expression *Ādi-kāvya* was in current usage in the Tamil country. But there is really no objection to holding that the expression might have been current in the south before 250 B.C. as the kernel of the *Rāmāyaṇa* has been assigned by the latest research to 700 or 600 B.C. (though

* According to some the real name of the king was not Mā-kīrti but Nilantaru-tiru-viṇḍa-pāṇḍya. See *Sen-Tamiḷ*, Vol. 14, pp. 448-50. But see *ibid*, Vol. 15, pp. 1-2.

Dr. Keith would bring it down to about 400 B. C.)

The *Tolkāppiyam* consists of three chapters (*adikāra*) on letters, words and etymology in 1276 *Sūtras*.* Every chapter has been subdivided into nine *iyals*. The first two are purely linguistic and philological in interest. The third (*Poruḷadihāram*) is also of interest in throwing light on the customs and habits, the ideals and institutions of the Tamil people of the period. The *Poruḷadihāram*† speaks of the characteristics of *Ahattinai*, *Puṇattinai*, *Kalaviyal*, *Karpiyal*, *Poruḷiyal*, *Meypṇāṭṭiyal*, *Ucamaviyal*, *Seyyuliyal* and *Marapiyal*. Of these *Ucama* (cf. Sans. उष्म) and *Seyyul* refer to the *alaikāras* and poetics. The rest deal with the subject-matter. It is in connection with this subject-matter that we have the references to contemporary life. The subject-matter (*poruḷ*) is of two kinds *aham* (subjective) and *puṇam* (objective). The *aham* deals with the emotion of love,—the characteristics of lovers, of messages between them, of their union, their separation, their conjugal and domestic life, and so on. The talented writer

* See *Sen-Tamiḷ*, Vol. 16, p. 202 ff. and *ibid*, Vol. 18, p. 381 ff. for critical analysis and some interesting views.

† The *Poruḷadihāram* has been edited by Rao Bahadur S. Bavanandam Pillai in four parts in 1916-17. The first two parts on *Ahattinai*, *Puṇattinai*, *Kalaviyal*, *Karpiyal* and *Poruḷiyal* have been published with Nachchirārkkiniyar's commentary. The other two parts on the other five *Iyals* have been published with Pēṇāśiriyar's commentary. The same scholar has published the *Solladihāram* with Sēṇāvarayar's commentary supplemented by other commentaries. The *Elutadihāram* with Ilampūraṇār's commentary has also been printed. Some quotations have not been found in printed editions in some cases. A systematic search and comparison of all MSS can be done only by the collaboration of many scholars. A comparative study of the commentators also is yet to be done. Mr. M. Rāghava Aiyangar's *Poruḷadikāra-ārāyehchi* is a most valuable publication on the subject.

classifies, in this connection, land into the five geographical varieties of *kuṇṇi* (hilly), *mullai* (pastoral), *pālai* (sandy), *marudam* (cultivable), and *neydal* (maritime or saline), and describes the characteristics of conjugal life in each. He also gives two other *tinai*s over and above these five. He describes the different classes of the population, their occupations, etc. He refers to the different systems of marriage, legitimate and illegitimate, prevalent in the land. The social and marital institutions are the exact reproductions of those of Āryāvarta. They indicate the complete naturalisation of the Brahmanical ideals and institutions in the Tamil land—both among the Brahmans and the other classes. The *Puṇam* deals with objective things or *tinai*s of 12 kinds. Of these, seven deal with the world and its transient character, the greatness of heroes, and so on; and the other five deal with the methods of warfare prevalent in those days. The ideals, varieties and stages of warfare are described in elaborate details, the value of which as the material for constructing the history of civilization is simply immeasurable. Incidentally the *Tolkāppiyam* throws light on religious life and system. It is purely Brahmanical, semi-Brahmanical or Dravidian. Curiously enough, it is not Buddhist or Jaina. From this fact we have to infer that the author was Brahmanical* in creed. The traditions also are unanimous about it.

It is not surprising that the *Tolkāppiyam* has always won the admiration of scholars and that it has been expounded by several commentators. The chief of these are Kallāḍṇar, Ṭampūraṇar, Śeṇāvarayar, Pēṇs'iriyar and Nachchinārkkiniyar. In regard to the chapter on letters, the *Ṭampūraṇam* is regarded as the best and in regard

* Dr. Burnell (who attributed *Tolkāppiya* to the 8th century) regarded him as a Jaina, without sufficient justification. See *Sen-Tamil*, Vol. 18, p. 367 ff. and Vol. 19, p. 113 ff. and 219 ff. for the different views on the subject.

to words the *Śeṇāvarayam*. Of all commentaries the work of Nachchinārkkiniyar alone is to the largest extent in current use.

V.

The other poets of the so-called first Śaṅgam have been already referred to. To these, however, a few others have to be added, as these are indirectly referred to. These are Netṭimayār, Neḍumpalliyattāṇār and Kāri Kīlār. The first of these is said to have composed *Puṇam* 9 in which he praises a Pāṇḍya king named Kuḍumi, or to use his full name, Palyāgaśālai-muḍu-kuḍumi-peruvaludi, i.e., the great king who wore the tuft of hair characteristic of a performer of many sacrifices. The poet says that this king always used in principle to warn cows, Brahmans (whose character is like that of the cow), women, the diseased and the issueless, before undertaking an invasion, giving them time to withdraw to a safe place. His valour, continues the poet, was equal to his chivalry. The poet prays that his patron should live longer than the sands of the Paṇṇai. There is supposed to be a reference in this verse to an ancestor of the king named Vaḍimalamba-ṇiṇṇa Pāṇḍya in the expression Neḍyōa. Neḍumpalliyattāṇār praises the same king in *Puṇam* 64, in which there is reference to the king's valour and wealth. Similarly Kāri Kīlār, in *Puṇam* 6, says: "May your fame be ever on the increase in all the area which is bounded by the Himālaya in the north and Kaṇṇiyāru in the south, by the sea in the east and the sea in the west. May it increase in the nether and upper worlds as well! May your justice be as straight as the ideal balance weighing extensive wealth! May your royal umbrella, under the shadow of which scholars are rewarded in the forts captured from enemies, be lowered only when going round the temple of Mukkaṭ-Selvar (the three-eyed Śiva), the subject of the sages' panegyrics! Great king! may your crown bend only before the arms raised in blessings by Brahmans versed in the four Vēdas! King! let

thy fields know only the dearth caused by the fumes of the burning lands of your adversaries! May thy anger be appeased by the shining face of your lady adorned with white pearl-garland! Conqueror! Kuḍumi of eternal greatness born of moderation in victory! Mayst thou attain perpetual strength in the world like the cool-rayed moon and the hot-rayed shining sun!" *Puṇam* 12 and 15 describe the same king's exploits in a beautiful fashion. The extensive forts captured from his foes he destroyed and he had their streets ploughed over by yokes of white-mouthed asses. In the countries of hostile kings he drove his chariots, drawn by restless horses, across rice fields! Into the fresh water tanks of the territories of his enemies he forced his broad-footed, stout-necked, angry elephants. But, the poet asks, which of the two was larger in number—the number of his foes who survived their defeats or the number of the sacrificial halls he erected? *Puṇam* 182, again, has been attributed to King Kaḍaluḷ-māynda-ḷam-peruvaludi (the young great king who died in the sea). We cannot say whether this was Mā-kīrti referred to in the *Pāyira* of the *Tolkāppiyam*.

It is clear from this that the earliest kings of whom we have any knowledge from the works of the Śaṅgam were (1) Vaḍimalamba-ṇiṇṇa-Pāṇḍya; (2) Kaḍaluḷ-māynda-peruvaludi; and (3) Palyāgaśālai-mudukuḍumi-peruvaludi; (4) Kaḍuṅḡa; (5) Mā-kīrti. Their relative chronology cannot be ascertained. They can be attributed to the 3rd century B. C., and the century preceding and following. Their capital might have been in the south and washed away by the sea, as the result of which Kapāṭapuram became the capital; but we cannot be certain about it.

Of all these kings Mudukuḍumi the sacrificer alone was remembered most in later times. The interesting suggestion* has been made that he

was the first Dravidian king who adopted the Āryan custom of keeping a tuft of hair on the head—a custom which had not prevailed among the non-Āryan castes and which had given rise to the appellation of *Kuḍumiyaṇṇiyyar* to the early Brāhman settlers. Peruvaludi established his renown as the patron of the Brahmanical creed on such a firm basis that, centuries later, when the habit of inscribing royal donations and charters on stones and plates began to be widely adopted in the Tamil land, he alone of the numerous kings who had ruled in the Śaṅgam period, was remembered and immortalised therein. Taking the latter of the two earliest available inscriptions of early Pāṇḍyan history, for example,—the Chinnamanūr and Vēlvikkūḍi plates—we find how, amidst all the vague generalities of the latter, it expressly mentions Palyāgaśālai Mudukuḍumi Peruvaludi. Indeed the very object of the grant is the restoration of a village which had been granted by this monarch to a Korkai-kīḷān Narkorān, but which was seized later on by Kaḷabra invaders. The descendant of the original donee receives the village back from the descendant of the original donor. The very name Vēlvikkūḍi reminds the student of the purpose for which it was given and the claim of the king who gave it to fame. It may be surmised that he belonged to the age when sacrifices were a common feature of religion. In North India this was the case after the Śuṅga advent; but in South India, where Buddhism was apparently not so powerful, it might have been earlier. In any case Mudukuḍumi Peruvaludi may be assigned to the second century B.C.

VI

We may close this discourse with a brief reference to what inscriptions and later paurāṇic literature have to say about the Śaṅgam origin. The only inscriptions that have reference are the Vēlvikkūḍi and Chinnamanūr ones. But their reference to the Śaṅgam is very vague. The

* *Tamil Studies*.

earliest historical figure they give is Kaṇṇōn about 600 A.D. He was preceded, they say, by the Kaḷabra occupation. And before the Kaḷabra occupation they refer to Palyāgaśālai Mudukuḍumi Peruvaḷudi. Before him they give only vague exploits of the Pāṇḍyas,—like the churning of the ocean, the acquisition of Indra's throne, the mastery of the Tamil language, the recovery of the sea, the foundation of Madura, the patronage of learning, the leading of elephants into the Bharata country after the death of the great charioteer, the rescue of Vijaya from the curse of Vasu; the engraving of the fish, the tiger and the bow on Mt. Meru; the construction of tanks; the victory over two kings at Talayāṅgaṇam; the translation of the *Mahābhārata*; the establishment of a college of poets at Madura; the priesthood of Agastya; the inducement of Rāvaṇi by one of the Pāṇḍyas to sue for peace; the embassy of one of the Pāṇḍyas as ambassador to the gods; and Brahma's offer of the dignity of protector of the three worlds to the Pāṇḍyan king. It is clear from this that the official knowledge of the Śaṅgam age in the 9th century was indeed very meagre.

VII

The later purāṇas are equally meagre. The *Hālasyamāhātmya* which deals with the 64 exploits of Śiva gives a jumble of legends which are not capable of yielding quite reliable historical facts. It refers to an Ugra Pāṇḍya, the fourth in the list of 73 Pāṇḍyan kings from Kulāśekhara (the founder of Madura) to Madhurēsvara, as the founder of a Śaṅgam. It says that the seventh king Vikrama Pāṇḍya defeated the machinations of the Jains, who sent an elephant to destroy Madura, with the help of Śiva and Narasimha and, metamorphosing the elephant into a hill, constructed a temple for Narasimha over it. It says that in the reign of the tenth king Anantagaṇa Pāṇḍya, Rāma visited Madura while searching for Sita! It says that the nineteenth king Varagaṇa proceeded to Tiruvīḍaimarudūr

(near Kumbakonam) to get rid of the disease of *Brahmahatti*. It credits Vamśa-sēkhara Pāṇḍya, the forty-sixth king, with the honour of having founded the third Academy. In the reign of Champa Māran, Śiva saw Nakkīra subdued and humiliated, had him taught grammar by Agastya and his commentary on *Ṛayaṇār-Ahapporu* approved by Rudrasarma, the dumb Brahman child, and the Śaṅgam. The sixty-first king was Arimardhana Pāṇḍya, the contemporary of Māṇikkavāṣaga. The seventy-second king was Kubja or Sundara Pāṇḍya, the contemporary of Gūṇasambanda credited with the impalement of 8000 Jains.

It is clear from this that the later paurāṇic literature differs from the Śaṅgam traditions in various respects. It does not give the same kings. It does not refer to the convulsions of the sea and the destruction of the seats of the so-called first two Academies. It makes no distinction between earlier and later events of history and makes Nakkīra and his contemporaries later than the construction of the Narasimha temple on the Yāṇamalai or the Śiva temple at Tiruvīḍaimarudūr. It places Rāma's visit in search of Sita after the first of these events! It has thus no idea of the evolution of history. A work of the 10th or 11th century, it is absolutely useless for historic purposes. Its value lies in its being a record of the absurd traditions which prevailed among credulous minds in a very late age of South Indian History.

Conclusion.

We may thus conclude that the Tamil Śaṅgam was first organized about 300—250 B.C., by Tolkāppiya; that his connection with Agastya is purely legendary; that the earliest Śaṅgam works disclose the complete naturalisation of the Brahmanical civilization in all its secular and spiritual aspects; and that, though some vague kings are referred to in the decades which followed, we have no materials for constructing a connected account. We now pass on to the so-called second Śaṅgam.

(To be continued.)

LANGUAGE TEACHING AND
LEARNING BY THE DIRECT
METHOD

Specially considered in relation to Teaching
English in Indian Schools

By

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THE Direct Method appears in principle as the natural method. Naturalism as a principle of methods has been in vogue for several centuries now, since at least the time of the teachings of Rousseau in Europe. Though then it might not have been so clearly perceived, the psychological theory of it consists in suggestion and imitation as educative processes.

