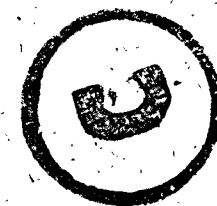


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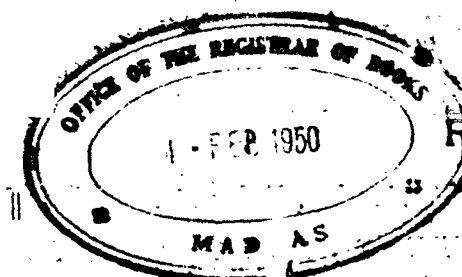


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No. 1

MORAL AND RELIGIOUS EDUCATION IN OUR SCHOOLS

By SRI M.B. NARASIMHA IYENGAR, M.Sc., Advocate, Bangalore.

AFTER the Queen's proclamation of 1858 A.D, the Government of India did not interfere with the religious practices of the various communities inhabiting India. Even the teaching of religion in Government schools and colleges was prohibited. In Christian missionary schools, that were mostly grant-in-aid institutions, the students were taught the Gospels by compulsion. This state of affairs continued for about half a century. In the early twenties of this century, a move was started to revive the imparting of religious education in our schools and colleges. An hour a week was devoted to religion and another hour for morals. The teacher would bring a voluminous tome on religion to the class room and read select portions from it. The boys would attend the class for the sake of attendance. The high philosophical terms used therein were not intelligible to the students and that hour was practically a waste. But the hour devoted to morals was somewhat useful to the student. The teacher would read certain stories and would ask the student to draw a moral from them. They were even asked to rewrite the whole story or they would be asked to write a story illustrating certain moral principles. This experiment was continued for a few years, and subsequently it was stopped completely. But the general principle that was accepted, was that education would improve the character of the student.

But few will disagree that education should be such as to make the student follow strictly the ethical code prescribed by the *Smriti* writers. For this, the sanction of religion is essential. Otherwise who will follow this ethical system? In India and even in pre Christian Europe, it was accepted that some sort of religious education was necessary to improve a man's conduct and character in life. But now these questions are asked: "Is this possible in a country where a number of opposing religions and opposing cults and sects exist? And how could religious education be imparted to a class, wherein students of various religious persuasions study?" This has become a very serious problem in our country and some kind of attention is to be drawn to this aspect.

Among the Hindus, some hold *Siva* as the supreme Deity. Others regard *Vishnu* as the highest God. The students must be taught to pay honour to the deity that they regard as supreme in their religion; but at the same time they must not be made to look down with contempt upon the gods of other communities. This could be done in only one way and that is this. The teacher must instil into the student the idea that the worshippers of all deities worship, in fact, only one Supreme Being. Sri Krishna Himself has developed this idea thus: "Those, however, who, being devoted in love to other deities, and being also possessed of faith, perform sacrifices—they,

too, without following the ordered rule, worship Me in reality. Arjuna! [*Bhagavad-gita*, ix. 23] Sri M. Rangacharya, in explaining this *sloka*, has stated thus:— "This stanza tells us that the worshippers of all dieties, whoever they may happen to be, worship in fact the *Brahman* of the *Vedanta*, who is one without a second. Since they worship their own particular deities with faith in their hearts, they are not aware that in worshipping them, they are truly engaged in the worship of the one only God of the *Vedanta*: moreover they are devoted in love to their various deities."

The students must be taught in schools the epics and the *puranas*. In our childhood, the stories of Sri Rama, Sri Krishna, the Pandavas and the Kauravas were taught to us in our houses, and no attempt was made to teach the same in our schools. But now these stories must be taught in our schools. But this itself is not sufficient. Our students must be made to know the personages, who contributed to the great-

ness of our country. How many of our students really know of Asoka and Sivaji?

The students must also be taught how to respect their parents and their nearest kin. In these days of democracy, a movement is afoot either to ignore the parents or to treat them with scant respect.

These things are the essential requisites for strictly adhering to the ethical code; "Speak the truth. Make friendship with the virtuous. Earn your livelihood by some honest means. In all your transactions in the world, think that you are doing your duty not inconsistent with God's plan and purpose in life." These are some of the rules prescribed in the ethical code. These have to be strictly adhered to by the student after he completes his education. Otherwise will he not harm himself? The universe is a machine that is being worked in a certain order by God himself. It will not be a loser, if any one works against it. The machine goes on in its own way, whether one likes it or not.

UNESCO SEMINAR ON ADULT EDUCATION

By LARS LIND (Continued from Vol. LV, p. 249).

GROUP III: ECONOMIC ASPECTS

The group specializing in the economic aspects of rural adult education stresses the fact that the low standard of living in Asia is largely due to the under-employment of the agricultural population. Full employment can be ensured by introduction or re-introduction of small rural and cottage industries, and improvement of already existing ones.

The means to create fuller employment are, according to the group:

1. A comprehensive survey by experts of the rural communities' primary needs.
2. Rural or Cottage Industries to be established to meet these needs in order of priority.

3. In the choice of such industries, self-sufficiency of the village should first be aimed at; in general no attempt should be made to compete with large scale urban industries using mass-production methods.

4. To further achieve self-sufficiency, subsidiary occupations should be found, specially such that provide work during periods of seasonal unemployment.

5. Training centres are required to teach the skills necessary for economic productions of good quality.

6. These centres should also be community centres. Schools could well be used. The centres should also serve as rural marketing agencies and supervise the standard of products.

7. Cooperative organisation is necessary for almost all cottage and rural industries from financing to production and marketing.

The basic education scheme as adopted by the Indian Government has been studied with special care and interest. The principle of self-sufficiency as a primary aim was generally approved; where production exceeds the local or village needs good markets should be found for the surplus, thus raising the economic level of the villagers. When opening a new rural or cottage industry the market demand should first have been carefully investigated.

The tools and equipment for these small industries should be of a sufficiently simple type for the individual villager to own and operate. The Group felt strongly that more help should be given by Governments to the survey and research for cottage industry development. Governments should cater more for the many millions in rural areas engaged in industrial work than for the comparatively few millions urban industrial workers.

Factory-produced or imported goods are only too often preferred by the consumers; efforts should be made to popularize local products of good craftsmanship. Special encouragement should be given to crafts providing scope for creative self-expression. Talented and skilled artisans should be helped to maintain their craft efficiency; if necessary Government or other funds should be used to aid them to teach others.

Ministries and other official services should as far as possible make use of cottage industries' products in preference to import goods.

The Group wishes UNESCO to collect and disseminate to its Member-States all available information on cottage industries.

"The teacher should not be like 'the merchant man seeking goodly pearls', but like 'the husbandman who waiteth for the precious fruit of the earth and hath long patience of it'" is one of the twenty basic principles which, according to the Group, should govern the approach to the economic

uplift of rural communities. Other important principles are:

Much time has also been spent on the study of media and methods in citizenship training as outlined in the curriculum. It specially deals with mass-media, both the traditional and the modern technical. Among the old, widely used media which the Group has considered are: festivals, fairs, pilgrimages, temples, tombs, ashrams, folk-lore, folk dances and dramas, games and sports. These media of proved worth should not be discarded out of a blind belief in the superiority of the modern mechanistic media such as press, radio and film. These new media can play a vital part in rural community education, but they must be handled with care, knowledge and skill.

The Group, led by Dr. A.N. Basu, Principal, Central Institute of Education, New Delhi, consisting of members from Burma, Ceylon, Egypt, India, Indonesia, Iraq, Philippines, Saudi Arabia, Thailand, and the United States and with observers from Bengal, Bihar, Bombay, C.P., Mysore, Orissa and U.P. passed the following main recommendations:

In areas where the population is not yet enfranchised it is necessary to introduce local self-governing institutions.

