

# EDUCATIONAL INDIA



Vol. XLIV  
No. 5

November, 1976

*Hon. Editor :*  
"Padmabhushan"  
Prof. M. VENKATARANGAIYA

*Mg. Editor :*  
M. V. SUBBA RAO, B.A., B.L.



.. What is now called for is a new outlook, a new value system, new, strategies and institutional resources to generate an attitude of self-reliance in the people. This would be possible only when the scientific community feels itself a part of the mainstream of Indian life.

— B. K. Pandey.



## EDITORIAL

Teacher's Code of Conduct

JAWAHARLAL NEHRU ON WOMEN'S  
UPLIFT

Dr. Daya Patwardhan

DE-INSTITUTIONALIZATION OF EDUCA-  
TION FOR NATIONAL DEVELOPMENT

Dr. T. R. Sharma

EDUCATIONAL APPROACH FOR INTER-  
NATIONAL UNDERSTANDING

Shri S. C. Rattan

SCIENCE & SPIRITUAL VALUES

Shri C. Subrahmanyam

*Three Priorities :*

*Energy, Agriculture, Education*

Mr. Alfred Kastler

'VIDYA BHAVAN'  
MACHILIPATNAM



INLAND Rs. 10-00  
FOREIGN Sh. 15; \$ 2-25

## India's Leading Educational Journal

A FORUM OF  
EDUCATION



TO LEAD AND  
TO INSPIRE

### EDITORIAL BOARD

Editor :

“Padmabhushan”  
Prof. M. VENKATARANGAIYA,

M. A., D. LITT.

Associates:

Dr. L. MUKHERJEE  
V. S. MATHUR, M. A. (OXON),  
V. V. TONPE, M. A.  
M. PATTABHIRAM, B. A., B. L.,  
D. VENKATA RAO, M. A., M. ED.,  
SHAMSUDDIN, M. A., B. T., M. ED.,  
M. L. WANGOO, M. A., M. ED.  
R. C. WADHERA, M. A., M. ED. (Gold Medalist)

Mg. Editor :

M. V. SUBBA RAO, B. A., B. L.

	ANNUAL		
INLAND		Rs.	10-00
FOREIGN	Sh. 15:	₹	2-25

Office :

Vidya Bhavan  
MACHILIPATNAM  
(S. India.)

\* To the student, it is informing and instills in him a desire for discipline and love for his *almamater*.

\* When placed on the table, it not only inspires the Teacher and the pupil in school and college but also the multi-reading public in Library and Reading Rooms.

Published on the 5th of the every month, with a Bimonthly for May and June (Summer vacation.)

The year begins from 1st July. But subscribers may enrol themselves for any of the following periods :

July to June ... Academic year  
Jan. to Dec. ... Calendar year  
April to March ... Official year

All subscriptions payable in advance by M. O. or by Postal Order.

## Educational India

Monthly Devoted to Indian Education

Founder Editor :

‘Padmabhushan’ Prof. M. Venkatarangaiya  
M. A., D. Litt



BESIDES ORIGINAL CONTRIBUTIONS and INSPIRING EDITORIALS the Magazine serves as a professional guide to all teachers and educational administrators.

News from different states of the Indian Union; informative material from Unesco and other progressive countries of the world; Public Opinion on different aspects of Education; Experiments and other Organisational matters etc., form different special features of the Journal.

\* \* \*

ARTICLES intended for Publication should reach the Editor, ‘Educational India’, Vidya Bhavan, Masulipatam, by the 10th of the month prior to publication. THE VIEWS expressed by individual authors are their own and do not necessarily represent the views of the Journal.

\* \* \*

EDUCATIONAL INDIA is published on the 5th of every month. But a Double Number is issued for May and June. Complaints for non-receipt of the Journal for any month should reach our office not later than the 12th of the month. It is requested that the articles be sent exclusively for Publication in Educational India.

\* \* \*

SUBSCRIPTIONS may date from Jan. or July but the year commences from July. Back numbers too will be supplied if available. The annual subscription, *always payable in advance*, is Rs. 10-00 Inland, and Sh. 15/- Foreign, and it may be sent by Money Order or by Postal Order. Cheques will not be accepted unless the Bank Commission is added on to the subscription amount.

\* \* \*

WHEN SUBSCRIPTIONS EXPIRE, an intimation will be sent along with the last number with which the subscription expires. All remittances are payable to the Manager.