Nature adopts as process suggestion and imitation for method in education, e.g., a child learns its movements from imitation through suggestion—immediately of its parents and somewhat remotely from surroundings. In course of time during its growth its psychophysical system absorbs movements largely obtained through imitation from surroundings. This is a generally adopted procedure commonly observable in Nature—so much so that it is well-known common fact that children through up-bringing are like those who are responsible for their up-bringing. This is the natural process by which a child educates itself during its natural growth. Language learning is one of the many educative processes by which the child gradually grows. This observed natural process has been adopted as a method for the teaching and learning of languages more or less in imitation of Nature.

Every language has form and matter; the matter is the substance of it, in words, symbols, as expressive of ideas in that

language. The material substance does not realise itself without form. The form is that which gives the matter a definite shape and recognisable and usable mode of its existence. This is the grammar of it. Form and matter being essential aspects which together make a thing exist as itself, every language has its own matter, group of words, working with its own characteristic structure—grammar. Between language and languages similarities there are but dissimilarities also, as between things there are similarities and dissimilarities. The special characteristics make the individual languages with their essential unity of form and matter what they are in themselves. Thus in relation to ideas characteristic of particular languages, there are the vocabulary and grammar.

In learning a language the vocabulary and the grammar are to be learnt. To do this the Direct Method as natural is adopted in contrast to the Translation method. The child that learns its language from its parents does not learn the vocabulary or matter of the language and the grammar—grammar rules—separately, but learns by gradual steps the language in its unity, simply, naturally, by imitating its parents, its relations, and friends during their natural usage of the language, —matter and form—and thus, in course of time, it acquires for itself, without separately learning the rules of grammar, the language by continued actual practice from natural use.

This is the observed fact. From this it appears that the psychology of suggestion might be used for the effective learning of language, by a process similar to that which the child adopts for itself providentially. The method consists in teaching and learning, while the language is being used, without dissociating the form or grammar from the

matter or vocabulary, that is, without having to teach and learn the grammar separately, that is, by gradually learning to use the language, as it is used by those who use it, through imitation of its actual usages.

The function of the teacher in this is therefore to use the language naturally and the work of the pupil is not to learn by laborious processes including rote, the grammar rules, but simply to learn carefully observing the teachers' 'natural' usage of the language and itself using the language, grammar and substance together, as it is being used. After this, the different sub-forms of grammatical structure, characteristic of the language, which form the grammar of it may be learnt indirectly, largely combined also with deductive practice. Such aspects of the language as pronunciation, spelling, reading, and writing, which are details in actual work, receive detailed attention by the natural process. The ear, the eye, the speech organ, and the activity of the psycho-physical apparatus of the child are co-ordinated to effectively achieve the purpose.

To achieve anything like satisfactory results by this method it is obvious that the teachers themselves who attempt it should be able to use the language naturally or in strict imitation of its natural usage. The value of the requirement of this condition is obvious, because if the teachers are bad users of the language, imitation and suggestion, as psychological processes, far from yielding satisfactory results will give the directly opposite unsatisfactory results in achievement, *e.g.*, every bad pronunciation of words will in imitation be so acquired by the pupil and the pupil continues to pronounce badly. Similarly, *e.g.*, every bad usage by the teacher of the

idiom or grammatical usage will be so imitated by the child who will continue to use the bad grammar and the bad idiom. Thus where the teachers themselves are ignorant of, or are but defectively acquainted with the language, the pupils' errors become serious and aggravated, because the direct channel of learning the right use becomes the direct channel of learning incorrect usage. That is, where the teachers themselves are bad users of the language, though the method itself in theory may be right, or because it is effectively so, the pupils can only learn the language badly or defectively through the bad, incorrect or defective practices of the teachers. This is clear.

In the present circumstances, the fact may be stated unquestioned, that the teachers, may be, considerably because of the circumstances—the language being not their own naturally and they themselves having quite inadequate facilities and scope to know the natural usages, not having opportunities of living with the natural users of the language or learning, in most instances, the language directly from them—who are largely, numerous responsible for the teaching of English to the children in this country—use the language badly or defectively. The consequence is that the children manifoldly learn and repeat the errors of their teachers with the result of aggravated spread of errors in the practice of the language.

The method has come into vogue and has been in practice for a considerable time now very largely because of the belief of its theoretical utility without relation to the circumstances in which it has been practised. The necessary condition of its giving satisfactory results should exist, if the method is to give the results that may be expected of it.

It is quite obvious that where the teachers themselves use a language badly, a method which has for its rationale and basis the psychological theory of imitation and suggestion, cannot get the results that may be otherwise expected of it—not only this, but the serious scope of bad learning through bad teaching. The essential requirement is that the necessary condition should first exist. If the condition favourable for it does not exist, worse, if the condition exists which is quite unfavourable for it, what happens is that quite the opposite effect of incorrect use of the language being imitated in practice from the teachers, results.

English teaching and learning being of much importance in the schools, it is well that the question of methods of teaching languages from this view, in relation to existing conditions, should receive the attention that it should from practical view, to ascertain how best improvements might be effected and for the achievement of the elimination of not only waste but actual evil and for realisation of good.

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THE SCHOOL ARITHMETIC BEING SOLUTIONS OF THE QUESTION PAPERS SET FOR THE LOWER SECONDARY EXAMINATION FOR THE

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TEACHING CHEMISTRY TO THE INTERMEDIATE CLASSES AND BELOW.

By Mr. S. C. N. RAO SARODE,
N. T. College, Adyar.

PART II.

THE OUTLINE OF THE METHOD OF STUDY.

Theory.

The subject must be studied under the following divisions:—

1. Historical study of the subject.

Historical study of particular matters such as

Discoveries;

The growth of this science;

Discoverers and detailed information regarding *how* they came by it;

What precautions they exercised and what mistakes they made.

2. Study of Principles, Laws and Theories:

(a) The modern and ancient theories.

(b) Hypothesis of each scientist.

(c) Study of particular laws.

(d) Study of universal laws (laws which hold good universally and are philosophic truths such as conservation of mass and energy, the three laws of proportion, the law of chemical equilibrium, etc.)

(e) Principles.

(f) What a *chemical law* means, how it is different from other *law* and *laws*.

(g) Study of physical chemistry.

(h) Detailed theories—

1. in general chemistry,
2. in organic chemistry,

3. in inorganic chemistry,
 4. in specialised portions.
 - (i) Chemistry in relation to *life* (not organic chemistry) but Bose's chemistry which rarely comes under the curriculum of the graduate study.
 3. General experiments for proving the laws and theories.
 4. Study of occurrences of substances (both elements and compounds).
 5. (a) Extraction and manufacture of substances (both elements and compounds).
 - (b) Chemical industries.
 - (c) Commercial uses.
 - (d) General technical preparation of substances.
 - (e) Metallurgy and the various kinds of processes used for each class of methods.
- Examples.*
- (1) Laboratory method of preparation of substances, and the electrolytic extraction of metals.
 - (2) Laboratory method of preparing what is commercially produced in abundance, such as baking soda, washing soda, caustic soda, sulphuric acid, spirits, alcohol, etc.
 6. (a) Study of physical properties of substances (both elements and compounds).
 - (b) Study of chemical properties of substances (both elements and compounds).
 - (c) Study of physical properties of metals (including ductility, malleability, etc.)
 - (d) Study of all properties of non-metals.
 - (e) Study of the use of these in commerce or at home.
 7. Study of laboratory experiments—
 - (a) Apparatus.
 - (b) Arrangement.
 - (c) Manipulation.
 - (d) Calculation (if involved).
 - (e) Inference or tests.
 - (f) Precautions.
 8. Formulae and calculations. Quantitative study of composition, equations. Calculations from physics.
 9. Definitions, etc.

Examples. Equivalent weights, valency, vapour density chiefly from books. Memorising them or making one's own definitions. The precision and accuracy of the expression. (This must be made by illustration and discussion).
 10. Remembering quantitative properties like boiling points, melting points, specific gravity, specific heat, solubility, etc.
 11. Analysis—quantitative and qualitative (to whatever grade it has been attained.) A scientific way of procedure in this study must be taught to every student, and left to himself for the rest of the work.
 12. Enumeration of methods of tests or preparations, etc.

Examples.

 - (1) No. of methods of determining vapour density, equal weight of elements and compounds, etc.
 - (2) Methods of determining composition (volumetric and gravimetric).
 - (3) Methods of preparation of substances: common gases and acids, hydroxides and salts of any kind and basity.

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13. Tabulation of study and general inferences.

Examples. Properties of halogens (a comparative chart), properties of halogen acids or oxyacids, elements of same group or salts of similar nature (isomorphic). Tabulation of solubility, the nature of such a group, and wherever common properties occur or comparable properties occur, they must be tabulated and studied. The periodic table is of immense use in this respect.

Such an analysis of the study and mental organisation of the matter in the subject is of great use in remembering as well as in applying intelligence everywhere.

14. Study of miscellaneous chemical reactions. Also rare and exceptional examples of preparation, precautions and reactions, properties and so forth.

15. Knowledge of poisonous substances and gases and of chemicals to be handled with particular kinds of precaution.

16. Observations in daily life or elsewhere.

Of these sixteen points or *credits*, each student ought to obtain at least 5 credits for being fit for promotion.

Those who get 6 to 7 credits are passed under "Fair."

Those who get 8 to 9 credits are passed under "Good."

Those who get 9 to 11 credits are passed under "Very good."

Those who get 12 and above are passed under "Distinction."

This kind of an organised, systematic and orthodox method of study may not be good or suitable among young students of the Lower

when they study science, but certainly, as science is a science, the method also must be made scientific. As defined, "science is organised common sense," the study and the procedure in study must be organised also.

PRACTICAL.

When students have to perform experiments where very simple apparatus is used, there is no use of asking them to sketch the apparatus. It will be absurd at this stage to sketch test-tubes, beakers and lamps. It must be more of *science* than school-room show.

Where students have doubt regarding reactions, they must be allowed to do their own practical work instead of the teacher deciding what the students must do. Where a regular exercise of manipulative skill is to be done, the teacher may suggest experiments. There is no use in insisting upon a work which each student does not like. A choice for selection must be given. Comfort while working is necessary and there must be all peace allowed to the students, and the Superintendent must see that no student interferes or disturbs another while the work is going on. The nervousness prevailing among some students in handling apparatus must be got rid of, and no student should be asked to pay for any accidental damage or damage that may occur in the process of his acquiring the ability to handle things carefully and neatly. Scrupulous cleanliness of the place and order must be insisted upon if there must be order and *clearness* in the mind of the student. If an experiment is not interesting, it is better to leave it out.

There are three main points of procedure in practical chemistry. They are experiment, observation and inference.

A. *Experiment.*

1. Apparatus used.
2. Selection of apparatus.
3. Reason for the selection or choice.
4. Adaptation of any apparatus given or available.
5. To manage with whatever little is given.
6. Invention of one's own apparatus for any question to be answered by the (Nature) experiment.
7. To make or arrange that self-invented apparatus.
8. Knowledge of disadvantages of using any particular apparatus or arrangement, and with reference to history.
9. Arrangement of the apparatus for any particular experiment either by the method given in a book or teacher's or of one's own suggestion.
10. Manipulation.
11. Sketching the apparatus (3 credits).

B. *Observation.*

1. Observation.
2. Calculation where involved, otherwise inference only.
3. Accuracy (as in weights and volumes).
4. Precautions.

C. *Inference or Deduction.*

1. Deduction of laws from general inference in B. 2.
2. New knowledge acquired or discovery.
3. Clues for inventions or for general use of the property studied and observed or for any commercial production and so on.

D. *Record of work.*

- (1) Neatness.
- (2) Well-worked or not, the correctness of the subject-matter.
- (3) Figures and sketches.

A = 12, B = 4, C = 3, D = 4 credits.
Of these (12 + 4 + 3 + 4) twenty-one credits, students must obtain at least 8 credits in order to pass, and 18 to 20 for "distinction."

Examination. (Observations of the candidate).

- (a) Time required. Slow or quick. (If slow, more time must be allowed).
- (b) Excited or cool, generally nervous or flurried.
- (c) Careless or cautious.
- (d) Everything in order and neatness or in clumsiness

(e) Note-book. Record of work.
(b), (c), (d) must be 3 grace marks for every 50 marks. The teacher should get an idea of what the student is, and help him accordingly. By studying the above five conditions, the teacher must help each student to become efficient. Therefore the examination will have 24 + 1 credits on the whole. Record will tell him of (24) points. The remaining one can be had from the Supervisor.

Of these points, those who get			
8	points,	get	merely a pass.
9 to 12	"	"	fair
13 to 15	"	"	good
16 to 17	"	"	very good.
18 to 20	"	"	distinction.

The teacher's observations during the terms.

NOTE:—The asterisk marked numbers are points which demand a great deal of memory of the student.

Theory—

1. The student's historical study of the subject.
2. Study of principles, laws and theories. (How many does he know out of the necessary number of them to be learnt?)
3. Study of the portion involving physics.

4. Study of the portion involving Mathematics, such as higher Algebra, and not merely Elementary Mathematics and detailed calculations;

- 5.* Study of occurrences of substances.
- 6.* Commercial manufactures, extraction, etc.
- 7.* Laboratory methods of preparation.
- 8.* Physical properties of substances.
- 9.* Chemical properties of substances.
10. Properties of Matter (in general).
11. Definitions and statements of laws.
12. Experiments—
 - (a) Laboratory Experiments.
 - (b) Those given in the Text-books.