Every country should encourage the establishment of special agencies for the training of personnel and for production of literature and other aids for civic and social training in rural areas.

UNESCO should undertake the production of adult education literature and visual aids specially suited for Asian conditions.

UNESCO should draw up specimen programmes for the co-ordinated and intensive use of mass media in the presentation of themes pertaining to adult and fundamental education.

Follow-up seminars on a regional and national basis should be organized.

Now delegates, observers and staff have left fair Brindavan, where the constant sound of dammed-up water's joyous operation in cascades of foam and the thousands

of many-coloured lamps mixing with stars and moon into luminous, unreal nights have been their faithful companions, either when at work in study groups or plenary sessions, at rest in rooms or tents, or walking and talking with colleagues from distant lands in the French-styled garden.

They bring with them home memories of generous hosts and helpful organizers, useful advice from fellow-workers and new incentives to increased efforts with improved methods.

They leave behind in the Mysore vicinity visible signs of their activities and above all a job well done, a prelude well played.

Because the work of the Unesco Seminar in Mysore has only been a prelude, a starting point. Unesco will collect all the findings and recommendations, pull them together into shape and form; then the co-ordinated, final programme of rural adult education for community action will be widely disseminated to all Unesco's Member-States. First of all it will go to the delegates and observers, now scattered round the world at their action-stations; but it will also be sent to others working for rural reconstruction, in the field or as administrators in offices.

Unesco's Clearing-house for Fundamental Education will follow up the contacts made, send information and advice whenever and wherever needed. Unesco will produce and give expert advice on the production of

teaching materials, media and aids. Unesco too has learnt much from this month at Brindavan and can in its future work draw on the experiences gained and plan its actions according to the needs discovered.

The Unesco Seminar was a prelude. For the full symphony the co-operation and co-ordination of all instruments is needed: international agencies and national governments, voluntary organisations and local boards, professional teachers and spare time volunteers, press and public opinion and above all the potential pupils themselves.

Real harmony demands an equalisation of living-standards and educational opportunities, within countries and between countries. This is a task for which Unesco was created. In its Constitution, now signed by 50 nations, it is stated that Unesco will "give fresh impulse to popular education and to the spread of culture; by collaborating with Members at their request, in the development of educational activities; by instituting collaboration among the nations to advance the ideal of equality of educational opportunity without regard to race, sex or any distinctions, economic or social; by suggesting educational methods best suited to prepare the children of the world for the responsibilities of freedom." The now successfully concluded Seminar on Rural Adult Education was a small part of Unesco's efforts to carry out its responsibility in respect of this central point in its charter.

PRIORITIES IN EDUCATION

By SRI R. SRINIVASA IYENGAR, Headmaster, Sarvajana High School, Peelamedu.

MOULANA Abdul Kalam Azad, inaugurating the UNESCO Seminar on Rural Education at Mysore, observed that "the problem of educating the adult population is of even greater urgency than the education of the future citizens" (or children), as an educated electorate is the condition for the survival and proper functioning of modern democracy. It is not

my object to say anything against the importance of adult education. I concede that education of the future generations can only be planned if the present generation recognises the importance of such education. Adult education has been recognised as a valuable auxiliary to primary education.

The planners and administrators of education have to note that several year

after the working of universal compulsory education, the State, in most countries, has taken the responsibility of doing pioneering organising work in regard to adult education. In England, adult education efforts commenced after universal provision was made for compulsory full time education of children from 5 to 11 years which took 25 years from 1870 to 1895. The object of adult education is not merely to make good the deficiencies of earlier education, but also to enable men and women to live full and interesting lives. Adult education is as wide as human interests, and must provide for many levels of attainments; and hence a great variety of service is essential. The complicated nature of the problem needs to be considered in providing the requisite machinery for adult education. I venture to submit that adult education cannot have greater urgency than the education of the children of the nation. Even if the planning and its execution were to commence for imparting adult education almost immediately, the results on the political knowledge and acumen of the electorate would be visible only at least two decades hence.

For the ensuing elections on the basis of adult franchise and for at least two more elections, the nation will have to content itself with the complacency of Sri Babu Rajendra Prasad. In his concluding speech on the passing of the Indian Constitution Bill, he said: "In my opinion, our people possess intelligence and common sense. They also have a culture which the sophisticated people of today may not appreciate, but which is solid. They are not literate and do not possess the mechanical skill of reading and writing. I have no doubt in my mind that if things are explained to them, they will not only be able to pick up the technique of election, but will also be able to use their votes in an intelligent manner; and I have therefore no misgivings about the future on that account. Their sturdy commonsense will enable them to see things in the right perspective." Lala Lajpat Rai has stated in his book, "The Problem of National Education in India", that the Indian peasant is the shrewdest person in

the world. Hence I would plead with the Education Minister at the Centre that he should endeavour to give effect to the suggestion made by the Hartog Committee and thus to fulfil the aspirations and longings of Gokhale. The Committee has said, "We cannot accept the view that the Central Government should be entirely relieved of all responsibility for the attainment of universal primary education."

Again, it was revealed by the Education Minister of our Province, while presiding at a meeting of the Madras Teachers' Guild, that the Government of India wished liberally to subsidise the Provincial Government if the latter would take over all the secondary schools and that the proposal had been abandoned by the Government of India. In my opinion, the Central Government is not being properly advised by its educational experts as regards the order of priorities in education. Though we in secondary schools may stand to gain, the welfare of the masses demands that nationalisation of elementary education should receive the topmost priority and that after this programme has been fully carried out, the nationalisation of secondary education could be thought of. I am not unmindful of the fact that conditions of teachers' service need betterment and State-protection and State aid. But nationalisation of education will have to be tackled along with nationalisation of industries, transport, communications, &c.; and nationalisation of secondary education is neither necessary nor desirable, neither feasible nor warranted in the present condition of our country. As the Hon. Mr. Madhava Menon remarked, "Apart from the model schools attached to training schools, not a single secondary school is run by the Government. All the schools are either privately run or run by local bodies." Private educational agencies cannot be easily wiped out, and have had their part to play in imparting vitality, vigour and freshness to educational work. It is aided agencies that have taken the initiative to try educational experiments. The aided institutions at Adyar and Papanasam presented pupils for the S.B.L.C. for answering the non-language subjects in the

mother-tongue, in 1926, they having started the vernacularisation scheme in 1923, in theory. Again, the Government can influence the local bodies; and training in the art of self-government under the inspiration of the present national leadership in the Republic of India may be expected to raise the standard and tone of administration of local bodies also. Hence I would urge that nationalisation of elementary education is a vital urgent necessity. It may be recalled that Pandit Jawaharlal Nehru felt awkward and embarrassed for a moment, when a boy in New York asked him if India would eventually have compulsory universal education. Pandit Nehru said, "Of course, that is our objective. But, you must remember that we have tens of millions of boys and girls and it will take time to organise it."

In the Provinces, universal elementary education is being delayed on account of the fact that the Provincial governments are obsessed with basic education as their policy. Gandhiji expected his basic education scheme to accelerate universal elementary education. But basic education is today retarding the accomplishment of universal elementary education. Again, it has to be remembered that just as the

nation venerates the ideal of nonviolence without divesting itself of the aids of the army and the police, realism requires that basic schools will ever be on an experimental plane, and should serve as models and beacons to other educational institutions. We shall ever be proud of Sevagram, Kilamungiladi, Kallupatti and other basic schools, as we are proud of Santiniketan, Hindu University at Benares, and Dr. Besant's educational institutions started by the Theosophical Educational Trust. The glory of Gandhian basic education is bound to suffer by regimentation on a mass scale; and every patriot should avert the tragedy. Hence, for educational and financial reasons, universal elementary education should receive prior consideration even over basic education.