\* \* \*

ADVERTISEMENT RATES are furnished on application. The payment for advertisements is strictly in advance, except where approved accounts are opened.

“Educational India” Office  
MASULIPATAM (S. India)



## EDUCATIONAL INDIA

### *Jawaharlal Nehru on Women's Uplift*

By

**Dr. (Mrs.) Daya Patwardhan,**

*M. A., Ph. D., B. T. (Bombay), T. D. (London), J. P.  
& Honorary Presidency Magistrate for Greater Bombay.*

**J**AWAHRLAL NEHRU holds a unique place in the history not only of India but of the whole world. He was an acknowledged statesman and the first Prime Minister of India, but also much more than that. His intellectual interests ranged far and wide into literature, philosophy, economics, politics, history and Greek poetry. Under the inspiration of his early tutor Ferdinand T. Brooke, he developed a taste for serious reading which he retained throughout his life. Reading his autobiography one is greatly impressed by the constant references to books. In the prison where he spent many years, his main occupation was reading and writing. Whenever travelling, he would carry books especially poetry with him. There are reference to lines by Gerals Manly Hopkins, Byron, Keats, T. S. Eliet in his autobiography. Authors like Bertrand Russell, George Bernard Shaw, John Maynard Keynes and some of the Scientific lecturers stimulated his thought. His education at Cambridge cultivated this love of

reading and also interest in socialism. As Michael Brecher in his book "*Nehru A Political Biography*" (p. 31) has said, "Nehru was a sensitive man



who had succeeded in absorbing the shocks of life without coarsening his mind, character and personality." The intellectual in Nehru saw all points of view and so unlike other dictatorial Prime Ministers and

Presidents of Republics, he hesitated to act boldly lest he destroy that element of "good" which he thought all viewpoints possessed. Like Abraham Lincoln, in fact, like all great men, he remained a solitary man in the midst of the crowds that he loved. A Western rationalist and a perfectionist, he remained an individualist. To quote him, "One must journey through life above; to rely on others is to invite heartbreak". (*Towards Freedom* p. 312). Nehru was different from other men in power in his love of nature, his fondness for animals, his interest in games, his pleasure in walking and riding, his tolerance, his humility and his childlike simplicity.

During his first visit to U. S. A. while addressing East and West Association, India League of America and Institute of Pacific Relations in New York on October 19, 1949, he said that he had not gone to the United States to teach anybody anything, but had gone there to improve his own education as far as possible, for as added he still retained something of the spirit of a student and the curiosity of youth. He also complimented U. S. A. thus—"The United States has got a reputation abroad...of being materialistic and of being tough in matters of money. Well, I could not imagine that any country could achieve greatness even in the material field without some basic moral and spiritual background" (*Nehru the First Sixty Years*, Vol. II Asia Publishing House, Bombay, 1965 p. 508. Edited by Dorothy Norman). While felicitating Dr. D. K. Karve, veteran educationist and social reformer on his completing 100 years, Nehru said that the pomp and publicity that attended on Prime Ministers like himself seemed petty and small in the presence of men like Dr. Karve. Addressing himself directly to Dr. Karve, he said, "you

are one of those who have shown what man can do quietly and serenely. That is how real work is done. Not in the way in which people who hold jobs like mine function with all publicity attending on them" (*Times of India*, 19th June 1958). Jawaharlal Nehru thus retained in him the best influences of Harrow and Cambridge along with the true culture of Rabindranath Tagore's Shantiniketan which he so admired.

Why such a great man should have written so little about women in his voluminous speeches and writings can be understood in the context of his personality. Wider problems engrossed him such as democracy, International peace, non-alignment, social justice. As the great historian Arnold Toynbee has aptly said in his Foreword to *Nehru - A contemporary Estimate* by Walter Crocker, "Nehru was a pioneer in taking nothing less than the world itself as the field for his public activity." He treated the problem of women as one of social justice. He was a defender of the underdog and an advocate of the oppressed people everywhere. He considered women to be one of the oppressed sections of society. As early as 1920, he described the India of his dreams thus—"There can be no room in such an India for the curse of untouchability, the curse of intoxicating drugs...women...will enjoy the same rights as men." (P. 65. *Nehru the First Sixty Years* Vol. I Edited by Dorothy Norman). The Independence League founded by Nehru in 1928 aimed at a social democratic state in which along with universal and compulsory primary education, adult suffrage, minimum living wage, unemployment insurance, an eight-hour day, he visualised the abolition of untouchability and equal status for women, (P. 183 *Nehru the First Sixty years*, Vol. I Edited by Dorothy