3 credits for various classes of points of study as given under No. 7 of (theory-study) (a) to (e).

13. Formulae and balancing of equations.
14. Calculations, gravimetric and volumetric. Composition of substances (liquids, solids or gases).

15. Power to illustrate laws from general observation outside the laboratory.

16.* Quantitative properties such as B. P., M. P., Sp. gr., V. D., and so on.

17. Analysis of the study. Classification of various substances and properties, and tabular work for other things.

18. Study of Analysis. Science of Analysis and the procedure in Analysis.

19. Analysis (proper). Identification of substances, both mixed and single by Analysis (gases, liquids and solids.)

20. Enumerating Faculty—

(a) Enumerating the number of methods of preparation of substances, etc.

(b) No. of methods of tests. Chemical tests.
(c) No. of methods of finding the composition or V. D., equivalent weight.

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(d) No. of methods of determining or proving a law. The meaning of a law in Chemistry.

21. Study of miscellaneous chemical reactions.

22. Knowledge of poisonous substances. Precautions to be taken in handling them.

23. Descriptive writing of experiments.

24. Study of the Text-book.

OTHER OBSERVATIONS OF THE TEACHER.

1. Memory of the student (by association or repetition of the nerves.)

2. Whether the student remembers by logical sequence.

3. Faculty for analysis of study, classification work and tabulation.

4. Study of principles, *i.e.*, fundamental laws of Nature (coming under Chemistry) such as conservation of matter and energy, electrolysis, structure of the atoms, the periodic law, and so forth, which tend more towards philosophising faculty. If so, classify the student under that.

Students must be classified under these four rough divisions.

A few other points of observation are—

1. The faculty for descriptive writing.

2. Studious or not. Can he concentrate much on the study or does he find it difficult to concentrate? How long does he concentrate?

3. Does he require to put much effort and what amount of time does he require? Is he quick or slow? Steady or unsteady?

4. For what career is he fit? For Medicine, Research work, professorial, technical industry or what other?

N.B.—It must be understood that those who are not steady are not unfit for this study.

They may turn out to be the best research students and scientists, especially if they have intuition. But such a student must show brightness in the subject.

Regarding concentration, either his studies catch him with interest and therefore he cannot easily get tired of it or he must be dull and insipid, but like a bullock goes on dragging. Therefore the power of concentration for a long time is not always a compliment. A bright student who has concentration is hopeful. A dull or useless student should not be found to have much of concentration.

PRACTICAL.

(Same as Practical for Physics).

In conclusion it must be said that a teacher who does not want to take pains will find this all troublesome and useless. But an enthusiastic teacher whose ideal is education and service will find it all useful. An ambitious teacher who loves to teach Chemistry to his students however they be, and not for the reward of money or pay (which he does get) but for the ideal in life, will take sufficient pains to think out on similar lines, and will surely succeed in taking these observations about his students. Many Honours professors too may keep such a record of their students, and with that, help their Honours students to learn well. They must be ready to help the students where they are deficient. They may warn their students of their weak points so that they may put themselves right before sitting for their examination. The University ought to insist upon its teachers and professors making such observations and keeping records, in which the real merit of students may be found. But it all depends much upon the teacher whether he is a *man of ideals* or not.

(To be continued for other subjects.)

PLAY METHODS IN THE ELEMENTARY SCHOOLS.

By Mr. S. JAGANNADHAN,

Kindergarten Assistant, Teachers' College,
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THE more we move with children, the more we teach them, the more we think like them, the greater are the opportunities thrown in our way to adapt our methods to the children and their needs. To a teacher of such a disposition the method of teaching in the present time appears to be quite soulless and far from being suited to those for whom it is intended. A perusal of the book 'Play Way,' by Caldwell Cook cannot but convince and impress upon the fair-minded critic that the play methods are but the happiest and most appropriate methods suited to the young age. No doubt there are great possibilities of taking up the method to the higher classes also. To those who are brought up on the lines of spoon-feeding, to those who still believe in rigorous discipline the methods will only appear as educational fads. But it must be conceded that at present there are some draw-backs in adopting the system wholesale:—First, let us take the child. A child who comes from the home with the notion that education is repeating after the teacher and doing what is asked of him by the teacher and copying from the black-board, finds that he is not learning anything by the play method. Let me illustrate the point clearly.

It was a short lesson in Tamil on the marriage of Uttara with Abhimanyu. Instead of reading the passage and explaining the expressions contained in it, I suggested to them the writing of a wedding card as if it emanated from the Raja of Virata. All pupils received the suggestion with such joy

and enthusiasm and earnestness that they began to think about it seriously. Each of them gave out how he would relate Abhimanyu to Dhritarashtra, how he would frame the letter, what details should find a place in a letter of this kind and so on. They also wrote in their own note-books a letter on the lines issued from all Hindu households. But at the end of the lesson they said: 'They had no lesson that day.' They spoke from the view that the few lines in their book describing 'Abhimanyu's marriage' was not read. I had to point out to them that they without reading the lesson were able to write a good letter, describing Abhimanyu's marriage. They had learnt for themselves more than they could get from the text-book. The difficulties they experienced were—

(1) In describing Abhimanyu whether as Dhritarashtra's younger brother's grandson, or as Arjuna's son or as the grandson of the late King Pandu of Hastinapur or as the son of Arjuna, brother of Dharmaputra, and the eldest of the Pandavas.

(2) In writing the letter in a form in which a king would send such a letter.

(3) In writing this, they had to think about nice Tamil expressions to be used in the letter and this set them thinking for a while.

Therefore we see the seriousness roused in adopting the play method and hence we can rightly say that there is play in work and work in play. If children have been trained in the play-method, they would not have taken this as a mere play but a lesson in all sincerity.

So the purpose of the play has to be kept in the fore-ground.

The second difficulty experienced is the lack of rigorous discipline. In a lesson of

this kind each child will have some remark to make and it is but essential that the teacher should give a certain amount of freedom for self-expression and respect for their remarks. A class of children trained from the beginning in the play-method would certainly preserve order in the class-room even by freely co-operating with the teacher and sympathising with his difficulties.

The seriousness with which they look at the problem is a sufficient indication that the time of the lesson is well and appropriately spent.

The third difficulty is lack of appreciation of the method by teachers themselves.

Some teachers do not come down to the level of the children in their play for fear that they would go down in the estimation of the children and their dignity would be at stake.

It is not fear that we have to cultivate in children but respect that we have to foster in them by direct relationship and guidance. Only by freely mixing with them would we be in a position to draw out their inner faculties and shape them along right lines. For those that would cast off any new system with prejudice there is no other course but to ignore them. But it is still open to us to work with greater zeal and show to the former the pleasant way by which the same matter of the lesson could be assimilated by children without experiencing great fatigue or tiresomeness.

The great qualifications for the teacher following the play-method are:—

1. Giving equal opportunities for all pupils to express themselves.

2. Bestowing great care to preserve orderliness in class.

3. Respecting the feelings of all children, especially of the sensitive children in particular.

4. Encouraging the children's play even outside the class-room.

DISCRIMINATION AND JUDGMENT.

In adopting the play-method the teacher must exercise his careful judgment in choosing lessons to be taught by the above method.

FREEDOM.

The text-book method, the strict adherence to syllabus and schemes of work and the daily time-table, should however have to be really replaced. Complete freedom therefore ought to be given to the teacher who is earnest in following the play-method. There may be times when a lesson has to be necessarily carried on in the next hour thus sacrificing the next lesson. In order to supply the needs of the children during the hour, it requires the teacher to collect all his resources by procuring beforehand suitable materials apparatus, and appliances.

So it concerns the head of the school to view the value of the play-method and give as much freedom and scope for the teachers under him. Trust begets trust. It is the feeling of the responsibility by the teachers concerned for the children committed to their respective charge, that needs to be constantly felt and reminded if it needs be.

OVERCROWDING OF CLASS-ROOMS.

If 'Individual attention' is a thing to be not only in theory but in practice as well, it is but fair that the strength of the class should be limited to a certain number to be determined according to local conditions. No definite standard need be set. It moreover depends upon the capacity of the teacher,

Roughly it might be put that 20 in the lower classes and 25 in the higher classes will be a sufficient number.

MORE SPACE FOR FREE MOVEMENT.

It may not be possible to carry out all play-method in the class-room, but it will be certainly productive of good result if the classes are for some time held in the open air, under a shady tree, in a garden, on the river bank, or near a hill, etc. Therefore excursions and walks should form the chief feature of such a system. No doubt in Nature lessons there is ample scope for such excursions and walks. But it does not prevent a teacher from undertaking excursions to teach any lesson in English, Tamil or Arithmetic. For example, the teacher takes the children to the bazaar to see the mode of weighing and giving change, or seeing the method of shoeing a bullock. Another time he takes the pupils to the tope in the early morning to see the birds and their nests.

Having outlined the difficulties from within, we have also to survey the difficulties from without.

First, the parent who does not see eye to eye with the teacher has to be shown the value of such methods by being invited to the school on more occasions than one. It depends on the great cordiality that prevails in the locality between the school and the home. Given the right type of teachers, they will leave no stone unturned in convincing the public of the value of the combination of old and new methods, by their strenuous endeavour, patience, love, enthusiasm and earnestness. Where there is faith and conviction, all difficulties may be surmounted.

The other obstacle is the want of encouragement on the part of the authorities. This

encouragement can be easily secured as in the previous case by showing to all in general the successful results obtained by following the play-method.

I shall not tire the readers with the enumeration of the difficulties in the way. I shall now proceed to describe some lessons wherein the play-method could be successfully followed. It will then be clearly seen by a perusal of the following pages that the play-method finds a great place not only in the general theory of instruction but also in the actual practice of instruction. More lessons can also be outlined on the following lines. Only want of space deters me from outlining more lessons. Teachers who really recognize the soundness of the method can carry the play-method in other lessons also by planning everything beforehand by themselves sitting in a Conference.

Many lessons in subjects of Elementary School Instruction, such as Number, Nature-Study, Language or Story-telling, and general knowledge lend themselves admirably for play-methods.

I would put Number foremost inasmuch as we should try to instil number ideas concretely.

I LESSON. Numbers—Odd and Even.

Apparatus Reqd. Beads Piece of Chalk.

A	C	E	G
x	x	x	x
o o	o o	o o	o o
o o	o o	o o	o o
o o	o o	o o	o o
	o	o o	o o
			o
x	x	x	x
B	D	F	H

Boys form pairs and sit one opposite the other.

Game. One boy takes some beads in his hand and closes it. He asks his partner as to whether the beads are odd or even.

The boy gives a reply, say 'odd.'

The first boy then proceeds to lay the beads in twos as shown above. If one is left behind, he declares it 'odd.' If nothing is left behind, he declares it 'even.'

In the same way each pair learns something by this play way.

II LESSON. Policemen's Drill.

Apparatus required—

1. Big calendar numbers pasted on pieces of card-board.
2. Pins.
3. Ten boys.
4. A leader.
5. Ten sticks.

Preparation. Let each boy choose a number and pin it on his shirt prominently, and hold a stick in his hand. They should stand in a row in the proper order 1, 2, 3, 4, 5, 10. Each boy must find out his place in the line and he will only know it by adjustment. If a boy's number is 7 and if he finds only 5, he will choose his place next to 8 not towards 9 but towards 5.

Game.

Commands

Attention.

Stand at ease.

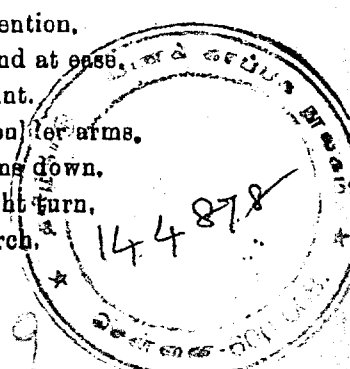
Count.

Shoulder arms.

Arms down.

Right turn.

March.



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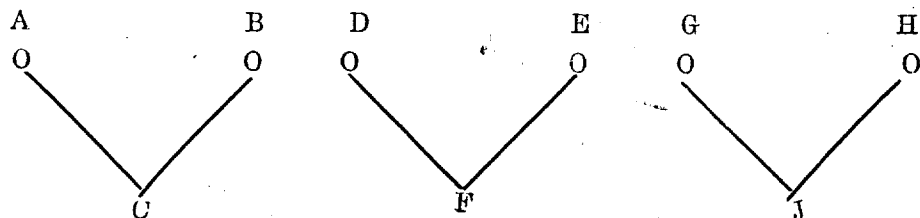
Leader counts

A. 2	B. 2 + 2 = 4
2	2 + 2 + 2 = 6
2	2 + 2 + 2 + 2 = 8
2	2 + 2 + 2 + 2 + 2 = 10.
2 = 10.	

C. One	two
Two	twos
Three	twos
Four	twos
Five	twos.

Comments may be made on the soldier-like marching, shooting with rifles by all children lying down and saying 'tup, tup.'

III LESSON. Playing Horses.



Two boys stand in front and a third boy stands in rear between the first two. The first two are the horses and the rear boy is the coachman. A string passes round the shoulders of the first two and the coachman holds the two ends of the string. The horses gallop and the coachman holds the reins tightly and follows the horses.

For each carriage 3 boys are required.

$$3 + 3 = 6$$

$$3 + 3 + 3 = 9$$

$$3 + 3 + 3 + 3 = 12.$$

It is noteworthy to add here that the process of continued addition and the process of multiplication go hand in hand with these games. First the play should be enjoyed completely and again in the repetition of the play seriousness creeps in by a word of suggestion from the teacher. He may suggest 'let us count the numbers before we let the horses go.'