Hence I would plead with Mr. R. A. Butler, "There would be a crisis in education in the near future unless the Ministry grasped essentials and had proper priorities." A well thought-out order of priorities is the essence of sound administration. In India, too, at the Centre and in the Provinces, the Ministries may profit by the caution administered by Mr. Butler.

TWO URGENT ASPECTS OF EDUCATION IN FREE INDIA

DEWAN BAHADUR K.S. RAMASWAMI SASTRI, B.A., B.L., *Retd. District Judge, Madras.*

MY aim in this article is not to discuss in detail the ideals and methods of education in general or of Indian education in particular but to draw attention to two urgent aspects of education in Independent India. Of course those two aspects cannot be viewed as if it were in vacuum and out of relation to the aims and objectives of education in general or of Indian education as a whole. It is our wrong views about the general aspects that have led to our deficiencies in regard to the two aspects which I wish to emphasise, I shall therefore dwell very briefly and lightly on such general aspects.

Even now there are but few persons who have got clear and definite ideas about the aims and objectives of education. Formerly the classes were educated while the education of the masses was neglected. Literary and philosophical and religious studies preponderated, and science occupied a back-seat. But now the pendulum has swung to the other extreme. Further even now there is no co-ordinated and synthesised view about the ideals of education. We must have education to enable a boy or a girl to earn his or her living. We may fit all the inhabitants to be democratic citizens. We must enable every person to develop his

TWO URGENT ASPECTS OF EDUCATION IN INDIA

talents and aptitudes and have a rich and full personality and live a good and godly life. These three aims are not mutually exclusive and a proper scheme of education must include them all.

The cry all over the world today is for scientific education and for mass education. But these have been largely achieved in the West, but with what results? The results are the atom bomb and the demagogue. Scientific progress has perfected the engines of destruction and universal literacy by itself is no guarantee of good citizenship. The popular press and the radio and the cinema often inflame the passions of men rather than illumine their minds. It is therefore necessary that scientific education should go hand in hand with education in the humanities, and that mass education should not stop with mere literacy but should include the rudiments of sociology and economics and politics and should lay at least some stress on ethical and spiritual ideals.

It is therefore not enough to have a small number of scientific experts plus a large number of mere literates who are likely to be swayed by demagogues and who have no critical or constructive faculty at all. A great community can arise only if there are proper leaders and an enlightened electorate capable of weighing and judging principles and policies and programmes. We are working for a welfare State. We seek to usher in a Socialist State. But unless we have the proper type of leaders and an educated proletariat we are sure to bungle and go wrong whatever may be the purity and nobility of our concepts of the future State.

Let me now proceed to deal with the two aspects which I wish to emphasise here. The first question to be considered is, have we now in India a leader-producing higher education? Quite recently His Excellency C. Rajagopalachariar said at Bombay:

"Democracy's claims and all-embracing pretensions notwithstanding, sound leadership is the fundamental of national achievement, and it must come from the precincts of our universities. We cannot seek for it

elsewhere. It would be no exaggeration if we admit that the gap between the needs of the times and the quality of supply from our universities is a yawning gulf. The explanation offered is that there is confusion, both intellectual and moral, in the world around, and this is reflected in the universities. But is it enough for the universities to reflect outside confusion instead of making up for it? The function of the universities must be to reform, not proportionately to represent society but to do something to restore moral values and intellectual orderliness where there is anarchy. In the great experiment which India has in the execution of her destiny undertaken to make in our generation, there is nothing more unfortunate than the present state of our colleges and universities."

His Excellency proceeds to observe that if we had kept our Vedantic culture alive, "no deficiency in school or college education would have mattered or resulted in serious harm." But our philosophical and religious culture has become "a rapidly diminishing asset." That is why greed and selfishness abound everywhere and why hoarding and blackmarketing and corruption thrive despite denunciations from very high places. His Excellency says in a passage full of poignant beauty of utterance: "The discipline and restraint and the sense of moral values which Vedantic culture implies have been almost completely jettisoned by the steady and unrelenting educational plans pursued during the last 50 years, which, alas, did not furnish us with anything in place of the old inheritance that was thrown overboard. All learning should develop personality. Otherwise it is worthless in every sense. On the other hand, if this aspect of university aims be kept in mind, every variety of study would be rich in fruit. Be it science, technical training, economics, history, law, domestic science or whatever, it might be, it would—each one of these—be an ample field for making a boy or girl a leader of men, provided that along with intellectual equipment the development of personality were attended to." No theory of a Secular State, no fear of denomina-

tional religiosity would justify our present thorough indifference to this most vital aspect of our university education. We must impart our essential ethical and spiritual ideals in a broad and tolerant spirit and not in an intolerant bigoted fanatical spirit. His Excellency says: "Not by total exclusion of all religion and spiritual thought but by all-embracing acquaintance and appreciation of spiritual thought of all kinds shall we be safe and shape ourselves properly."

That is how we are at the top. How do we stand at the bottom? We are yet in a state of appalling mass illiteracy which now stands at about 80%. The Constitution Act will become law on 26th January 1950 and the elections on the basis of adult suffrage will be upon us in 1951 or at the latest in 1952. We must totally liquidate illiteracy and achieve cent per cent literacy as soon as possible. For this we concentrate simultaneously on adult literacy as well as on free universal compulsory primary education. It will be foolish and futile to pursue the latter aim alone neglecting the former aim. But to-day elementary

education makes the youth merely bookish and even then their general knowledge is of a limited character and is not coordinated with moral and spiritual ideals. Our forefathers who were technically illiterate were often cultured and disciplined people, because of Puranic recitations and Harikathas, Nowadays these have been neglected and have almost vanished, and practically nothing has taken their place. Our forefathers enjoyed their vocations, while we their wiser children have a distaste and contempt for them. Here again His Excellency asked the crusaders of compulsory primary education not to force all children away from family apprenticeship in the trades of their parents and compel them to spend all their time in schools. We must have cent per cent literacy in the shortest space of time, but we must also see that primary education and adult education do not breed distaste for hereditary vocations, while giving the small blessing of ability to read and write and that they contain and include a basic knowledge of the laws of social and economic and political life and a sense of ethical and spiritual ideals.

THE ROMAN ALPHABET AND THE INDIAN LANGUAGES

BY SRI D. ADAIKALANATHAN, Pondicherry.

FIGURES are signs that represent exactly numbers. Letters are signs that represent sounds. As a corollary of the principle, each sound must be represented by a particular letter, having the same value always and everywhere.

The Roman alphabet, which is dominant in the world, does not fully satisfy this important need for facilitating reading of Indian languages. Thus in the word "Sacrificum" the letter 'c' is employed in two different places. The first 'c' is pronounced differently from the second. Again in the word 'cement' the sound of the letter 'c' differs much from those of the two 'c's' mentioned above. On the other hand, different letters are used to represent the same sound, as in the word 'cork' when 'c'

and 'k' have the same value. Sometime it requires two letters to represent a single sound like 'sh' or 'ch' in *sheet* and *machine*. On another occasion, a single letter represents two sounds which come one after another, like 'x' for *gz* in *example*, for *ks* in *box*. Sometimes a letter or a group of letters are quite mute or silent; for example, *wright*.

To avoid these defects one must choose for the sound that gives room to such confusions, the letter that represents this sound in a great number of languages, using the Latin alphabet.

Moreover, this alphabet is incomplete. It lacks the symbols to indicate a class of consonants called cacuminals, or cerebrals that are produced with the tip of the

'LILAVATI' THROUGH MODERN SPECTACLES

tongue lifted and folded behind. They are common in the Oriental languages. We find them in the Swedish and Norwegian. The consonants t, d, n, l, r, s retroflexed in the Indian and the Mongolian languages form that category. To distinguish them from those generally articulated with the stretched tongue, one must place the sign (before those last mentioned letters thus: (t, d, n, l, r, s).