Norman). In his various speeches Nehru stressed the economic independence of women. "It is the economic bondage that is the root cause of the troubles of the Indian womanhood, to the removal of this our energies must be directed"—he wrote in his review of Katherine Mayo's *Slaves of the Gods in Bombay Chronicle* of 25th April 1925. He was of the opinion that women should be treated on the same level (as men) economically and industrially except in so far as a few occupations are concerned (Letter to Rani Laxmibai Rajwade, 23rd July 1937). In his speech at the foundation stone of Women's College in Madras on 22nd January 1955, he stressed the importance of work for women whether poor, struggling or well-to-do. He was glad that the idea that the less work a woman does, the higher is her status, is disappearing. In his letter to Maulana Abul Kalam Azad, 5th March 1942 he wrote that he was against treating women as helpless human beings who must run away from the danger zone.

In his *Glimpses of Indian Culture* Nehru traced the Indian Woman's status in ancient India. He was proud that the women of India had a background of history and tradition which is inspiring. He agreed that the legal position of women according to Manu was definitely bad. And yet he noticed from the numerous stories in the Epics, that the law was not applied very rigidly and that they held an honoured place in the home and society. The position of women in ancient India according to him was far better than in ancient Greece or Rome, in early Christianity, in the Canon Law of Medieval Europe. There are references to learned and scholarly women in ancient India. In the early centuries there is mention of one Laxmi Devi who wrote a great legal documentary on Mitakshara, a famous

law book of medieval period. Indian history, he wrote in his *Glimpses of Indian Culture* is full of names of famous women, including thinkers, philosophers, rulers, and warriors. It was after Moslems came that the position of women deteriorated. The system of seclusion of women spread among upper classes all over north India. Lacking most other ways of distinguishing themselves, living a confined and a restricted life, they were told that their supreme virtue lay in chastity. And yet he thought that the women of India had in a political and outward sense fewer barriers to face than the women of some European Countries in regard to the vote and other things. (Address to the East and West Association, Foreign Policy Association, India League of America and Institute of Pacific Relations: New York, Oct., 19, 1949 Quoted on pp. 508-509. *Nehru The First Sixty Years* Vol. II Edited by Dorothy Norman).

Before the great struggle for India's freedom in which women took a prominent part and learnt to organize themselves, Nehru was much dissatisfied with the lot of the Indian Women of the day. In his address to the Prayag Mahila Vidya Pith on 31st March, 1929 he said "We hear a great deal about Sita and Savitri. They are revered names in India and rightly so. But I have a feeling that these echoes from the past are raised chiefly to hide our present deficiencies and to prevent us from attacking the root causes of women's degradation in India to-day". In this address Nehru made an important statement which showed that he was much ahead of his times. He emphatically disagreed with the view that woman's place was in the home and that her ideal should be that of a devoted wife and nothing more. Such a view, he thought, meant that woman has

one profession and one only, that is the profession of marriage and her education should train her only for this profession. This would make her a doll, a plaything for others. He even said, "the future of India cannot consist of dolls and playthings and if you make half the population of the country a mere plaything of the others, half an encumbrance on others, how will you ever make real progress?" In other countries while bright-faced boys and girls played and grew strong in mind and body, he was sad to see that in India girls of the same age were kept in Purdah and were married just when they should be growing intellectually. (p. 150 *Pandit Jawaharlal Nehru—Speeches and Writings*, R. Mohanlal, University and National Book Supplies, Allahabad, 1929). He called upon organizers of Mahila Vidyapith to send out into the country rebels against the unjust and tyrannical customs of the day, women who were as much soldiers of the country as the best men. In his message to the same Vidyapith on 12th January 1934, he told the young graduates not to relapse into the humdrum day to day activities of the household. He told them to go out into the world as knight-errants in the cause of truth and freedom, battle fearlessly against oppression and evil. There were so many evils to be eradicated—women graduates could fight untouchability and caste, combat the marriage laws, fight for the physical improvement of women so that India would be full of strong, healthy and beautiful women and happy children.