IV LESSON. The Railway Train and the Engine.

Apparatus.

1. Posters showing names of stations near the locality or neighbouring villages.

2. Bell.

3. Green and red flags.

4. Whistle.

Game. Free Play. Let children form a train and let a leader be the engine. He whistles and the children behind him follow and they stop on reaching the next station. Ringing the bell, pointing signals, and crying out loudly the name of the station, all these take place when the train is reaching a station.

Number Ideas.

Let ten boys represent the train. At the next station, a carriage is detached. Then how many would be left behind? Two carriages are attached at the next station. How many carriages are there?

or

Leaving aside the engine, the other children are passengers. Four children get down at the next station. How many passengers are left behind? Three more passengers get into the train. How many passengers are there on the whole?

This will be a very good example for later sums on addition and subtraction in the same sum.

Measuring. Tape, foot-rule, yard stick, sand, a set of measures and weights, a balance.

A. Length Measure. Ropes; bamboo sticks.

1. Measure a distance on the ground with your feet and count as you go on measuring.

2. Take this stick and measure the distance (e.g.) a foot-rule.

(The teacher must teach the child to put a mark after each foot so that he may rightly measure the distance.)

3. What is your pace? Measure the length of your pace. How many paces are there from A to B (any two places marked in the play-ground, street or river bank)?

4. Measure the distance in yards.

5. Measure the bamboo sticks and ropes.

The children may be divided into a number of convenient groups. As one boy is measuring, one will be marking the two ends, the other will be counting, another will be noting the times counted and so on, the work of each group may be determined. It will be a pride for each boy to have something to do in the group. The same distance can be remeasured from the other end by another member from the same group.

B. Capacity Measure.

1. Grain. Have sand for grains, salt, etc.

2. Liquids. Have water for curd, ghee, butter-milk, and milk.

Let boys measure sand by an ollock and fill in a measure. How many times does he measure by the ollock till the full measure is full? Continue this with quarter measure, half measure, etc. Measure a heap of sand with a full measure. Measure a small heap by a half measure and then by a full measure.

In this exercise each boy should have an opportunity to measure by each of the measures

in the set and learn the relation of each to the other. A number of such lessons done in the school compound will prove to be greatly advantageous.

Liquids. In the same manner, measure liquids and find the relation of one unit of measure to the other. The practical work may be followed by oral sums. If children are not then able to comprehend and answer, the same problems may be again correctly demonstrated.

C. Weights. Sand, clay, pieces of brick, stones, in place of sugar, jaggery or tamarind, sugar-candy respectively.

How much of sand is equal to the weight of one viss? Weigh the same with half a viss, $\frac{1}{4}$ viss and a seer. How many times have you to weigh a viss of sand by both the weights of the lower denominations quoted above?

In the same way, weigh 2 viss of tamarind, 3 viss of jaggery, $1\frac{1}{2}$ viss of sugar-candy, $2\frac{1}{4}$ viss of sugar, etc. Learn the relation of the weights of lower denominations to those of the higher ones.

D. Making a Balance.

E. Tracing coins on pieces of paper and pasting them on small round pieces of cardboard during leisure hours.

F. Keeping toy shops, buying, selling, giving change—all these are other instances of the play-method.

General Remarks on Number Teaching.

We could divide the stages of Number teaching into three periods, viz., (1) The period of sense-training and free play through which the child gets Number ideas. Lessons 1 to 4 are examples for play-methods in Number.

2. The period of formal lessons through practical work such as paper-cutting, block-

building and Number games such as keeping shop and the rest of the kind that follow the first 4 lessons are examples in this direction.

This is a period in which the child is introduced to concrete examples in life apart from his routine work.

3. The period of carrying on a project such as the book-shop and learning all higher number work through actually working the project. In this period plenty of opportunities is given to learn space work by actual work. 'Hand-work' is the other method by which space work may be taught in this period.

I have in a previous issue elaborately outlined my scheme of teaching 'Number by life and for life' and the few suggestions given above in this number may be usefully read with the previous one.

One caution is however necessary. Play-methods are criticized from the view that they retard the thinking power. The seriousness of the purpose should never be lost sight of in play. In counting, measuring, or weighing, the mind is also exercised to a great extent. All play lessons should be followed by Drill work based on the play lessons.

Nature, Number and Geography.

Let us take a lesson on shadows.

I. Pupils can measure the length of their shadows at each hour:

Continue this practice even at home.

Pupils note the length of the shadow decreasing as it is advancing towards noon, and increasing again as it is towards the evening. Pupils note the direction of the shadows.

II. On a level space in the open ground, fix a big sheet of paper, a thin stick 2" in length in the centre. Draw lines over the

shadows of the stick at each hour. Measure their length in inches and denote the same on the lines. At the end of the day draw a line touching the end of these lines.

Let children note here the different directions in which the shadows have fallen.

III. There is ordinarily prevalent in the villages a simple way of calculating time by measuring the length of one's shadow with one's feet. We could leave aside some details as the exact time at which the sun rises and sets. The approximate time can be taken from all these calculations. The pupils themselves feel that during some times of the year the days are long and at other times, the nights are long.

2. The pupils have to be told that the calculated time is not in hours and minutes as is in the English system and as is shown by the clock or watch, but Naligais and Vinadis.

[A Naligai is 24 minutes: 2½ Naligais make an hour.]

3. The play-method of calculating time has some connection with actualities.

Method. Measure the length of your shadow with your feet. Add 5 to it.

With this number in the divisor, divide 100. The quotient gives the number of Naligais from the time of sunrise, if it is in the morning or the time to sunset if it is in the evening.

If there is any remainder, multiply the remainder by 24 and divide again. This quotient gives the minutes.

This is only a rough method of calculation, but it approximates to correct time.

A. *General Knowledge.* Panchangam.

Class II. Have a calendar in the classroom.

A: 1. What day is to-day?

2. What month is this?

3. What date is to-day?

Class III.

B. What Thithi is to-day?

What is the Nakshatram to-day?

Class IV. Read a Panchangam.

Class V. Make a calendar for each day and write the same on the black-board.

In all these cases the children can only be counting one after another and get at the actual Thithi or Nakshatram. Reference must be made to the Hindu calendar.

If the right incentive for such things is given to children from the beginning, this will become a habit and a good habit which the villagers will be pleased to appreciate and encourage.

B. *Railway Stations.*

Class I. In the lower class the children have played the Railway train. The same lesson can also be combined with a language lesson. The names of Railway stations may be written in bold letters and stuck on walls. Children are given small card-board pieces on which the names of the stations are written. The test is to see whether they compare their tickets with those stuck on walls. There is great stimulus for learning the letters and reading words.

Class II. In Class II the children can close and open gates on the road that crosses the Railway lines, collect tickets, etc. In the next higher class, tickets may be sold and a Booking-clerk for the purpose may be appointed.

Provided we have enthusiasm and desire to follow methods appropriate to the nature of children, we would not feel ourselves wanting

in finding out devices and making adaptations.

C. *Vote.*

This is a very beautiful lesson and we could enjoy the great seriousness, enthusiasm and the anxiety displayed by children in class election games. Let me describe an actual example. The pupils had collected some amount by voluntary subscription from a pie onwards for the purpose of purchasing a picture for the class-room. The money was a voluntary contribution of their savings from their pocket-money. There were two proposals, one to purchase a picture of Dhruva and the other to purchase one of Shanmuga.

Pupils were each given a piece of paper on which were written the two names

Dhruva

Shanmuga

Dhruva and Shanmuga, and the boys were asked to cast their votes in favour of any one of the two. Each was to go out and mark X against that which he favoured, fold the same carefully and put it in a box with a broad opening on the top. Much seriousness was evinced in this matter though it was all a game. They themselves elected the returning officer to count the votes, and an agent on each side was also nominated. All the children too were crowding in with an anxiety and eagerness so characteristic of an adult in the same situation. While the numbers were being counted as they were put into their respective boxes (two boxes, one with Shanmuga and the other with Dhruva written on them, were properly got for the game) their anxiety could be measured. At the close it was known that 17 were in favour

of Shanmuga and 9 in favour of Dhruva out of the 26 present in the class. The scene ended with a great ovation and clapping of hands. The two boys who proposed the respective pictures were asked to tell the audience why they preferred their particular picture. They could say about two or three sentences each though they full-well knew the story of Dhruva and a little about Shanmuga. Great stress was laid on giving their individual opinion in the matter before them. A number of occasions to display their individuality will prove to be advantageous in the long run.

Nature Walks.

The lesson taken for the purpose was the work of water in wearing away rocks. The children were taken to the river-side close by where water flows over rocky soil. The water had just subsided after the floods. The children crossed the river and came to the middle of the river. They saw the rocks worn away on the surface and they could gather the sand particles in their hands. They could easily remove small pieces of rock from the surface. Each one of the children learnt these things for himself. They could also see the current steering a course of its own in the midst of rocks and dams.

Let me describe another long excursion that lasted for a day.

CUBS ON EXCURSION.

One evening, the cubs after their parade, suggested the organisation of an excursion to St. Thomas Mount. This suggestion was completely approved of by the whole pack and the cub-master. A programme as to how the next day was to be spent, was drawn up.

1. Railway journey to Mount Station.
2. To the St. Thomas Church at the top of the hill—by walk.

3. Lunch in a friend's home.

4. Plays, games, rest.

5. Return journey.

Next morning, the cubs dressed in their uniform, flocked to the railway station at the appointed time, each carrying his own provisions for the lunch, and when the train arrived, each got into the train watching at the same time, whether his brother cub got into the train and accommodated himself. The 'few minutes' journey to their destination was spent delightfully, amusing talks and conversations about the beauties of Nature all round, the river, the channels, the gardens, the hills at a distance, etc. Some minutes' free talk was also resorted to in studying the characteristics of fellow-passengers.

The train stopped and they alighted and stood in a line to march straight to the hill as per their original proposal. That was the very first time since they had ever a long walk and they gained an experience of good marching. The caution 'Always keep to the left' was strictly adhered to, the passers-by really showed their admiration while some one also dropped a few words of suggestion as to their behaviour in their marching. The cubs, only the children of the Kindergarten, though they looked upon the work as a piece of delightful game, had by circumstances to keenly feel the seriousness they had to bestow on it and in this they had to look into their cub-law 'the cub gives in to the old wolf—the cub does not give in to himself. The soldiers standing near the barracks were whispering to one another that the cubs are trained to be good and daring youths. And in their presence the cubs walked more majestically and in a more orderly fashion than they did before.

When they accomplished this mighty journey, mighty of course in their view, they went up the hill putting on faces indicating sometimes pleasure and at other times pain, pleasure in having gained their desire for an excursion and pain in having had to walk the distance to which they were not usually accustomed and the scale in which they had to do that day.

They reached the top. A kind mother showed them all the noteworthy features of the Church of St. Thomas and to her they returned their grateful thanks. A chameleon attracted their attention. Its changing colour, its cry, its mode of walk and all, they observed with open eyes. The view from the top had broadened their vision, both physical and mental. They also strayed for a few minutes here and there and in a short time fell in their rank to get down to the foot and to march straightway to their friend's house.

The friend referred to here was a class-mate of one of the cubs and who though not a cub himself evinced great pleasure in their activities and responded to all their wishes and wants. The cubs had their lunch and took rest for a few minutes. After that, they had their jungle dances, ball-games, leap-frog, hopping and other usual games.

After a few more minutes' rest, they got ready to march to their houses. But the point at issue then was to decide as to the course to be adopted in reaching home, whether by walk or by train. Excepting one, all were for a walk and hence the one cub too had to concede to the wishes of the rest as the cub-law was always before him. They also unanimously viewed that the money left unspent on the railway journey may be credited to their savings. It was accordingly carried.

In forty minutes they covered their return journey and on reaching the nearest street, they all stood in a line almost silent just to offer their thanks to God; and then sang, 'God Save the King.'

Thus they spent their one day in a pleasant and amusing manner, gaining some preliminary experiences of men and things outside. Such bits of experience gathered during excursions and walks are really the sound steps of a free and natural education and leave an everlasting impression in their minds.

Geography in the School Garden:

Topic. The Village Plan.

Children start from a central point such as the village school, the local temple or their own home. In the case of the last, each boy would have to make a plan. In the other cases, the children could attempt to do group work. Let them start from the school.

1. What is the name of the street? Write the name of the street and fix it on the ground at the entrance to the street.
2. Construct small clay-houses to represent those adjoining the village school.
3. What street branches off at the end of the street?
4. Always keep in view the direction of the street, bazaars, etc., in relation to the school. They could point to these places by show of hands or be more definite as East, West, North or South, or between East and West or near a definite spot such as cocoanut tope, canal side, tank, temple of the village god or goddess.
5. Small plants can represent topes, and grass can represent fields.

6. Houses can have thatched roofs—pieces of straw or cocoanut leaves may be stuck on to the clay.

7. Great prominence may be given to the school, the Village Munsiff's home, the school teacher's residence, etc.

8. The tank or the canal or the river in the locality can be filled with water. Grass may be grown along the tank-bank or the canal bank to show the growth of reeds.

A separate plot in the garden may be reserved for the purpose. The teacher or the on-looker could see the work of these young town-planners and the interest evinced by them in offering suggestions and executing work shared by the respective groups.

Story Dramatisation.

Readers of the 'Educational Review' will have been aware of my 'Story Rhymes,' published in 1926. There are very great opportunities in the school to make the stories appear lively and interesting if the stories are dramatised in the class.

I. Taking the story of the fly that forgot its name, we can successfully carry out the following in actual practice.

1. Make drawings or if it is not possible, collect drawings of a calf and a cow, a shepherd, a stick, a tree, a crane, a tank, a fish, a fisherman, a pot, a potter, clay, grass, a horse, etc.