There is in Tamil a peculiar sound very difficult to pronounce by persons who are not accustomed to it. It is ṣ . One would close the gap by less fitting combinations which are far from producing the expected effect. Scientifically speaking, the ṣ is a consonant voiced or soft corresponding to the whiffed or hard sh or ś in Sanskrit. The fricative palato-alveolar (ṣ , ś) is usually formed by raising the side of the tongue, whose upper part approaches the hard palate in allowing a short but broad passage for the air. The ṣ and the ś are then formed in the same place and in the same manner. But at the moment when the ś is produced, the glottis is opened, the air comes out from the lungs without touching the vocal cords. As for the ṣ , the glottis contracts; the vocal cords vibrate and the modified consonant sound is accompanied by the sound of the voice. It is better to add to the Latin alphabet these two letters ṣ and ś , which have no equivalent in European languages.

It remains to provide for the long vowels and the nasal vowels, which are not provided for in the Roman script. For that, we might place to the right of the short vowels this sign '—' to indicate that they are pronounced as long and the other sign ^ to indicate that they are nasalised.

It would not be out of place to mark by a figure the slight noise of friction produced while breathing by the air coming from the lungs when the veil of the palate is raised, the throat and the tongue are in a state of rest; and the mouth and the glottis are opened, by the sign ḥ . It is the puff. Now let us suppose that the vocal cords are brought nearer in order to close the glottis. Then the puff passes through a series of shocks that make the vocal cords vibrate in order to produce a sonorousness of a particular musical sound called voice. Let us represent this sound which is at the bottom of all the vowels by the other sign ḡ .

These two symbols ḥ and ḡ have their usefulness as letters that serve for transcribing the language, for speech, from a physiological point of view, is a particular modification of the well known phenomenon, breathing. They will serve to distinguish principally the nature of (h) when it is necessary to transform the voiced (soft) consonants into whiffed (hard) consonants; and the whiffed (hard) consonants into voiced (soft) consonants.

'LILAVATI' THROUGH MODERN SPECTACLES

BY SRI PURUSHOTTAM SHAH M.A., B.T., M.R.S.T., (LOND). Bombay.

AT present we study mathematics through the medium of English. When we probe into the big volumes on Mathematics written in English, we are likely to gather the impression that the science of mathematics was originated and developed only in the West and that we had only to follow in their footsteps adopting their system, while no trace of this science could be

found in our country. But I think, the veterans of Indian culture and sciences must now try to reveal before the people our great inherited hidden treasure of Indian books, which still await exploration and study.

I here would like to refer to one of those volumes in Sanskrit known as *Lilavati* by Bhaskaracharya, a great mathematician and

Astronomer of the 12th century. He has given in it various rules on Arithmetic and Geometry. Let us take one for illustration.

Take any numerical figure you like, and you will come upon the required answer with the help of the rules given therein. The beauty of it lies in getting the same answer, even though any convenient number is taken. It is, therefore, worthwhile attempting to follow that line of thinking and adapting it to our modern system.

Moreover, these rules are extremely simple. They say, as for example: "Divide the number by three, multiply the result by two and add to the product a certain number." But the logical reasoning behind those rules has not been clearly explained in the book. This will furnish an interesting study to the students of mathematics.

I have here attempted to trace the reasoning behind the rules about the right angle in *Lilavati*. Modern geometry teaches us that in a right-angled triangle the third side can be found out only, if the two other sides are given and for that purpose the Principle of Pythagoras only can be applied. But according to *Lilavati* the two unknown sides can be found out, even though only one side is given. This goes to prove that our Indian science of Mathematics must have been far advanced in formulating generalisations, but the number of interpreters of these rules must have gone on declining and ultimately such books too fell into disuse. This might be only the result of utter negligence on the part of the students of this indigenous science of ours, or perhaps the foreign invaders might have taken away Indian books with them. The Westerners might have found these books and based their well organized and highly developed knowledge on them. Whatever may be the case, if all the books on Mathematics were available, we could convincingly have proved that we were not comparatively behind them with regard to the knowledge of the science of Mathematics.

Now let us try to unearth the secret behind the rules as given in *Lilavati*.

The students of geometry know that there are three sides of a right-angled triangle known as the hypotenuse, the perpendicular and the base. According to Pythagoras..... $P^2 + B^2 = H^2$.

Out of these three, if any two are given, the third can be found out with the help of this formula.

Now let us examine one after another different rules given in Bhaskaracharya's *Lilavati*.

1. Given perpendicular 4", base 3", find out the hypotenuse.

(a) According to Pythagoras:

$$H^2 = (4)^2 + (3)^2 \\ = 16 + 9 = 25$$

$$\therefore H = 5 \therefore \text{Hypotenuse } 5''$$

(b) According to *Lilavati*:-

Multiply perpendicular by base. Again multiply the result (product) by two and add to it the square of the difference of the perpendicular and the base. Find the square root of the final result.

Illustration:

$$4 \times 3 = 12, \quad 12 \times 2 = 24$$

$$4 - 3 = 1 \quad \text{Sq. root of } 1 \text{ is } 1$$

$$\therefore 24 + 1 = 25 \quad \text{Sq. root of } 25 = 5 \therefore H = 5''$$

Students will do well to take other examples illustrating this rule.

Line of thinking behind the rule.

A little thinking will show that there are more algebraic than geometrical fundamentals involved.

If perpendicular, base and hypotenuse are taken as a, b, c , respectively,

$$2ab + (a-b)^2 = a^2 + b^2 \dots\dots\dots (1)$$

$$\text{where } a^2 + b^2 = c^2 \dots\dots\dots (2)$$

Here it seems he has combined two fundamental truths (1) an algebraic identity and (2) Pythagoras theorem (used indirectly). All those who are interested in this subject are invited here to throw more light on this.

2. Given hypotenuse 5", base 3", to find out the perpendicular:

(a) According to Pythagoras:-

$$P^2 = (5)^2 - (3)^2 \\ = 25 - 9 = 16$$

$$\therefore P = 4 \therefore 4'' \text{ perpendicular.}$$

(b) According to *Lilavati*:-

Add hypotenuse and base together = (1)

Find the difference of H and B = (2)

Find the square root of the product of the results = (1) and (2). Answer = perpendicular.

Illustration:

$$5 + 3 = 8 \dots\dots\dots (1) \quad 8 \times 2 = 16 \\ 5 - 3 = 2 \dots\dots\dots (2)$$

The Sq. root of 16 = 4 $\therefore$ perpendicular 4"

Logical Reasoning behind formula:

$$a^2 + b^2 = c^2 \text{ (according to Pythagoras)}$$

$$\therefore a^2 = c^2 - b^2$$

$$= (c-b)(c+b) = (H-B)(H+B)$$

Note:- The formula that appears perplexing at the first sight is found very easy on experience.

8. If the base is 12", find the values of P and H. (P = perpendicular and H = hypotenuse).

The solution to this problem will not be obtained with the help of the Pythagoras Theorem. Here *Lilavati* will come to our help.

Rule 1: (a) Take any number, say 2. Double it $2 \times 2 = 4$. Multiply it by the given base. We get $4 \times 12 = 48$. (1)

Square the original number $\therefore 2^2 = 4$

$$\text{Subtract 1 from it. } \dots 4 - 1 = 3 \dots\dots\dots (2) \\ \therefore 48 + 3 = 51$$

Divide the first result by the second. Multiply the perpendicular by the original number, $16 \times 2 = 32$.