Nehru was therefore delighted when he heard in prison of the awakening of women which was a striking feature of the Civil Disobedience movement of 1930. He was greatly moved by the news of his aged mother and sisters picketing

before foreign goods shops in the hot sun. His wife Kamala in spite of ill-health, had taken a plunge in the Satyagraha struggle in the summer of 1930. This was a feat of courage which filled her husband with pride not unmixed with anxiety. In his autobiography Nehru relates how when pressmen asked her for a message, on the spur of the moment she said, "I am happy beyond measure and proud to follow in the footsteps of my husband." As a champion of woman's rights against the tyranny of man, she should not have said that. But Nehru observes that the Hindu wife in her came uppermost and even man's tyranny was forgotten. When answering questions concerning fundamental problems of Indian politics at a meeting in London in February 1936, held under the auspices of Indian Conciliation Group, Nehru was asked a question regarding the contribution of women to regeneration of India. Nehru observed that the most important feature of the Civil Disobedience Movement was the tremendous part that the women of India had taken in it. (*Nehru the First Sixty Years* Vol. I Pp. 412-413 edited by Darothy Norman). It was not as if men had to push women. They simply came out and took charge of the situation when most of the menfolk were in prison and they functioned in an extraordinarily efficient way. The surprising thing as Nehru noted it, was that although many of them had no experience of public activity, yet they became good organizers and they ran the whole movement practically without any men and in a much more uncompromising way than men might have done. Nehru in his autobiography tells us how the British Government had somehow got the foolish idea that men would exploit women in the struggle by filling

the goals with them in the hope that women would get light sentences. Government therefore decided to discourage women by long sentences and bad treatment in prison. He himself when in prison had listened in horror to the language and curses which these women had to put up with from the women convict wardens. Nehru points out how most of these women were "middle-class women accustomed to a sheltered life and suffering chiefly from the many repressions and customs produced by a society dominated to his own advantage by man. The call for freedom had always a double meaning for them and the enthusiasm and energy with which they threw themselves into the struggle had no doubt their springs in the vague and hardly conscious, but nevertheless intense desire to rid themselves of domestic slavery too". (*Nehru First Sixty Years* Vol, I pp. 275-276) Nehru admired women's role in the movement so much that he observed, "I do not think that after that experience any person will dare to say that Indian women are going to play a subordinate part in the public life in India in the future". (*O. CIT. Vol. I Pp. 412-413*) He was aware that women had suffered in the past and were still suffering from a large number of social and semi-religious disabilities. Some orthodox elements in the community were trying to prevent them from removing these disabilities. But he was sure that women were sufficiently alive to their task and that no one could really stop them from carrying it out.

After India had become independent, Nehru in his address to the East and West Association, New York, on October 19, 1949, told the American people that in the eyes of the Indian Constitution the removal of all disabilities and the absolute

equality of women with men was laid down as a fundamental right. He then made this statement "I am quite convinced that in India to-day progress can be and should be measured by the progress of the women of India". In order that women should be rid of their many legal and social disabilities, he spoke on the Hindu Marriage Bill in Lok Sabha on 5th May 1955, and on the Divorce clause in the special marriage bill on 16th September 1954 advocating divorce to make for happy marriages. At the meeting, earlier mentioned to felicitate the centenarian Dr. D. K. Karve on 18th April 1958, Nehru made some significant observations on the status of women. He stated that it was more important for the women of India to be educated than men. It was women who brought about a social revolution. He emphasised that we cannot have political and economic revolution unless they are accompanied by a social revolution; and for this he stated that women had to be free and unfettered by restrictions imposed upon them by society. In this connection he referred to the developments in China where the biggest that had taken place was a change in the social status of women. This he thought, was more important than Marxism. The women of China were made to feel that they were free from servitude and shackles in which they had suffered so long. Nehru struck a note of optimism when he said that he had no doubt India would measure its success in the social and economic spheres by changes brought about in the status of women. He was sure that a social change was definitely coming to India. Speaking as a member of the Government, Prime Minister Nehru said that what gave him some sense of achievement was the laws the country had passed with

# *De-institutionalization of Education for National Development*

By

**Dr. T. R. Sharma,**

*Dean, Faculty of Education, Punjabi University, Patiala.*

**S**OMEONE has said: If you are developing an individual, you are, in fact, developing a nation. There is truth in the statement, but does not the statement need a small modification? As no garden can claim to be bloomed if there is youth, colour or fragrance in a few buds only and the great majority of plants have been left to struggle for existence; so if only a class in a nation is growing, flowering and tossing like Wordsworth's daffodils and the masses are suffering ignorance, poverty and disease, the nation hardly earns the adjective 'developed.' The development of a nation, therefore, should mean the development of all her citizens.