2. Actual specimens for a stick, a pot, clay and grass can be obtained easily.

3. Fourteen boys stand in a line to play the fourteen respective parts as shown in the drawings above and another boy personifies the fly. The fourteen boys possess in their hands a drawing of the person, animal or object they are supposed to act. The fly goes to each in order, sings the rhyme and asks what its name is.

4. When the whole is finished, another boy can take the place of the fly and they exchange positions. The game is again continued from the beginning.

II. In the same way the story of the monkey and the drum can be dramatised.

Pictures of objects or persons in the story or drawings add to the value of dramatisation. A barber with a knife, a basket-maker, a gardener watering a garden, a boy grazing cattle, an oil-monger at work extracting oil, an old woman in front of her oven preparing morning cakes, a village Talayari sleeping near a tank with his drum close by—all these scenes could be easily arranged outside the class with the help of boys, actual objects or pictures.

The monkey passes from one to the other, playing his own jokes till at last he gets to the top of a table or any raised place and beats the drum singing his favourite song.

Language. Even language could be taught by play-methods and in connection with the stories. The names of animals written under the pictures drawn for the above stories will be found very useful in teaching those words. The names of objects could also be written under the drawings and usefully employed in teaching.

As a sort of revision exercise, words cut out from books, posters, newspapers, notices, advertisements, journals and other waste materials may be used. These words may be arranged in some convenient order as names of persons, books, dramas, names of places, etc.

1. First, these can be read.
2. Next, the children can be asked to pick out any name which the teacher suggests.
3. The children by themselves could play at a game thus (e. g.) There is a place which

begins in *ப*: What is it? Find it out and tell me what it is.

There is the name of a fruit which ends in *தை*. Find it out and tell me what it is.

There are six cards with these six commands written thereon. First the children do these commands after the teacher. The word *கை* is written on the black-board and the children are made familiar with it. The other words would have been made familiar in their previous revision lessons. The order in which the actions are performed and the words are written, the repetition of the same words in their play drill will leave a sound impression in their minds.

In the same manner, more cards describing movements of arms, head, etc., can be written and advantageously used as play lessons in reading.

Short advertisements such as

வெண்ணெய் காய்ச்சின வெயில் நல்ல வாசனை !!

குறைந்த விலை !!!

வீசை ஒன்றுக்கு விலை மூன்று ரூபாய்

ராஜம் பிள்ளை,

கெய் வியாபாரம்,

தெல்லூர்

could be distributed by a boy of the same class, himself shouting at the pitch of his voice, the contents of the notice card. Is it not after all that we want to establish a connection between the sound and the sound symbols firmly in their minds to facilitate easy and quick reading? Does not this method justify our way of reaching the goal by a better understanding of the child's ways?

1. IS REFORM EXCEEDINGLY NECESSARY?

When the whole world is moving forward in its search after perfection, should we not keep pace with the advancement and march forward? Should we not mould a system in keeping with the aspirations and needs of our children? The outstanding feature in the much talked of modern methods such as the Dalton Plan, the Project method, the Story method, the Play way, the Dramatic method, etc., is the recognition of the individual needs of the child. The real method therefore is the one that takes the children into first consideration in its formulation. The other considerations are the recognition of the individuality of each child in the class and the self activity, the creative tendency and the self-expression of the child. We need not however slavishly and blindly follow these systems but it is open to us to take all the best from our tradition without losing sight of all the best ones from the modern method. Thus the reform should first emanate from the teacher.

2. RAISE THE STANDARD.

If we think that the standard of attainment according to the present method is very low, it is left to us teachers to raise the standard not at the top but from the bottom. If so, we should strive harder still in finding suitable methods of raising the standard. That question is in direct bearing with the question of finding out suitable methods or devices for teaching children. If we will, certainly it could be done. If in so raising the standard, will these play-methods stand in the way of advancement? There is no need to be discouraged at this. I am sure if the methods are rightly followed from the lower classes and the interest is kept up, we shall be reach-

ing the goal of perfection soon. We do not confine ourselves to any one of the above methods or entirely cling to our old system, but are in the process of evolving a new system by blending the old with the new in the light of our own experience, thought and the rapid advancement which we desire our children to make.

EXAMINATIONS.

If by following such play-methods and paying individual attention, could we have a same test for all the children in the class? As it is, examinations are but a chance and they give the incentive for the children to read and work hard. But examination alone is not the sole criterion for judging the standard of a child. Such considerations as regular attendance, satisfactory individual work, good deal of practical work and written work, sincere effort in learning portions done in absence, the parent's genuine interest in seeing to the educational development of his child—all these are matters to be deeply considered in promotion. The more we lessen the examination fear and fever the better for our children. With those who are in charge of Elementary Schools, the question of incessant examination need not at all be a subject of worry.

EQUIPMENT.

It is desirable that each school should be thoroughly equipped so that the teachers would not find it difficult to carry out their methods. But it should also be understood that there are great facilities open to the teacher to gather the materials for himself. Especially for the teacher everything on earth is found useful in teaching. Picture collection should engage the teacher's attention foremost. How many Readers are spoiled year after year? Could not the pictures in

these books be put to a better use than being cast off in the street or sold as waste paper in the bazaar? A teacher who sees the value of pictures would take the earliest opportunity to gather all the pictures available from newspapers, journals, calendar sheets, old books, etc., and then sort them in the many useful ways which he could plan for himself. Words, sentences in large bold print in the vernacular and in English could be cut out from the above and advantageously used in language lessons. Short and useful advertisements, placards, posters can be preserved and read. The more are the ways of teaching the more will we create the thirst for reading. Especially in connection with number teaching, I had occasion to chalk out a list of materials, charts, etc., which each teacher could by his own effort secure for the school.

CONCLUSION.

It may be safely concluded here that the play-method can successfully be employed in many lessons in the Elementary Schools; but as a rule it could not be applied to all lessons. It is a means to an end and not an end in itself. So also it is necessary to point out that hand-work, sense-training, dramatic methods—all these are only methods adapted for a higher end. These are more psychological than logical. The several advantages of combining these methods in elementary instruction are first, we quite realise and give scope for the children's activity and second, we look upon the twenty or twenty-five children committed to our charge as twenty or twenty-five individuals, each with a taste, like or passion particular to himself, and third, we see that the educator's duty is to take stock of all these things in particular in his teaching. The view of teaching a class

or group of children is slowly fading away and individual attention is much recognised and cared for. Again the knowledge gained through these methods by self-seeking, self-doing and by self-effort is sure to be fixed in their minds well. As Caldwell Cook says: 'In the process of learning, there should at least be as much practice as of instruction, and the theory and practice of study must be united in education.'

Whenever we study a system of teaching, we must make it a point to give constructive

suggestions for work. Unless we could do it, there is no use of suggesting to the teachers to follow the methods. The teachers require guidance in details to be followed. In the foregoing pages I have endeavoured to give constructive suggestions for further thought on the subject of play-methods. If the suggestions are taken as sufficient incentive for further thought and future work, I shall consider this article to have rightly served its purpose.

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PRIMARY EDUCATION IN BENGAL.

BY

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IT is now unquestionably a recognised fact all over the world that one of the first conditions of self-defence, self-reliance, self-help and self-government is the gradual emancipation of the masses from gross ignorance. The system of local self-government and the principle of popular election presuppose that the mass of the population will, by degrees, attain at least that elementary knowledge which enables them to exercise judiciously their rights and powers. Undoubtedly, in India, many causes combined to make the progress of education slow. The slight demand for education in an agricultural country, the early employment of children on account of bad factory laws, caste-prejudices, the existence of large depressed communities, the inferior social position of women, and, finally, the reluctance of the authorities (both Municipal and Government) to introduce compulsion, terribly affected the progress of education in India. Whatever might be the causes, so completely, so desperately, have the whole popular body been pervaded by the stupefying power of a long reign of ignorance, that we have still before us a melancholy spectacle.

The Government of Bengal and the representatives of the people in the Legislative Council, District Boards and Municipalities have, on many occasions, in the past few years, given expression to a definite opinion that the most pressing educational need of the province is the removal of illiteracy among the masses. The percentage of literacy in British India

among the total population of 20 years of age and over (according to the last Census of 1921) was 18.3 males and 1.9 females. For Bengal alone the figures were 22.5 males and 2.1 females. So far as male literates were concerned, Bengal was ahead of all the other provinces in India except Burma. The next Census will, perhaps, show that some of the other provinces have overtaken Bengal in regard to the progress of literacy among the total population of their respective provinces. Almost all the provinces passed Primary Education Acts in 1919 and 1920 for the introduction of compulsory and free primary education in areas within the jurisdiction of Municipalities and District Boards. But only some of the local authorities in Bombay, Madras and the Punjab took up the question seriously. The Acts of the other provinces, particularly the Bengal Primary Education Acts of 1919 and 1921, have remained dead letters. The poverty of the local authorities and their natural reluctance to introduce coercive measures are usually the causes for the Acts remaining so ineffectual.

Progress of education in Bengal has been very slow during the last five years compared to some of the other provinces in India. For instance, if we compare the figures for Bengal, the Punjab and the United Provinces, we find that five years ago, so far as percentage of population under instruction is concerned, Bengal was ahead of the Punjab and the United Provinces; but now the Punjab has gone ahead of Bengal. The following figures will reveal the exact condition at the end of 1926-27:—

(a) Percentage of total population under instruction:—

	1921-22	1926-27.
Bengal	... 4.05	5.02
United Provinces	... 2.25	2.97
Punjab	... 3.03	5.72

(b) Percentage of male population under instruction:—

	1921-22.	1926-27.
Bengal	... 6.88	7.94
United Provinces	... 3.92	5.15
Punjab	... 4.77	9.32

Hence we find that the percentage of boys under instruction has very nearly been doubled in the Punjab (*i.e.*, about 100 per cent. increase) during the last quinquennium; while in Bengal it has gone up by only 24 per cent. during the same period.

No doubt primary education has made a certain degree of progress during the last five years, for the number of primary schools rose from 35,615 in 1921-22 to 38,187 in 1926-27, and the number of pupils in primary schools increased from 11,64,597 to 13,98,942, *i.e.*, by 2,43,345. While in 1921-22 there were on the average 32.6 pupils in a school, in 1926-27, there were four more or 36.6. The number of boys in primary schools in 1926-27 was 13,40,499. Of these 7,46,053 were Muhammadans or 53.3 per cent. of the total and 6,42,538 were Hindus or 45.9 per cent. The Hindu pupils have increased by a little over a sixth during the quinquennium, but the Muhammadans, by almost, a fourth. In the whole province, there is 1 primary school to 2 square miles and to 2.2 towns and villages.

The above figures appear to be encouraging. But on closer examination it is seen that few of these pupils enrolled in primary schools remain for more than one year under instruction. The expenditure and care bestowed upon these pupils is almost entirely wasted, for, in no sense of the word, can they be considered to be literate. The enormous preponderance of pupils in the lowest class reveals the proportion of wastage. Of 100 boys in Class I, only 30 reach Class II, 20 pass

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on to Class III, 5 to Class IV and 3 to Class V. Here is something to make one pause and think. Primary education at present too often means merely a year in the lowest class. In the case of girls also an overwhelming majority leave school after the first year and soon relapse into ignorance. The above figures reveal not only lamentable waste but also the deplorably backward state of primary education in Bengal and the great need of keeping children in the primary schools after Class I.

In Bengal the greatest obstacle to progress in primary education is the persistence of inefficient one-teacher school. In Bengal there were 38,187 primary schools with 52,822 teachers in 1926-27. In the Punjab in the same year there were 5,908 primary schools and 11,668 teachers. On an average only 36 pupils attended a primary school in Bengal, 55 in the United Provinces, and 70 in the Punjab. Bengal is principally a land of one-teacher school. In the Punjab, compulsion is raising the tone of the school by providing one or more extra teachers where increased enrolment justified this extra support. In Bengal, compulsion has not been introduced anywhere; hence waste in education particularly in Calcutta, is appalling. Eighty per cent. of the boys attending primary schools in Bengal give up their studies after a year or two, and return to illiteracy. No doubt there had been rapid progress in primary education in Calcutta, but if statistics were taken, it would be found that boys and girls who joined primary schools left them after 3 or 4 months, returning at a later period, thus beginning their studies afresh. The money that was spent on primary education in the province was thus wasted. A mere introduction of free education for all

primary pupils will hardly benefit Bengal unless at least the boys are compelled to continue their studies for a number of years.

The existing expenditure on primary education, low though it is in India as a whole, is deplorably low in Bengal as compared with other provinces. The average annual cost of educating a boy in Bengal is Rs. 4 0-9 and a girl, Rs. 3-3-6. The people of Bengal are nevertheless paying directly and voluntarily more than those in other provinces. The fee-rate in primary schools for boys is the highest in Bengal, averaging Re. 1-10-1 per annum, no other province, except Bihar and Orissa, coming up even nearly to one half of that sum. The cost of educating a boy in Bengal and in the Punjab and the United Provinces is shown below :—

	Bengal.			United Provinces.			The Punjab.			
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	
Government funds*	...	1	4	9	5	6	2	5	11	9
Local funds	...	0	11	3	1	12	7	2	8	6
Fees	...	1	10	1	0	3	3	0	3	2
Other sources	...	0	6	8	0	3	0	0	7	0
Total cost per pupil	...	4	0	9	7	9	0	8	14	5

Bengal has a population slightly bigger than that of the United Provinces and more than double that of the Punjab. But the expenditure on primary education in Bengal from public funds is deplorably low. This will appear from the following figures :—

(a) Expenditure on primary education for boys :—

	Bengal	United Provinces.	The Punjab.
	Rs.	Rs.	Rs.
Government funds...	18,00,000	56,00,000	22,50,000
Local funds	...	10,00,000	10,00,000
Fees & other sources.	28,00,000	4,00,000	2,50,000
Total expenditure.	56,00,000	78,00,000	35,00,000

(b) Expenditure on primary education for girls :—

	Bengal.	United Provinces.	The Punjab.
	Rs.	Rs.	Rs.
Government funds ...	4,50,000	2,00,000	3,00,000
Local funds	...	2,80, 00	3,00,000
Fees & other sources.	3,70,000	1,00,000	1,20,000
Total expenditure.	11,00,000	6,00,000	7,35,000

Hence we find that the expenditure from public funds in Bengal is small and the proportion from provincial revenues is very small when compared with that in other provinces. If Bengal had spent as much in proportion to its population as the Punjab, then the expenditure from Provincial Revenue on primary education for boys alone would have been Rs. 52,00,000 instead of Rs. 18,00,000. Or in other words, the expenditure on primary education in Bengal from provincial revenues should have been nearly three times as much as the Government are now spending.