Subtract base from it and get the hypotenuse $32 - 12 = 20$ Ans:

16" perpendicular and 20" hypotenuse.

(b) Suppose the original number is 3. Repeat the application of the above rule.

$$3 \times 2 = 6 \quad \quad \quad 3^2 = 9$$

$$6 \times 12 = 72 \dots\dots\dots (1) \quad \therefore 9 - 1 = 8 \quad 9 \times 3 = 27$$

$$\therefore 72 + 8 = 80 \text{ Perpendicular } \therefore 27 - 12 \\ = 15 \text{ Hypotenuse.}$$

Let us reason out the formula:

From the point of view of Algebra:

Keep Rule 1 before you, base being given. Let us suppose the number as x . Application of the rule. Perpendicular = $\frac{2xb}{x^2-1}$

$$H = \frac{b(x^2+1)}{x^2-1} \text{ Application of the Pythagoras}$$

$$\text{rule } \left(\frac{2xb}{x^2-1} \right)^2 + b^2 = \left\{ \frac{b(x^2+1)}{x^2-1} \right\}^2$$

This is the general identity and therefore the above rule is literally true for any value (except 1) of x . This rule is pregnant with the truth of the above identity.

(The time of the composition of *Lilavati* is probably 1086 *Shaka*. Bhaskaracharya seems to have written other voluminous books on Mathematics like Algebra, *Goladhya*, *Ganitadhyaya*, *Karoon-Kutuhel* etc. I intend to deal with the Mathematics of the West in "The Rise and Progress of Mathematics" against the background of this Indian sister-science).

Rule II. Square the Base $(12)^2 = 144$

Divide it by the supposed number $144 \div 2 = 72$.

$72 - 2 = 70$ and half of this is 35" which is perpendicular.

$72 + 2 = 74$ and " " is 37" " Hypotenuse.

Students may test these answers.

As you go on changing the number supplied, you will get different measurements (or values) of perpendicular and hypotenuse. But all the results will furnish us with the sides of a right-angled triangle and none else:-

Suppose we take 4; Now $(12)^2 = 144$

And $144 \div 4 = 36$

$\therefore 36 - 4 = 32$, half of which is 16" which is perpendicular

$36 + 4 = 40$ " " is 20" " Hypotenuse

The results are also correct, when the base is 12".

Reasoning:

Let Base be b and the supposed No. x :

Applying rule II we get $\frac{1}{2} \left(\frac{b^2}{x} - x \right)$

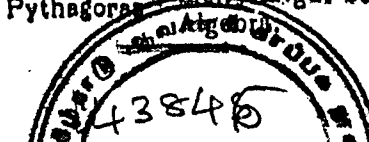
perpendicular, $\frac{1}{2} \left(\frac{b^2}{x} + x \right)$ Hypotenuse

At the back of this rule.

$$\left\{ \frac{1}{2} \left(\frac{b^2}{x} - x \right) \right\}^2 + b^2 = \left\{ \frac{1}{2} \left(\frac{b^2}{x} + x \right) \right\}^2$$

This is an Identity.

We get the above general identity. We are led to believe from this that Algebra must have been much more advanced than geometry and the generalisations in Geometry might be based on the knowledge of



THE MADRAS PROVINCIAL HEADMASTERS' CONFERENCE

The Madras Provincial Headmasters' Conference met at the Christian College High School at Madras on the 28th and 29th of December, 1949.

Sri P. Doraikkannu Mudaliar, the President of the Madras Teachers' Guild, welcomed the Education Minister and the delegates. The Hon'ble K. Madhava Menon, Minister for Education, declared the Conference open.

Sri K. Kuruvilla Jacob, President-elect of the Conference, could not attend the Conference on account of illness. His address was read by Sri S. Natarajan.

PRESIDENTIAL ADDRESS

In the course of his address, Sri Jacob said:

"We have now met after the introduction of the scheme of reorganisation to discuss what problems still remain and how we may overcome them.

In regard to the new scheme for the Middle School, we should be glad that by the change that has already been made by starting the study of English in the first form and by the changes that have been recommended by the Experts Committee for adequate provision for Sanskrit and Hindi, the difficulties may be regarded as solved, as well as it is possible in the circumstances. It may be that for the Citizenship Training there are not yet sufficient number of teachers who are trained to give effective training for the pupils, but I would appeal to all schools to take up the course seriously, because all the items in the scheme are important for the training of efficient citizens for Free India.

It was hoped that a fair proportion of pupils would go for definite vocational training in Trade Schools after the completion of the middle school stage. The present Trade Schools under the Department of Industries do not quite fit in with

the Secondary School scheme and if the Government can arrange to open Trade Schools of the kind outlined in the Reorganisation Scheme many pupils will be benefited and High Schools will be less overcrowded.

As for the High School courses, the academic and bifurcated courses are now functioning. One serious criticism that was raised against the academic course was the absence of optional subjects and especially the omission of Algebra and Theoretical Geometry.

It was felt that the science syllabus should be improved by the addition of portions from the optional course and there should be practical work in science for all High School pupils and that an integrated course of Social Studies should replace History and Geography. Unfortunately a mistake was made in regard to Mathematics by leaving out Algebra and Theoretical Geometry thus making the standard of S.S.L.C. Mathematics somewhat low. The Universities made legitimate protests on the representation of the Headmasters' Association of the city and the S.I.P.U. and others. The expert committee has recommended that alternative courses of Higher and Lower Mathematics should be provided in forms 5 and 6. This provision should be found to be adequate and satisfactory.

The course called 'Hobbies and Practical Activities' in the High School classes has puzzled some people. The reason for including this in the scheme is that compared to High School pupils in other countries our pupils are poor in practical skills and in the variety of interests that they have and it was thought desirable to make suitable provision in schools for giving the pupils some facilities for developing these.

We are all aware that the standard of the S.S.L.C. is now very low. We may be tempted to blame examiners for lowering the standards or the Moderation Board for

lowering the standards of eligibility; but the fact remains that the standards of attainments of pupils are set by the schools in the day-to-day work and not by final examinations. I shall refer here to a few of the important causes of the low standards. During the past few years the number of pupils coming to the Secondary Schools have greatly increased and many of the pupils come with very inadequate training in the primary stage.

The method of teaching in our schools has to be greatly improved. We depend too much on the easy way of lecturing and dictation of notes and less on the pupils' efforts to learn through reading, by consulting reference books, by drawing, by making charts, models, collections, visits and various other activities which make learning effective and real. One way of overcoming the weakness is by the use of audio-visual aids.

Another serious defect is that the progress of pupils and the errors in their learning are not tested, diagnosed and corrected efficiently. Efficient methods of testing and recording therefore are urgent improvements to be brought into our schools.

Both Rajaji and Pandit Nehru have repeatedly stated that manual labour is a social necessity in our country. For some time past the Madras Headmasters' Association has emphasised the importance of this provision in the Citizenship Training programme in Secondary Schools, but we are afraid our resolutions have not proved very successful.

But if it is of national importance as the Governor-General and the Prime Minister have said, then it is a matter to be taken up seriously by the Education Department and the Government and not simply by a few schools.

No education is complete unless it is based on the eternal truths which religion and morality teach us. Religious instruction can now be taught only in private schools according to a conscience clause in the constitution of our country. This is good and let us hope that the provision will

be used wisely and justly. It is about moral instruction that I wish to refer heret. The Madras Headmasters' Association has spent considerable time and thought over this matter and has made the following recommendations. Moral instruction to be really effective should include a study of the lives and teachings of the great teachers of the world. Such dispassionate and reverent study will enable our pupils to grow with a wider vision, free from communal prejudices and with open mind to search for Truth."

RECOMMENDATIONS

The following topics were discussed at the Headmasters' Conference.