And who is a developed individual? Of course, one who is educated, and

the one who gets education continuously. Briefly speaking education is drawing out of the best in the individual, body, mind and spirit. Education does not merely mean the acquisition of knowledge or experience, but it means the development of habits, attitudes and skills which help a man lead a full and worthwhile life. It is an effort to secure for everyone the conditions under which individuality is most completely developed. In the words of John Dewey "education is the development of all those capacities in the individual which will enable him to control his environment and fulfil his possibility"; the capacities may be physical, mental and moral.

---

*(Continued from preceding page)*

regard to women. These laws had long been overdue. They had liberated women and given them the freedom to grow. He was convinced that if shackles binding our women were loosened or taken away, the women of India could do tremendous service not only to India but to the whole world.

Jawaharlal Nehru had quoted the words of the great French Idealist

Charles Fourier thus: "One could judge the degree of civilization of a country by the social and political position of its women. "In the words of Nehru, if we are to judge of India to-day, we shall have to judge of her by her women". (Address to Mahila Vidyapith, 31st March 1929). In this sentence is reflected Jawaharlal Nehru's abiding faith in the improved status of women.



What has been said about an individual is true of a nation. A nation is fully developed if all her capacities are fully grown and it fulfils its possibility.

It will be of interest to have an idea of inadequacies of development of most nations of the world. There are around 800 million illiterate people in today's world and all of them have been deprived access to what has sometimes been called the knowledge explosion. Can they improve their job opportunities and their life styles? Is not their participation in nation building and development restricted? The prospects of education for them in the next few years are indeed dim. It has been estimated that in the 25 least developed countries of the world, less than 30% children aged 6-11 years will go to school even in 1985. And situation in rural areas is especially bad. Lack of education, illiteracy and poverty go together.

Again approximately 300 million people in the developing countries are unemployed or under employed (Employment, Growth, and Basic Needs. I. L. O. August, 1975). Very soon, in a few years time only, 700 million people will enter the labour market in these countries. All will look for and expect work. To satisfy this utterly reasonable requirement, and remove the current back-log, a billion jobs will have to be created. These daunting estimates come from the International Labour Office. But let us understand that unemployment chooses its victims with ease and deliberation. It is not a random and hap-hazard ailment. Worst hit, of course, are the so called developing countries where education has not developed the capacities of people.

Let us restrict the discussion to our own country. In a nation of

61 crores of men and women, a little more than 43 crores (nearly 70%) are illiterate. Denmark, Sweden, Britain, Canada, France, Russia, U. S. A. Australia, Italy and a score of other countries have reached 100% literacy mark and they have achieved this distinction over a period of a decade or at the most two. In India percentage of literacy has increased from 6.2% in 1901 to 34% in 1971. It is clear that increase in literacy in 70 years has been almost significant. If we continue with this pace we may take two centuries, perhaps more, because population grows with almost double the rate of literacy increase. Among women literacy rates are much lower than those of male population and literacy in rural areas where 80% Indians live, is far too low as compared to urban areas. It has been found that as compared with lower age groups, literacy figures are extremely low in higher age groups called productive age-groups. The illiterate people fail to satisfy their deep desire for dignified and happy life. Their economic, social and cultural progress suffers to a great extent and consequently the nation suffers.

Long back Swami Vivekananda pointed out that "so long as the millions live in hunger and ignorance I hold everyman a traitor, who, having been educated at their expense pays not the least heed to them... Our great national sin is the neglect of the masses and that is the cause of our downfall. No amount of politics would be of any avail until the masses in India are once more well educated, well fed, and well cared for". Herein lies the role of the University. Education will surely serve as a boon for the half clad, ill fed, and for starving population suffering from poverty, disease and ignorance.

Illiteracy is a sort of mental slavery which creates a hindrance in the progress of the plans for the development of the country such as agricultural improvement, family planning, industrial growth and so on.

That education holds a key to material well being is not an empty slogan. In a number of countries, studies have been carried out which reveal that there is vital relationship between education and economic development. Strumilin, the Russian academician calculated some 4 years ago that primary education imparted to labourers resulted in 44% increase in their efficiency. Fabricant, the U. S. Economist has estimated that of the average 3.1% annual growth in physical output for 1919-1957 (USA) increase in supply of both labour and capital accounts for only one percent. The rest of the increase in output which is estimated at about two-third is accounted for in terms of organisational and technical knowledge which in turn is due to investment in research, education and better health.