During the last 10 years the total expenditure on primary education in Bengal has increased by Rs. 16 lakhs, and the contribution by the Government has risen by only Rs. 4 lakhs. *This means that practically nothing has been done to improve the state of the primary schools and that very little, of anything, has been done to increase the literacy of the mass of the population, and this at a time when it is estimated that over 50 per cent. of the electorate is illiterate.*

The Government, however, have not been totally unmindful of the need for expansion of primary education. By the end of 1926-27, free primary schools had been started in 21 Municipalities and 72 Village Unions towards which the Government contributed

Rs. 1,04,102. But education in these areas was not compulsory. Only the Chittagong Municipality, after conforming to all the requirements of the Bengal Primary Education Act of 1919, applied and obtained sanction of the Government of Bengal towards the end of 1927 to introduce compulsory primary education for all boys within its area.

It has been mentioned that the system of primary education in Bengal is defective. But one thing must not be forgotten and that is the education imparted in the primary department of secondary schools in Bengal. The number of secondary schools in the province is shown below :—

	High Schools.	Middle English.	Middle Vernacular.	Total.
1916-17 :—				
Boys ...	698	1,602	349	2,649
Girls ...	14	20	30	64
1926-27 :—				
Boys ...	985	1,616	74	2,675
Girls ...	19	48	22	89

The middle vernacular school has ceased to meet any public demand and the number of middle English schools for boys has practically remained constant. But the number of high schools has increased by over 40 per cent. No other province can boast of having 1,004 high schools for boys and girls. It must not be supposed that they are all efficient. Quite a large percentage of them are inefficient. But the increase in the number of high schools is the result and symptom of the growing desire for English education in Bengal. All high schools in Bengal have primary classes, and it has been found by actual examination that the proportion of wastage is much greater in primary schools than in the primary classes of secondary schools in the same area. The absence of a

genuine desire for education on the part of the agricultural people, who form the bulk of the population in Bengal and who cannot afford to part with the services of their children in connection with their domestic affairs, may be taken as one of the main causes of stagnation and wastage that is seen to occur between class and class of primary schools. But the wastage is small in middle schools and very small in the primary classes of high schools compared to that in primary ones. The boys reading in high schools enter them with a desire for education and they go on until a course is finished, and the wastage is very small there. And for this reason, it can safely be asserted that 1,004 high schools in Bengal, with all their shortcomings, are doing useful work in the lower classes so far as imparting a good primary education is concerned.

In the Punjab up to 31st December 1927, compulsory primary education was introduced in 1374 rural areas and 58 municipal areas, and in the United Provinces in 24 municipal areas and in a few rural areas in the districts of Agra and Lucknow. In the Punjab the scale of pay for the trained primary teachers is ordinarily Rs. 25-2-35-2-55; even in the districts where the financial condition of the Local Boards is not satisfactory the scale is Rs. 20-1-30-2-50. There is no time-scale of pay for untrained teachers. They get fixed pay, viz., the matriculates Rs. 20, the middle passed teachers Rs. 16, and the primary final passed teachers Rs. 14 per month. In the United Provinces the trained Head teachers of primary schools are placed in three grades, viz., Rs. 22, Rs. 25, and Rs. 30; and the trained Assistant teachers in the grades of Rs. 17, Rs. 19 and Rs. 20. Untrained Assistant teachers get only Rs. 12-1-14. It will

therefore, be noticed that the primary teachers in the Punjab get at least a living wage. Even the condition of the primary teachers in the United Provinces is better than those in Bengal.

Under the present system of voluntary education the pay of the primary school teacher in Bengal is such that it cannot even be called a living wage. Of the 38,187 primary schools, 97 are managed by the Government, 3,783 by Municipalities and District Boards, 29,984 are aided and 4,323 unaided. That is to say, 90 per cent. of the primary schools are under private management. The average pay of a teacher in such a school is miserably low. It is Rs. 8.9 per month in the Burdwan Division; Rs. 7.6 in the Dacca Division; Rs. 8.4 in the Rajshahi Division; and Rs. 6 in the Chittagong Division. If we consider only the pay of the teachers in unaided schools, we find that the figures are so low as to be almost incredible—for instance, in the Chittagong Division, the average monthly emolument of a teacher in an unaided school is Rs. 3.3. If an education cess be levied, as proposed in the Bengal (Rural) Primary Education Bill, then it will be possible for the District School-Boards to give

a minimum salary of Rs. 15 per month to all trained teachers in recognised primary schools. Levying of an education cess ought not to be delayed any further if we want to improve the condition of the primary teacher in Bengal.

In India, national solidarity, a consciousness of which has already dawned on the land, will be the outcome of a complex variety of causes, social, political, economic and psychological, and not the mechanical outcome of a school system. But the teachers can undoubtedly do much towards attaining national unity. In a land of diverse tongues, castes and creeds, we cannot expect to have a mechanically adjusted system of schools standardised by the State. In India, and particularly in Bengal, where the voluntary efforts in education have been encouraged for such a long time and innumerable types of schools of all denominations (conducted by Christians, Hindus, Moslems, Buddhists, etc.) have been allowed to spring up, a State system of education must be a free union of more or less self-governing institutions having different traditions but encouraging each to bear its part in unifying the national life.—*The Teachers' Journal*, Calcutta, Sept., 1928.

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LITERARY VALUES, OLD AND NEW—(REVIEWS)

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Maharajah's College, Ernakulam (Cochin).

ENGLISH VERSE: CHOSEN AND ARRANGED BY
W. PEACOCK—VOL. I. THE EARLY LYRICS TO
SHAKESPEARE.—THE WORLD'S CLASSICS SERIES.
(OXFORD UNIVERSITY PRESS). Price 2s.

One of the recentmost additions to the *World's Classics* Series is the first volume of a Selection of English Verse covering the period from Chaucer to Shakespeare. In the choice of pieces and their arrangement in chronological order, the editor has been guided by the same object that he had in view in compiling the parallel volume of *Prose Selections*: to provide reading matter, complete and interesting in themselves, and to illustrate the history of the literary form. Good things are always good, and they never cloy by repetition, and so Mr. Peacock rightly claims immunity from criticism for not omitting time-honoured favourites that are usually served up in almost every anthology. The representation of authors in the volume under review is complete: not only Chaucer and the Chaucerians (English and Scottish), the earliest Sonneteers, the University Wits and the bigger luminaries of the Elizabethan period are here, but diminutive geniuses and even pygmies who have given us really good things have not been brushed aside; similarly, some of the best anonymous productions of the different centuries are also rightly included. The exclusion of pieces from the drama (barring, of course, songs and pieces from Shakespeare) was inevitable, as the editor observes, owing to considerations of space and to the difficulty of choosing pieces "intelligible and interesting" in themselves. The retention of the old spelling in the printing of the earlier pieces will be an infinite source of charm and interest to the scholar. Certainly our visualisation of the workings of the poet's mind is aided by reading, for instance, Barbour with his own Scotch accent, if possible:

A! Fredome is a noble thing!
Fredome maye man to haiff liking;
Fredome all solace to man giffis,
He levys at ese that frely loves!

We are sure that this volume, along with the four volumes yet to appear, will be treasured by readers of all classes in the English-knowing world as something like an international possession.

Mr. Peacock's adoption of the chronological arrangement serves the excellent purpose of enabling the student to trace the development of the thought-world of English Poetry. One thing that would strike the reader as he goes on in regular progression from Chaucer forwards is the gradual change in the outlook of the writers. There is a certain detachment and objectivity in the writings of the 14th and 15th centuries. What invests them with a naïveté is their almost exclusive emphasis upon external relations. Whether the topic is love, war, religion or society, the stress is mostly on the extrinsic aspects. When Duns Scotus praises the City of London:

Fair be their wives, right lovesom, white and
small;

Clere be thy virgins, lusty under kellis;
London, thou art the flour of cities all;

or when Skelton apostrophises Mistress Margaret Hussey:

As full of good will
As fayre Isaphill,
Colyaunder,
Swete pomaunder,
Good Cassaunder;

or even when the 'sevin deidly synnis' are allegorised:

Than Lichery, that lathly cross,
Berand lyk a bawkit horse,
And ydilness did him leid;

the centre of interest is all on objective aspects and extrinsic relations.

As we come to the beginning of the sixteenth century and as we progress well onwards into the

middle of the century, the focus gradually shifts to the reactions which external relations produce in the mind of man. Objectivity no doubt continues to exist, but side by side with it there slowly appears a tendency to look inwards into the souls and write. This change, though not quite marked, is evident in Vaux when he writes:

"When I look back, and in myself behold
The wandering ways that youth could not
desecry....."

The new feeling gathers strength in Raleigh:

"Even such is Time which takes in trust
Our youth, and Joy's and all we have" etc.

And it becomes emphatic and pronounced amongst the great Elizabethans.

It is remarkable, however, that the rise of the new feeling never becomes so dominant as to sap their joy of life, adventure and action. The spacious times of the sixteenth century were still too full of a child-like spirit of romance to permit subjectivity to overstep limits. True, there were some like Wastell who wailed:

Like as the Damaske Rose you see
Or like the daintie flower of May
Even such is man, whose thred is spun,
Drawne out, and cut and so is done;

but Life was still a "damask rose" and a mid-May flower, and the prevailing feeling was: "Feed your fancies and your sight, whilst occasion gives you seisure!"

There was no *welt-schmerz*, no Obermannian melancholy, no surfeit of life (except occasionally as in Bacon's cross-grained insincerity). On the contrary, the belief in human effort and human aspiration was ecstatically celebrated:

"Nature that framed us of Four Elements,
Doth teach us all to have aspiring minds
Our soules, whose faculties can comprehend
The Wondrous Architecture of the world,
Wills us to weare out selves and never rest,
Until we reach the ripest fruit of all,
That perfect blisse and sole felicitie
The sweet fruition of an earthly crown."

With the passing-away of these spacious days, other times and other manners came, and both this simple faith in human aspiration and that other inward-looking analysis of the soul received a temporary set-back; but with the opening of the 19th century, wonder was reinstalled and Life again became at once a joy and an object of intensive study.

But the world was marching at a tremendous pace in other domains than the world of æsthetic thought. The 19th century witnessed such remarkable changes in religious views and scientific investigation as could not but react on the thought-world of literature too. Action, struggle, life, — these had been drunk to the very lees, and the great Query arose, — *what then?* In the midst of the bewildering complexities of material life which the 19th century achieved in ushering in with great exultation and pride, the seer and the prophet, the thinker and the poet found themselves stranded on the rock of Doubt. Subjective inquiry gains complete dominance when conventions, social values, religious dogmas and material adventure fail to give satisfaction. This is what has happened within the last thirty or forty years. Life outside is all a tumultuous whirl, it is neither the merry-go-round of the Elizabethans nor the smug self-satisfaction of the early Victorians. Hardy rails, therefore, against the Impish Divine, Butler plays the role of the *enfant terrible*, Edward Carpenter flees to the loneliness of his thoughts, Housman takes refuge in pessimistic melancholy, Wells proclaims the need for the revision of "this business called life", Shaw rides about tilting his doughty lance at big bubbles, and voices everywhere resound:

"Though a great God slay me with fire,
I will shout, till he answer me: Why?"

TWENTIETH CENTURY LITERATURE (1901—1925),
BY A. C. WARD. (METHUENS.) Price 5s.

It is this Age of Interrogation in English Literature that Mr. Ward has with distinction,

described in his book. The period dealt with by Mr. Ward is the first twenty-five years of this century. "From 1901 to 1925," says Mr. Ward, "English literature was directed by mental attitudes, moral ideals, and spiritual values at almost the opposite extreme from the attitudes, ideals and values governing Victorian Literature." The Note of Interrogation everywhere stares us in the face, old values have been thrown overboard, the voice of Authority has been snubbed and the Permanence of Institutions has been displaced by a sense of universal lack of fixity. So far as we can judge, Mr. Ward's sympathies are all with the modernists, and this sympathy has stood him in good stead for a clearly reasoned and discriminating appreciation of the literary personalities of the time. In five separate chapters he treats, in succession, about the Novelists, the Dramatists, the Poets, the Essayists and Critics and the Biographers. The chapters are fairly exhaustive, the treatment is never over-technical and the reader feels assured of clarity and definiteness everywhere. The reading-lists supplied at the end are exceedingly valuable.