1. Audio-visual Education.
2. School organization & discipline.
3. Examinations & assessment of abilities.
4. Practical activities & projects in the reorganized scheme of Education.

After the discussion of each topic, the points largely supported during the discussion were put down in the form of conclusions, and these conclusions were unanimously approved by the Conference.

AUDIO-VISUAL EDUCATION.

SRI R. SRINIVASA IYENGAR, *Peelamedu*, presided over the discussion on the question.

From a discussion and review of the present conditions obtaining in the organization and working of the audio-visual education scheme, the Conference is of opinion that the scheme as worked out in most educational institutions is not suited to the graded capacities of the pupils of the various classes and it operates in a haphazard manner.

The Conference therefore offers the following proposals for the early consideration of the Department of Education with a view to ensure proper and effective working of the audio-visual education scheme.

- (1) Every school should have as far as possible a silent projector and a film strip projector of its own.

(2) Early steps should be taken by the Department to form central film libraries in each district so that the school in the district may hire films from the library.

(3) The Department of Education should circulate half-yearly a list giving the films available and the companies from which they are available.

(4) Half grant should be given on the purchase of projectors and their accessories except films and film strips.

(5) The present system of gathering together about 200 to 250 pupils for a show is ineffective from the point of view of instruction.

Effective steps should be taken to enable institutions to give film shows to a gathering of about 40 pupils.

(6) The managements may be permitted to incur the following expenditure from the visual education fees that are collected now if funds are available:—

(a) Paying salary to the mechanic who operates the projector.

(b) Increasing the contingent expenditure from Rs. 2 to Rs. 7. per show.

(c) Utilizing a part of this amount to purchase other visual aids such as charts, maps, models, specimens, epidiascope etc.

In the case of institutions which spend over and above the visual education fees collected, for incurring expenditure on the above items, the excess expenditure may be taken as approved expenditure for assessment of grant.

(7) Mike with loud speakers and radio receiving set should be considered as equipment items for which half grant should be given. If certain institutions have large unspent amount under visual education fees, they may be permitted to utilise the unspent amount for the purchase of mike and radio receiving set.

(8) Short training courses for teachers in the operation of projectors and in the preservation of films and of preparing and

collecting other visual aids may be organised by the department of education in a number of training institutions.

(9) Early steps may be taken by the department to produce films suited to our pupils' attainments as most of the foreign films are unsuitable to our pupils.

SCHOOL ORGANIZATION AND DISCIPLINE:

SRI K. P. VARID, CALICUT, *presided over the discussion on this question.*

(1) In the matter of appointment of teachers and clerks the management should consult the Headmasters before appointing, as it has been found in many cases that unsuitable and unqualified persons are appointed, thus retarding the smooth and efficient working of the institution.

(2) The Department should issue directions to the managements not to interfere in the internal administration of these institutions for which the Headmasters are responsible to the Department as laid down in the M. E. R. and the Grant-in-Aid Code.

(3) It has been represented that many managements do not allow their Headmasters to utilise the amounts collected as special fees for specific purposes. The department should issue a direction to the managements that the amounts collected for specific purposes should be placed at the disposal of the Headmasters who in consultation with their staff councils will spend only for those specific purposes, and if any balance is left, that should be carried over to the subsequent year.

(4) In the interests of education and discipline in schools the Headmasters should be given the discretion to detain pupils in form VI. The recent G. O. abolishing the selection should be withdrawn and the powers given to the Headmasters previously should be restored. The recent departmental circulars giving serious warning to the headmasters in the matter of promotion, admission and dates of birth of pupils is felt derogatory to the dignity of the Headmasters and hence it should be withdrawn.

(5) Many of the entries made in the S. S. L. C. Books are of doubtful value and serve no purpose. Hence abolition of unnecessary entries is recommended.

EXAMINATION AND ASSESMENT OF ABILITIES

SRI SARGUNAM *presided over the discussion on this question.*

There is no scope in the present system of examination to assess the practical abilities of pupils and their personal traits. The Conference is of opinion that the time has come for the teachers to acquaint themselves with the methods of assessment of abilities of pupils.

The Conference is of opinion that before the recommendations of the committee for testing and recording the progress of pupils in school activities are given effect to, special courses may be arranged for the teachers in testing, assessing and recording and a comprehensive guide book may be published.

PRACTICAL ACTIVITIES AND PROJECTS IN THE REORGANISED SCHEME OF SECONDARY EDUCATION

(1) Activities and projects have an important part in the education of children but as the activities contemplated in the reorganised scheme are too many, heads of institutions find it difficult in implementing the activity programme contemplated in the scheme. The Conference suggests that the number of activities may be suitably reduced.

(2) The syllabus on social studies requires readjustment and modification and the number of activities should be reduced. Some of the topics are beyond the comprehension of pupils and history is not treated in the chronological order, and Geography is not treated in a scientific way.

(3) As correlation and integration with the basic craft have been found by most of the headmasters to be impracticable, the Conference requests Government to afford facilities for heads of institutions to visit institutions where such correlation and integration are made.

(4) As only elements of scouting are incorporated in the citizenship training course, Part II, and as they benefit all the pupils, the Conference is of the view that they should not be removed from the citizenship course.

(5) Camp life would increase individual efficiency and inculcate dignity of labour.

(6) The scholarship fund and savings bank schemes may be instituted in the schools.

CONCLUSION

Sri S. Natarajan made a few concluding remarks. Sri T. Suryaprakasa Rao, speaking on behalf of the Andhra headmasters, hoped that, after the formation of the Andhra Province, the S. I. T. U. would function as a federal organisation, guiding all the future provincial organisations.

The Conference concluded with a vote of thanks proposed by Sri K. Hanumanta Rao and Sri Sargunam.

UNIVERSITY TEACHERS IN CONFERENCE

THE fourth annual conference of the Provincial Association of University Teachers met at the Madras Christian College, Tambaram, on 29th and 30th of December, 1949. About a hundred delegates attended the Conference from all over the Province.

The Rev. R. S. Macnicol, Chairman of the Reception Committee, welcomed the delegates.

INAUGURAL ADDRESS

Dr. Boyd inaugurating the Conference said that the Association aimed at being something more than a mere trade union for university and college teachers.

On the question of discipline among students he said that there was plenty of evidence that our younger brethren, when wisely dealt with, could still recognise and take pride and pleasure in the benefits of

discipline and order. Unfortunately there was nearly always some well-meaning but misguided outsider who was prepared to attempt to arrange what he described as a "settlement"—really making matters worse. He felt that many of the troubles that beset us today were due to the habit which grew up between wars when older people losing confidence in themselves told younger people that the latter were the only hope of the world as the former had made a hopeless mess of things.

About the criticism of their educational system as one producing only potential clerks, the speaker felt that those who would condemn their whole system of education with an epigram were not to be taken seriously.

Analysing the intrinsic value of good education he said that all general education

must be not merely a preparation for life in general but a genuine preparation also for the professional or vocational training which was bound to follow. That in turn meant quality; for general education of low quality would prepare for nothing. Unhappily the present tendency was in the contrary direction. Therefore, there was urgent need to improve the quality of their products, a big and united effort necessary to improve matters.

The college teacher was getting less than a well trained stenographer. Far too little was being spent on college education. Teachers' salaries were ludicrously inappropriate.

It was the business of the Government to adjust its policy in such a way that it would have money to discharge its obvious liabilities. He pleaded for more Government grant to the colleges.

PRESIDENTIAL ADDRESS

DR. R. VAIDYANATHASWAMY, M.A., PH.D. D.Sc., *Professor of Mathematics, University of Madras, in the course of his presidential address said:*

IT is a matter for satisfaction that we the University teachers of this province have formed ourselves into this association, and have been coming together in these yearly conferences to take stock of our position and our problems—both problems of immediate urgency and those of longer range. It is part of the Dharma of an organised society that each major function should seek to become fully conscious of itself, and shape its activities continually in relation to the health and integrity of the whole. The independence of India has brought with it a responsibility for straight and fundamental thinking on the present set-up of higher education, the kind of teaching to be given in our colleges and universities, and the position of the teacher vis-à-vis the management, the University and the government. It is certain that the University Commission will have made wise and far-reaching recommendations on these issues, and it is the fervent hope of every one who has faith in the future of this country, that their recommendations

will be implemented and a new era will dawn on higher education.

Not even the most inveterate optimist can look with equanimity on the present state of higher education. While the cost of living is four times the prewar level, there has been no substantial increase in the salaries of college teachers, which continue to be lower than in other provinces and much lower than the scales recommended by the Central Pay Commission and the Inter-University Board. The Government and the University cannot but be aware of the demoralisation in this state of affairs, and of the peril in delaying relief. The Government have in fact recently given a certain degree of relief to their own teachers, in the matter of starting salary and allowances. But in a key branch of national service like college education, is it justifiable or wise for a popular and a national government to discriminate between teachers in government colleges and in private colleges?

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This Association has had to deal, as part of its routine work, with various complaints of teachers in private institutions against their managements.

The grievances of university teachers in regard to their status, and their freedom to hold and express opinions are all traceable to the fundamental attitude which looks on them not as persons entrusted with the responsible task of shaping the growth and personality of the younger generation, but as casual hired workers, who have to lecture so many hours per week, at wages determined by the law of supply and demand. This helped to perpetuate an invisible wall of separation between the *administrative educationist* who is on the executive and can contribute to the making of decisions and the mere *working educationist*, or the actual teacher who should not be entrusted with the making of decisions, but only with carrying them out. Responsible bodies like the Inter-University Board have sensed the danger to the whole basis of University education hidden in this attitude, and have recommended as a remedy that teachers should be given a predominant representation in the board of management. But the obstacle in carrying out this recommendation does not lie with private institutions, but with the Government and the University who set the style in higher education. Our Government for instance, is chary of allowing its teachers to join this Association. The Madras University Act contains an explicit provision forbidding any university teacher to stand for election to the Syndicate, or to be a member thereof. This curious provision has been explained on the ground that it is unnatural for a teacher to be a member of the body which pays his salary. It is a fact that on occasions blundering decisions on technical academic matters have been made by the Syndicate, which could have been easily avoided if university professors had been on the body. It is also worthy of note that the Madras Government which recently made elaborate proposals for revising the Madras University Act, saw nothing out of the way in this statutory inhibition, and did not refer to it.

The mass mind in India, and the University education which we impart do not easily mix with each other. What we teach is a number of unconnected optional subjects, without any great principle or value which will hold them together. We do not teach the pupil the meaning of life in general or his own life, the science of the Real or the self. It is a fact that the educated man at any crisis or trial of life has to cling for support to religion or traditional philosophy. What we give in the college is information, not a total outlook on life, which will serve as a saving principle and the germ of growth and capacity for acquiring knowledge. Speaking broadly, the western thought which we contact in our university training has many currents and cross currents in it, and is not capable of giving that total creative outlook on life, which is the foundation of character or culture. The mass mind in India feeds on the Puranas and builds its character on books like the Ramayana, and on the forms of Siva, Subramanya, Devi sculptured in temples. Our college teachers have lost the institution and the understanding of these forms and cannot transmit to the young the power and the inspiration they may carry. The teaching of Indian Philosophy had been recommended by previous conferences of this Association, but it will probably add only a further subject to the others. The only way out of this fundamental impasse in our higher education, it seems to me, is to go back and learn from the past. In the university of Takshasila, where Yajnavalkya taught, all sciences were studied of course up to the standards of that day. But we may be quite sure they were not taught, as unconnected schedules of information like the subjects of our college curriculum to-day, but as parts of one great science,—the Science of the Real. I personally see no reason why a similar method should not be tried to-day in our colleges. It is of course not easy, but then nothing which is worth while doing is ever easy. But the point is, it can be done, and if we start doing it, we can get into the stride of it in a few years' time. This will remove all the drawbacks and the

flaws in our educational system, and make of it something real and vital.

It is realised now that university education should not be open to all who come from the school. university education is not the logical continuation of school education. It is said in an Upanishad that Man is a tree whose root is above and whose branches grow and spread downward. This means that social organisation generally must be built from the top, the Dharma which holds it together being maintained by a higher institution and knowledge. So also University education must be built from the top—from the level of research and advancement of knowledge. Only those who have a call for the pursuit of knowledge and truth should be admitted to the University. Advantage should be taken of the coming census for a careful occupational analysis of the population, and technical and industrial schools in sufficient number and of suitable kinds should be opened for training the non-university student-population.

The kind of teaching which we give in the colleges to-day is of the same kind as school teaching. If the colleges were really an *attache* to the University, a different kind of teaching would be called for, on the principle that the pupil has to learn the subject by himself from a good text-book, and the teachers' help is given only when called for, and to the extent it is called for. The continual lecturing and the spoon-feeding which goes on in the colleges under the name of teaching, may perhaps help the dull pupil, but does definitely blunt the growth of the better class of student. The good college text books available for various subjects, are really for the student to learn from mainly by his own initiative. This kind of tutorial teaching will automatically weed out the unfit, and bring out the best in those who can profit by the university course. If this cycle of training, growth and development could be maintained, all the hidden resources of the national ability and talent could be brought out, and afforded creative expression, and the national life could be raised and transformed in all its phases. The new would have the fulfil-



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ment of Love—for Love, as contrasted with desire, means essentially the direct appreciation of the ability and talent, and the soul-quality cooped up in each human being, yearning for expression and manifestation; and for this final culmination, it is the university teacher of to-day who is both the precious raw material, and the instrument for gradual transformation till the goal is reached.

RESOLUTIONS

A resolution welcoming the report of the Universities Commission, and expressing general agreement with its findings and recommendations, was adopted.

The Conference also constituted a committee of nine to examine the report in detail and to report to the Executive of the Association.

The Conference also adopted other resolutions touching the service conditions, emoluments, grant of house rent and family education allowances to the University teachers.

The Conference regretted that proposals for the recruitment of Principals of Government Colleges from among experienced members of the staff of aided colleges, were turned down by the Government and urged on the Government the need for recruiting to responsible posts in the Educational Service from among the members of staff of non-Governmental colleges without the usual age restrictions, to enable them to secure the services of suitable personnel from the widest choice possible.

In regard to the cases of victimisation of teachers that were brought to notice, the Association resolved to take steps for rendering assistance in deserving cases.

The Conference stressed the need for devising a scheme like the F.S.S.U. (Federated Superannuation System for Universities) in force in England and urged that on the same model, the Government and the management should each pay an amount equal to the member's contribution, which should not be less than two annas in the Rupee. It also strongly recommended the

creation of a suitable machinery for the adjudication of disputes between teachers and managements and drew attention to the recommendation of the Universities Commission that for disputes between the University authorities and a teacher, reference to a tribunal composed of representatives of the teacher, the University and an umpire is essential.

Discouraging the practice of undertaking private tuitions by University teachers, the Conference appealed to managements to raise the salaries so as to obviate the necessity for taking recourse to such practices.

The Conference pleaded for the grant of family educational allowances to University teachers on the lines of the system prevailing in England, and as is being done in the case of Professors in the Madras Christian College.

The Conference drew the Government's attention to the systems of contract appointments in the Annamalai University by which the period of uncertainty of employment was spread over five years and asked the Government to take steps to see that the University authorities adopted the practice of the Government with regard to appointment of teachers and conditions of service.