Mr. Ward has original view-points of his own. His analysis, for instance, of what has often been described as Hardy's pessimism is sufficiently original and forceful to commend itself to the reader's acceptance: "Except among those who are governed by a dispassionately speculative temper, it is almost certain that the repeated charge of pessimism will continue to be brought against Hardy, though there is no sound reason why pessimism should automatically be regarded as an indictable demanding defence or apology. A poet-philosopher can scarcely ever be unhappy; and it is possible for a philosophy of pessimism to be accepted by a man who is completely happy in himself. Yet the view is widely current that Hardy must always have been exceedingly unhappy. If this is so, his unhappiness originated, not in his philosophic pessimism, but in his acute sense of pity. He was vulnerable through his emotions rather than through his mind."

Mr. Ward has no sympathy with weak and washy traditionalists. Here is his criticism of Noyes, the post-Tennysonian: "The thousand pages which Noyes has encrusted with glittering images and adjectives of colour contain depressingly few unbackneyed pictures or illuminating thoughts. This familiar picturesqueness, this re-echoing of commonplace ideas, this pretty refurbishing of a shabby poetic Lord Mayor's show is exactly what gives immediate pleasure. But as literature, it is flashy and hollow and empty—a mere confection sweet to the palate, but quickly dissolved and soon forgotten." Judiciously balanced are Mr. Ward's estimates of popular idols. That "golden-haired Apollo," the modern counterpart of Sir Philip Sydney—Rupert Brooke—is rich in *promise* only and not in *achievement*. The mantle of Lamb has only *partly* fallen upon E. V. Lucas, because there are marked dissimilarities between the 'gentle Elia' and the modern humorist. The anti-traditionalist Sittwells are poets of sensation and not of thought. Thus whether it is Wells's moralising, Beerbohm's artistic caricaturing or Lytton Strachey's biographic method, Mr. Ward's treatment is clear, judicious and illuminating.

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Some well-known educationists in this Presidency and elsewhere have promised to read papers on this occasion.

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Mr. V. S. Toru, Dy. Educational Inspector of Visual Instruction, Bombay.

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Prof. D. K. Karve, S.N.D.T. Indian Women's University.

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Principal H. D. Chhatra Pati, V. M. School for the Blind, Bombay.

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Mr. P. B. Sathe, Member, Nagpur University Board.

Education Research :

Principal H. R. Hamley, S. T. College, Bombay.

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Indian Education in 1928 :

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A SHORT HISTORY OF THE FEDERATION.

THE ALL-INDIA FEDERATION was inaugurated in Cawnpore in December 1925 with the object of advancing the cause of Education in general but particularly for co-ordinating the work of the many Provincial Organisations that are being formed in India, and securing for this country a place in the Board of Directors of the World Federation of Education Associations.

Since its inception, Prof. P. Seshadri of Benares University (now Principal, S. D. College, Cawnpore) has been the President of the Federation and Mr. D. P. Khattri of Cawnpore has been the Secretary.

The Federation has held so far three annual Conferences :—

Place	Year	President
1 Cawnpore	1925	Prof. P. Seshadri, Benaras University.
2 Patna	1926	Prof. A. K. Wadia, Mysore University.
3 Calcutta	1927	Prof. C. V. Raman, Calcutta University.

All its sessions were attended by about 50 to 60 delegates from different parts of India such as the Punjab, Jeyapore and Jodhpur, C. P. and Berar, Bombay and Baroda, and Hyderabad (Deccan) in addition to the large number of local delegates from U. P., Bihar and Bengal.

Last year the Federation secured affiliation to the World Federation and, with the help of the Government of India, was able to depute a representative to the second Biennial Conference of the World Federation held at Toronto in August 1927, and secured two seats for India on its Board of Directors. Thus Prof. Seshadri and Mr. P. A. Inamdar (Aundh State), the President and Member of the Council of the All-India Federation respectively, are, from August last, Directors of the World Federation of Education Associations.

But owing to the fact that its first three annual sessions were held in Northern India, its work is not as widely known in the South as it ought to be, and the Executive Committee of the Federation resolved last year in Calcutta to hold its next annual session in Bombay.

Detailed accounts of the Cawnpore and Patna Sessions are now available in the form of year-books which can be obtained from the Secretary, Mr. D. P. Khattri, Prithwinath High School, Cawnpore. (Prices Re. 1-8 and Rs. 2-8 respectively.)

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The Educational Review.

Extensive reports have appeared in the newspapers regarding the achievements of Sir J. C. Bose and the appreciation he has met with during the recent tour in Europe. But we are afraid we cannot congratulate him on the attitude he has shown with regard to the challenge extended to him by a Professor of the Royal College of Science in Bombay. Sir J. C. Bose is reported to have said : "The greatest scientists in the world have accepted my theory, and I cannot condescend to enter into controversy with a novice in science." This attitude is thoroughly inconsistent with the undivided pursuit of truth which ought to characterize the investigations of every scientist. A Professor of Science at a University College like the Royal College of Science, Bombay, was certainly no foeman unworthy of his steel, and we are sure that the fact that he is very much younger in years than Sir J. C. Bose, cannot be such a serious disqualification as he seems to imagine. The cause of Science can never progress by this attitude of conceited self-complacency on the part of scientists, and the earlier Sir J. C. Bose sets up a better example to his countrymen, the better. Sir J. C. Bose cannot be unaware of the fact that very grave doubts have been expressed in many scientific quarters regarding the validity of his conclusions about the unity of life, nor can he be ignorant of the circumstance that he has been more often anxious to meet Viceroy

and Secretaries of State and other persons in authority than students of science. We hope to hear more of the criticism advanced by the young Bombay Professor. Without any desire to question the value of the scientific researches of Sir J. C. Bose, as an educational journal standing for fairplay, we are bound to wish more strength to the elbows of the enterprising scientific scholar of the Royal College of Science, who has extended a challenge to him.

The subject of Students and Politics has often given rise to controversy in the educational world of India.

Time was when European educational authorities, devoid of any sympathy with Indian political aspirations, used to throw up their hands in horror at the slightest exhibition of interest in politics on the part of the young men of India. On many an occasion, the intolerant attitude of some bureaucratic Principal resulted in the severe punishment of innocent young men misled by political exuberance into demonstrations of some kind or other considered to be inconsistent with academic life. While it is hardly possible for a really good student, while at College, to spend much of his time in politics and while it is also desirable that active participation in politics should be allowed only to those who are sufficiently mature in understanding, there is no denying the fact that the *alumni* of Universities must take an intelligent interest in the events which are happening round them, especially when they

are fraught with serious consequences for the future of their motherland. We are glad to find that such a keen and radical political enthusiast as Pandit Motilal Nehru, addressing the students of Allahabad the other day, gave the right advice in the matter and warned young men against wasting their time in the distractions of politics, without paying sufficient attention to their legitimate work at the University. Pandit Motilal said that he would not advise students to identify themselves with any particular party. But he did not mean thereby that they should have nothing to do with politics. He did not advise them to take an active part in politics, but he appealed to them to study closely social and political problems, so that in later years, they could work for the advancement of the country with some knowledge of the questions awaiting solution. We would like to commend these words not merely to educational authorities but to students all over India.

A subject which has been pressing for attention in recent years all over the Western world is the question of teaching the elementary laws of sex in schools and colleges. It is not denied that there are a large number of difficulties associated with education in matters of sex, but surely there is very little justification for the attitude of ignorant purism maintained by parents as well as teachers in India. At a recent Conference of Missionary Educationists held at Tinnevely, it was however resolved that

efforts must be made for imparting instruction on these subjects in schools within their jurisdiction. The Conference resolved that instruction in sex matters was necessary and that the ideal of innocence was not a possible one. Knowledge should not be a forbidden thing as the desire for it was natural and it should be satisfied and not quenched. It was suggested that instruction should be given at different stages and simple instruction may start when children began to ask questions. The instruction may be based on the elementary facts of nature as seen in the study of flowers, birds and other animals within the knowledge of the boy. The members of the Missionary Conference went so far as to suggest that at the ages of 13 and 14 clear and direct instruction should be given on the facts of human sex and at the ages of 16 and 17 boys should be directed to the ideals of chivalry and regard for women.

One of the subjects which have come before the Education Committee appointed as auxiliary to the Simon Commission is that of co-education in India. It may interest our readers to know in this connection that the Duchess of Atholl observed the other day in England that while there were many things she felt a girl could best learn from a woman, there were undoubtedly many things that boys could best learn from men. It was certain at the same time that both boys and girls, she said, could learn some things at least from teachers of the

opposite sexes. Of all the educational experiments, none was more interesting, more daring, or fraught with greater possibilities for the welfare of the country than the experiment of co-education. It seemed to the Duchess unquestionable that if boys and girls grew up together, worked together and played together, they should be able to enter upon life with a general knowledge of the mentality and habits of their sexes which should be a very valuable guide to them.

Communalism has done sufficient havoc in this country in recent years in the field of politics. Hindu and Muhammadan conflicts, in Northern India and Brahmin and non-Brahmin conflicts in the South have caused insurmountable difficulties which threaten to prevent the country from developing any sense of united nationality. While communal differences in politics deserve condemnation enough, no words could be too severe for the condemnation of the exhibition of communal feeling in educational institutions. A good deal of agitation is being caused in the educational circles in the University of Allahabad, by the conduct of the Professor of History at the University, Dr. Shafaat Ahmad Khan, who is a very wild protagonist of the pro-Muslim movement in Northern India. He has actively identified himself in recent months with a party of irreconcilable Muhammadans who have been fomenting a good deal of class-hatred. More than

one meeting has been held in the University of Allahabad, protesting against this kind of attitude on the part of one of their professors, and we understand that the matter is likely to come up officially even before the authorities of the University. Without wishing to express any opinion on the justice or otherwise of these accusations, we should certainly assert in the most emphatic manner that University authorities should show no quarter to people who foment class-prejudice, because this is a negation of real University work.

In view of the fact that a Committee presided over by such a distinguished statesman as Sir M. Visweswaraiya is investigating into the recent disturbances in Bangalore, we are not anxious to arrive at any hasty conclusions with regard to the people who are really to be blamed in producing this trouble. We must, however, confess to a sense of surprise that there should have been any interference with an innocent attempt on the part of the school-boys to celebrate the Ganesa festival to their hearts' content. If boys in a Hindu State cannot have the advantage of celebrating their national festivals without being interfered with by those professing other religions, things must have arrived at a very bad stage indeed. Whatever may be said of some of the authorities in charge of the affairs in the Mysore State to-day, it will be universally agreed that His Highness the Maharaja may be expected to take a very statesmanly

view of the present situation. We hope he will interfere early enough and with sufficient strength to prevent any unhealthy development of this kind in the future history of the State. The excitement caused by these factions must have injured very seriously the educational atmosphere of the city of Bangalore and the hundreds of pupils who belong to institutions in the city must have suffered considerably by the recent events. The statesmanship available in the State cannot be too bankrupt to ensure that the children of the State shall have the privilege of pursuing their religion undisturbed by hooligans anxious to cause trouble.

Considerable progress has been made in England in recent months in introducing broadcasting as an effective means of education in schools. The fitting of a school with broadcasting apparatus so that pupils may be able to come into a central hall and listen to concerts, lectures and narrations of news broadcasted from considerable distances is an advantage of great educational value. Considering the fact that a good receiving set costs only about Rs. 500, there is no reason why a number of High Schools in this country should not make an experiment in the direction of making this new provision. Writing on this subject, Mr. Eric C. Dunstan, General Manager of the Indian Broadcasting Company, Ltd., points out the great possibilities of broadcasting in India in the future. "In many of the outlying

villages," he writes, "there is nothing in the nature of schools or education, because either it is impossible to get the teachers to go and teach there, or it is too expensive, but when the communal listening set becomes an established fact, education will be better than now. There are large numbers of Europeans and Indians who pass their lives in districts entirely cut off from the world. To them broadcasting means the end of their isolation. The majority of Indians can afford little from their meagre income for entertainment or enjoyment, and the establishment of broadcasting will mean, a new era for them, and must change their whole outlook on life. In fact, taking the whole world, I doubt whether it is possible to find any other country where there is such a tremendous future for broadcasting; the possibilities are infinite. Nothing can prevent the progress of Indian broadcasting, which can so easily, so effectively and so economically fill many gaps in the average Indian's life."

It was a very notable address that Dr. Cyril Norwood, the well-known Headmaster of Harrow, gave at the recent meeting of the educational section of the British Association at Glasgow. He spoke mainly on the subject of the personality of the teacher, though he also surveyed some of the pressing questions relating to Primary, Secondary and University education in Great Britain. We commend his concluding words to the special attention of our readers; "What-

The Teacher's Personality.

ever reforms of administration, whatever changes of curriculum, whatever increase of expenditure were approved, the last word lay with the teachers, and all depended on the spirit which animated them and the ideals which moved them. This country was committed to the experiment of unrestricted democracy, ideally the highest form of government if the quality of the citizens was good, in practice capable of being the worst if the citizens were uneducated and incapable of discerning the true values of life. Everything depended upon whether the teachers in the next generation rose to the full measure of their responsibility and opportunity, whether they carried through every part and parcel of our educational system the highest and truest English tradition, that education was more than instruction, that character counted for more than brains, and lives more than learning, that the true basis of life was religious, and the only real values spiritual. The main end and aim was to train boys and girls for service to the community. There was no nobler calling than that of the teacher, and the hope of the future lay in this, that none could escape the teacher's influence. The highest education was the gift of personality to personality, where in freedom one led and others were fired to follow; and this could not occur unless schools were free and individual, and the teachers within them no less free to develop and give the best of which they were capable. Education could and must be organized in Whitehall and the country town, but it could not there be given; it could only

pass from living men and women to living boys and girls, where each was known to each. This personal relation based on freedom was the most precious tradition that had come to us from the greatest of the past, and any advance of organization and extended scope would be too dearly bought if it brought into the question, or rendered impossible, the spontaneity and independence without which no school could be great."