The Conference requested the Government to guarantee immunity from punishment for teachers of the University Grade for the legitimate exercise of freedom of speech and opinion as much as was guaranteed to the ordinary citizen of the land. In this connection, the Conference strongly condemned the ban imposed by the Municipal Commissioner on the staff of the Municipal College at Salem against teachers talking in public on any subject without the previous permission of the authorities and appealed to the Government to lift the ban immediately. It also viewed with concern the reported absence of freedom of expression of views for teacher-members in the Syndicate, Senate and Academic Council of the Annamalai University and observed that such an atmosphere was detrimental to

the evolution of real autonomy in University bodies.

In First Grade Colleges where Indian languages are taught for the B.A. course, each Indian language should form a separate department and the head of the department should be given the status and emoluments of a Professor, the Conference suggested and added that Indian language-teachers doing lecturer work should be given the lecturers' grade.

The Conference also resolved that a Committee consisting of members of the managements of aided colleges, members of the University authorities and the Association be formed to review the present conditions of aided colleges and to bring to the notice of the Government the necessity of their coming to the aid of managements in improving the general conditions of the colleges to make it possible for them to pay adequate salaries to the staff and raise the general level of higher education

EDITORIAL

INDIA AS A REPUBLIC

On the 26th of January, India became a sovereign independent republic, associated with the British Commonwealth of Nations as a free member. After 92 years India has formally severed her connection with the British Crown. It is for constitutional pandits to explain the exact significance of India being a republican member of the Commonwealth and acknowledging the King of Britain as the head of the Commonwealth. For the average citizen of India, January 26, 1950, marks formally the end of British rule in India and the inauguration of the new constitution. Much labour and thought have gone into the making of this new constitution, whose makers have sought to endow it with both flexibility and stability. But it is true that every nation gets the government and the constitution that it deserves. May it be given to us to work this constitution in the right spirit so as to lead us on to greater and greater achievements in the future!

Mr. Lobo Prabhu, Secretary to the Madras Government in the Citizenship Education Department, has stressed, in the current issue of *New Education*, (the recently born journal of the Department of Public Instruction), the sets of loyalties inherent naturally on the proper concept of citizenship to be kept in view by all teachers and even others.

"Citizenship involves at least four sets of loyalties, *first* to the country or culture, *second* to the constituted government, *third* to fellow subjects and *fourth* to personal interests and affiliations. The task of education is not only to inculcate these loyalties but also to adjust them so that the results as a whole, are the best for the country, by material and moral standards. The loyalty to one's country or culture is not only in the interest of the country but of the individual, a proper pride being a general basis for human activity. In the context of to-day, loyalty to one's country has to be reconciled with the wider loyalty to One World. There is no real conflict if one's country or culture is regarded as part of a greater whole to be developed and glorified, to add richness and variety to human progress. The task of the educationist here is therefore to discover and disclose the past and the potentialities of his country, relating them to the same of other countries. There is no doubt a tendency now to emphasize our own culture, but this is the inevitable reaction to its suppression in the past. When the balance is restored, we can afford to study the cultures of other countries without any embarrassment or loss to ourselves because our culture has contributed in mathematics, medicine, philosophy, the very foundation of these subjects in the world. The more we study of our own culture and the cultures of others, the more reason we shall have to be proud we are Indians.

"The second loyalty is to the constituted Government. This stems from the consideration that without law and order, citizenship is meaningless. There are circumstances, and there will always be persons who will suggest a conflict between loyalty to the Government and loyalty to our fellow subjects. It will be posed that the constituted Government is opposed to the interests of the subjects. The answer is that the subjects elect that Government and have the means of periodically changing it, and constantly criticizing it. In the circumstances, those who advocate violent methods are exactly the minority who do not represent the views of the majority and depend on force and fraud to further their own ends. It is the task of educationists to create a proper respect for constitutional methods, because they are the essence of democracy, government for the greatest good of the greatest number.

"The next loyalty, that to one's religion, caste, family and personal interest, is a natural one, which it will not be proper to ignore. The task of the educationist is to teach the proper place of these loyalties, which is that they are essentially personal and must not be allowed to obtrude on the larger loyalties to the State and fellow-subjects. It may be said that education achieves this result naturally because liberality of thought is the general characteristic of the educated."

It is in this background that the citizenship training course has been conceived, must be understood and should be taught, as has been pointed out.

In the course of 1949, according to the U.S.A., Department of State's Office of Educational Exchange, a total of 125,000 persons travelled between the United States and other countries, "not just to visit, not as tourists, but for the sole purpose of learning—of trading ideas—acquiring knowledge."

Among these were 26,000 students from 151 countries and dependencies enrolled in 1,115 American colleges and universities, and 16,000 American students studying abroad. Counting the exchange of teachers and professors, close to 50,000 individuals in the academic field are participating in the exchange programme. The rest—the majority—are scientists, researchers, technicians, farmers, journalists, and labour representatives.

"Not a week passes but brings notice of some new project. A business woman's group praises money for a scholarship for a young business woman, cities send good-will ambassadors to their neighbours across the water, towns exchange mayors."

Behind the widespread public interest in the international exchange programme, according to Dr. Johnstone, is the growing belief of the American people that real international understanding can be achieved best through personal knowledge of other peoples and their ways of life. He cites as an example an American farming community that was not content with merely listening to a speaker describe France.

"They want something more tangible, so they bring two French farm boys over to work on their farms and from them learn first hand of the life and problems of rural France. They send their own young people to work on French farms and learn again, on their return, from firsthand accounts, those things which never can be photographed or written in books," he explains.

"As a government we are doing every thing possible to assist the people of the United States to have more direct contact with the peoples of other nations." Dr. Johnstone says. The role of the government is not to direct but to help—not to dominate but to assist—the citizens of the United States, private organizations, and institutions in a joint effort at better understanding between peoples.....

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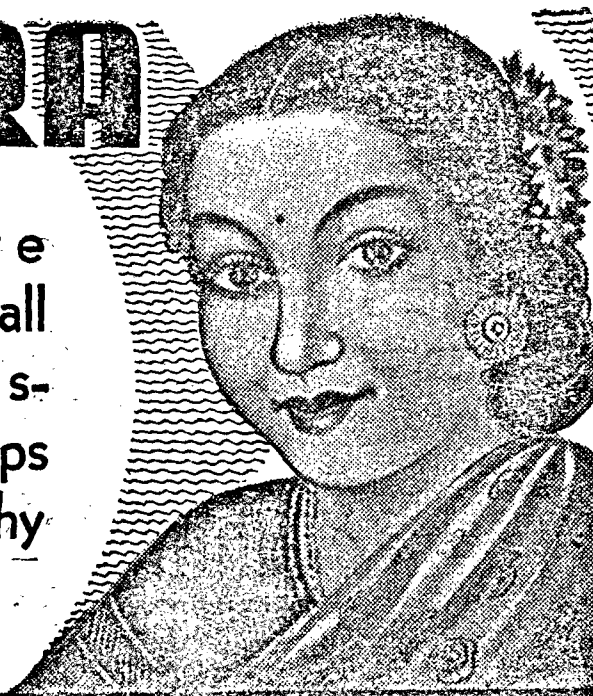
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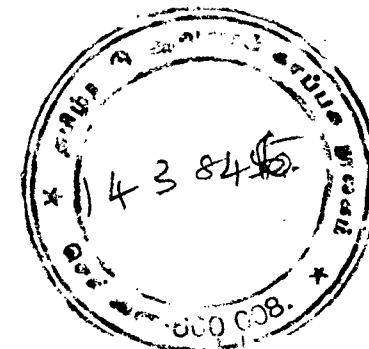
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