In spite of all the advance which has taken place in educational theory and practice in recent years, there are probably still old-fashioned teachers in various parts of India who are believers in corporal punishment. We are glad to see that in a recent issue of the *Educational Supplement* to the *London Times*, there is a very enthusiastic appreciation of the changed conditions created in the educational world by the passing of the birch. Time was when the birch indicated in the most effective manner the profession of the teacher, but an appreciation of the delicate sensibilities of childhood and the need for drawing out the latent faculties of the pupil entrusted to the care of the school-master had made considerable difference with regard to the exercise of corporal punishment. It is no longer not only regarded as necessary, but most educationists would also have no hesitation in condemning it as even undesirable, except in certain very rare circumstances for the purpose of moral correction. The revolution in the world of education in

The Passing of the Birch.

this matter is described very effectively in the following paragraph which takes note of the real educational reasons which have led to the new state of affairs: "Discipline has changed because the whole view of education has changed. When the aim was the inculcation of set lessons, arranged by the teacher without reference to the pupil's powers and motives, then discipline was the device adopted to hold him to an unpleasant task. When the modern educator starts from the child's powers and impulses, using them and directing them towards an end expressed in social co-operation, then the discipline is of necessity different. The child has become in part his own disciplinarian, not because of any vague theory of freedom, or for any sentimental cult of self-expression, but for the reason that his own actions, or his own suggestions for action, are elements in the problem of working from spontaneous impulses to the goal which he is learning to appreciate. The goal is not fixed—it rises and recedes as impulse gives way to reason, and as remoter purpose replaces present achievement. The decline of the use of the birch is the proof that the educational process is better understood; it was the crude device of a crude theory, as impulsive and ineffective as the child's own whims, and requiring the same direction and transformation."

Babu Ramananda Chatterji, the veteran Editor of the *Modern Review*, who has, as is well-known, considerable educational experience also to his credit, has rightly

protested against the undue absorption of the attention of students in matters other than their own studies. Recent events in Bengal have shown that often unhealthy political or other excitement might interfere with the legitimate work of students in our colleges, and Babu Ramananda Chatterji rightly asks: "Should students be everything but students?" We are in entire sympathy with what he has said in the current number of the *Modern Review* on that subject: "Infants, boys and girls and young men and women do not live in air-tight compartments separated from the rest of the world. According to their capacity for understanding and being interested in passing events and pressing problems, they become interested in things, get excited by some events, depressed or elated by some others, and so on. For this reason, there cannot be and ought not to be an 'atmosphere of pure study' anywhere. It is natural for students to want to know all about what is taking place around them and even to be actors among other actors. They should not be blamed for this natural desire; rather should they be encouraged to be up-to-date in their general information. But to be well-informed about current events and problems and things in general is an ideal meant for all, not for students alone. Students have their main and special work just as other kinds of people in society have. Peasants, artisans, mechanics, craftsmen, traders, merchants, teachers, lawyers, engineers, physicians, artists, scientists, philosophers, litterateurs, etc., have all their special work to do. This they generally do, and in addition they acquire information

regarding the world of to-day and do their duty as citizens. Also there may be and are statesmen and politicians whose main work lies in the field of politics. But they are not *in statu pupillari*. Are students the only class of people who have no duties which entitle them to be called students? Is it because they have not got to earn their bread and are maintained by others that they are to be called upon to be everything else but students? Is the book of nature a useless superfluity? Are *existing* libraries, laboratories, museums, demonstration farms, botanical gardens, etc., useless lumber? It has become necessary to repeat these questions, because whenever students are reminded of their main duty, agitators at once place before them the supreme duty of freeing the country. But in what sense is it *their*

supreme duty and not of every one else? We are old-fashioned enough to believe and assert that the proper duty of students is to study. And, of course, like other people, they have other duties, which are subsidiary. When they leave their schools, colleges or Universities for good, let them, if they choose and are fit to do so, devote themselves entirely to politics or other kinds of social service. It is very far from our thought to suggest that students as students are not all to be social servants. They are certainly to be social servants as part of their training but study must be their main and special work. Why else do they call themselves and allow others to call them students? If they do not want to study or if they want to give their studies a subordinate place in their scheme of life, they should call themselves simply boys or girls, young men or young women."

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Journal of the Bombay Historical Society, March 1928:—"On principle it is difficult to be enthusiastic about text-books. They only develop the cramming faculties of the students and lower the standard of history, which is accordingly supposed to be a science for all, and is not being looked at with the awe and reverence which are due to it as a high science of reasoning. Yet this little volume deserves, on account of its comprehensiveness, an honourable exception. It is specially satisfactory to see fully treated the history of the South, which seems often to be treated as if hardly belonging to India by many writers of text-books even in recent times. It is the work of two scholars, written after long teaching experience; and as Dr. Radhakumud Mookerji says in the *Introduction*: "The work represents a considerable advance on works of the same scope and standard, by utilising the most up-to-date materials and results of researches in different fields of Indian History." Still the authors might well have made use of the most recent articles published in learned journals, so as to give the controversial aspect of some events, which are in the book presented to the reader as definitely settled.

Two appendices render the book extremely useful to students. The first contains a chronological list of events in Hindu history from 8000-2000 B.C. down to 1850 A.D. The other gives a catalogue of books used in the writing of this one. These books can be usefully consulted by those students who wish to do something more than cramming the pages of a text-book—a very low ideal indeed for University students. It would be preferable to make

a clear distinction between sources and literature, in order to accustom the students to this distinction, which is the first thing to be realised on entering the sphere of historical research.

The Madras Christian College Magazine, April 1928:—"The volume under review presents a narrative of the history of India down to the beginning of the Muhammadan era. It is designed to meet the requirements of senior High School and Intermediate students, and ought to meet a real need for students of these grades. With so many kings and kingdoms, many of them short-lived and soon displaced by stronger arms, it is impossible to avoid a good deal of detail. We have wondered whether there is too much detail for students of High School age, and yet we would find it difficult to suggest how it could be obviated. No one can understand historical currents without a knowledge of the social background in which political movements take place, and our authors have done well to describe wherever possible the cultural, economic and religious movements that are so closely related to the political life.

We are particularly indebted to them for giving a more equitable proportion of space to South India than some historians have done. Much work is being done and requires to be done on the part played by Dravidian culture in the life of India. The present volume gives a fair recognition of the contributions that have been made to our knowledge of that important phase of influence. In this as in the earlier parts of the work there is a recognition also of the fact that opinions differ on many interesting points, due to the scarcity of accurate records. It is a valuable feature of the present work that the authors inform their readers on most of the noteworthy points where scholars hold different views.

The "Hindu" Literary Supplement, 11th April 1928:—"This book is intended to be a simple and continuous narrative of the political and social history of India from the age of the Rig Veda down to the times when Mahomedan military adventurers overthrew the indigenous kingdoms in different parts of India. As is customary now-a-days in text-books of History, the account is prefaced by a chapter on the chief physical features of India. This is followed by a chapter on the thesis, "India—a museum of races"—a phrase impossible to understand, in view of the fact that modern methods of ethnological investigation point to the conclusion that the bulk of the people of India belong to one race, i.e., the "Mediterranean" race. Chapter III starts with the pseudo-history of "the Aryans on their march;" they reached Cappadocia in 1400 B.C. (p. 24) and, it may be inferred, entered India several centuries later, though, as the authors inform us, "the Rig Veda does not tell us anything about the mode in which the Aryans performed this feat encumbered with wives and children" and Indian scholars take the Vedic period to 800 B.C. or even 4000 B.C. (p. 29). This chapter, then, gives a lucid account of the condition of the people of North India during the Vedic age, illustrated by a map. Chapter IV deals in an equally lucid way with the social, economic and political conditions of North India, based on the Buddhist Pitakas and Jatakas, followed by the history of Magadha from 600 B.C. to 321 B.C. The great Mauryan Empire is next described and, here again, the authors give due prominence to the social, religious and economic conditions of the age. The succeeding chapters continue the story of North India, interspersed with notes on the progress of society, literature and the fine arts, age by age, till the greater part of North India came under the sway of Mahomedans.

The authors of the book are experienced Professors of Indian History of fairly long standing; they have conducted research on their own account on sundry questions connected with ancient and modern Indian history and are quite up-to-date in their knowledge of the work of other scholars as almost every page of this book testifies. But sometimes the authors adopt hasty conclusions of European scholars. The maps and chronological tables are likely to be of great help to the student, and the bibliography fairly complete.

Education, Cannanore, March '28:—"This is the fittest book on Hindu India for the Intermediate students. Hindu India is the most neglected branch of history and teachers generally skip this portion over, as hurriedly as they can. There is a lamentable dearth of good books on Hindu India, and there has been a long-felt need of suitable books on this portion of Indian History. The learned authors deserve the congratulations of all teachers of History for having so adequately met this need. They have ransacked all the important sources of information on this difficult period, and have presented the most up-to-date views. They have been as critical as painstaking. The cultural history of Hindu India has received due prominence. The latest archaeological discoveries have been utilised in dealing with pre-historic India. The Expansion of the Aryans, the Epic Age, the Mauryan Period, the Post-Mauryan Period, the contributions of Jainism to Indian History—all deserve to be carefully read and assimilated. The book is most suitable for Intermediate students. We cannot too strongly recommend its use by them. Every college student and every teacher of Indian History would do well to have a copy of this book with him.

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The distinguished author of the book under review is one of the few enthusiasts in India who have taken to a systematic study of child-nature. The book embodies the results of close study by the author, not merely of the existing literature on the subject, but of the actual, mental and physical growths of children, as witnessed by her in several schools in Britain and India where she has had the opportunity to work. Within a brief space of 200 pages, the author has contrived, in her plain, matter of fact, and at the same time, engaging style, to elucidate the various topics connected with child life such as the sense perception, play, the service of Hand in Mental Development, fatigue, exceptional children, measurement of Intelligence and the Kindergarten system; touching the various theories on these topics and supplementing them by her own views based on personal study and investigation. We would especially commend to our readers the beautiful and inspiring chapter on the Kindergarten system in which without going into technical detail, the author has surveyed the basic principles of the system and pleaded in accordance with these principles for the indianisation of Indian education. We are sure that this

little book will prove an excellent handbook for teachers as well as parents and others interested in the subject and kindle in them a deeper interest therein. It has been already recommended by the Academic Council of the Madras University as a suitable text-book for the students appearing for the L. T. Examination and we hope that other Universities will soon follow suit. We congratulate both the author and the publishers on this valuable publication and recommend every teacher to secure a copy thereof.

The Madras Christian College Magazine, January 1925.

The study of child-nature is exceedingly important for both of the sciences of Psychology and Education. Its importance for Psychology is from the genetic point of view. In the child one is able to observe in simpler forms many of the processes at work which in adult experience become so complex as to make them difficult of analysis. Its importance for Education is too obvious to need extended notice, and yet there are some who are so short-sighted as to neglect it. Here in South India there are a great number of schools in charge of teachers who do not know the elementary facts about child-nature. But with the progress of education the time will surely come when it will be considered as dangerous to employ a teacher who is ignorant of child-nature as it is to employ a man for a physician who knows nothing of anatomy and physiology. Such a book as that which Miss Gordon has written will serve a useful purpose in hastening that day by putting teachers in possession of a primer which contains the fundamentals of the subject in a readable style. It is the type of book which we would like to see translated into our South Indian vernaculars, because it not only includes the principles of the science, but states them with special reference to the needs of Indian teachers.

A personality is the outcome of forces which are both hereditary and environmental so that child study must take account of both sets of factors. Much more is to be gained by teachers through the study of children for themselves than the mere perusal of books on the subject, however authoritative they may be. The trouble with so many students of other things as well as of child-nature is the evident desire to be spoon-fed. They desire to get their information at second-hand rather than take the trouble to study for themselves. In many instances teachers have not the technique necessary to observe intelligently. Very valuable, then, is Miss Gordon's chapter on 'How to Study a Child,' particularly for those who are beginners in child study, and it is a matter of vital concern as much for the parent as for the teacher.

Certain subjects have been especially studied recently by educationists, and Miss Gordon gives useful accounts of the results of these studies. One chapter is devoted to the place of play in child life and in the educative process. It is a wholesome corrective for the old fashioned idea that play is a superfluity. The author brings out some of the most useful services which are rendered by play, for play has direct educative value, assisting in the training of the judging and other mental processes, as well as in the spirit of fair-play and other moral qualities. The play-ground affords a splendid type of voluntary democratic organisation. Another chapter is devoted to 'The Services of the Hand in Mental Development.' Sometimes the school in emphasising the development of the mental processes has tended to neglect the fact that intelligence is sometimes motor, and that these two factors, the mental and motor, are closely related to one another. The questions of 'Exceptional Children' and 'The Measurement of Intelligence' are closely related, since it is through the latter that we get our most accurate knowledge of the former. A final chapter deals with a question on which Miss Gordon is surely competent to speak. 'The Kindergarten System and Its Application to Indian Children.' Altogether she has succeeded in writing a most useful little book, and we hope that it may have a good circulation among teachers and parents who cannot but profit by what she has written on the nature of children and how they should be educated.

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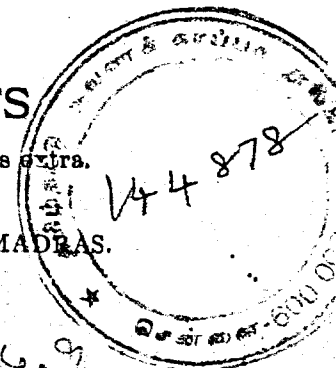
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