These studies clearly reveal that tempo of progress of a country is greatly determined by the type of knowledge and skills its people have developed. In the absence of skilled manpower even the rich natural resources make slight contribution to progress as these remain unexploited.

T. W. Schultz remarks that 'it is certain that there could be both low output and extra-ordinary rigidity of economic organisation until the capabilities of the people were raised markedly by investing in them!

Commenting upon the benefits of education, Newman observes: The man who has learnt to think and to compare and discriminate and to analyse, who has refined his taste

and sharpened his mental vision, will not indeed at once be an engineer or a chemist or a geologist but he will be placed in the state of intellect in which he can take up anyone of the sciences...with an ease, grace, versatility and a success to which another is a stranger.

Our own economist Dr K. N. Raj asserts that 'In a country in which more than three fourths of the labour force is engaged in agriculture and small scale industry it is difficult to conceive any kind of broad-based economic advance based on necessary and acceptable technological changes without this population having the minimal advantages of literacy.

It can be concluded that so long as Indian masses are not adequately educated, the question of national development will only remain on the level of talks and schemes. By the directive in Article 45 of the Constitution we should have provided by 1960 free and compulsory education for all children up to the age of 14. But this has not been possible. We have yet to provide schooling for 69 million children. This number is only slightly less than 74 millions which we have at present in schools. Again the number of persons on the live registers of unemployed people in India is ever on the increase. One sided pressurization, say in Engineering or medicine or I. T. I. products also creates problems and disturbs the balance of employment chances in particular field (s).

What is the remedy? Every nation will feel proud and satisfied to provide schooling, health, food, awakening, entertainment and jobs to all its people. It is the lack of funds that frustrates their efforts; and conversely it is lack of education that stands in the way of creating funds.

Most nations are caught in a vicious circle.

But Mrs. Alva Myrdal, the Swedish Ambassador in India has solved this riddle by saying: Education has in the nations that have advanced rapidly and firmly been rather a precursor than a follower in the time table of progress. One thing more. It is not just education which is needed for the countrymen. It is good education which is required. The character and content of education imparted in schools and colleges can hardly satisfy the demands of our times.

Julius Nyerere has criticised the education system for being "such as to divorce its participants from the society it is supposed to be preparing for, particularly by transmitting the values of urban, competitive, consumerist society embodied in the white collared, managerial class. This criticism applies very correctly to Indian University education which does not touch the Community even remotely.

W. Senteza Kajubi of Uganda has raised a question: Is the school (in a broader concept) an obsolete institution? In October, 1973, participants at an International Educational Planning Conference at Saigon were busy discussing the theme: "No more schools". Even in European countries, it is felt that children go to schools and colleges ignorant and curious; they leave schools and colleges still ignorant but no longer curious. In Italy the most common remark about the school is "It is a hospital which tends to the healthy and rejects the sick." And reformers like Hartmut Von Hentig have advocated 'Deschooling the school.' In brief education, everywhere in the world, more particularly in developing countries, is in a serious crisis.

A major element of the crisis may be the problem of escalating cost. But not less important ailment lies in the form and machinery of the education model being used in different countries. It has been rightly observed by Everett Reimer that "No country in the world can afford the kind of education it wants in the form of the present institutions." We have to de-institutionalise education and release it so as to make it reach the masses. Kothari Education Commission has stressed the disappearance of the wall which stands between the gown and the town. Ivan Illich has argued that Institutionalization, Professionalization and bureaucratization in education limit the distribution of education to the elite and deny it to the majorities. The most serious limitation of institutionalised education, H. Coombs writes, is that it can reach only a small proportion of the population, and the result is often a small, elite powerful on the one hand and uneducated impotent majority on the other. The Third World countries, says Ivan Illich, play the game whose rules are written by First World countries (institutional provision, professionalization and high technology etc.); they are bound to lose. They talk of schools, hospitals and cars and how to get more people into more of them, when they should be talking about education, health and transportation. When raised to this higher level of analysis, it is possible to see that schools might deny to majorities the education they pretend to provide, just as hospitals and cars provide health and transportation essentially to a minority elite.

The solution lies in de-institutionalization of education, in establishing a vast net work of non-formal education, as enunciated by the International

Education Commission in 'Learning to Be'. It envisages rich and broad based programmes of education for all citizens of India, of all ages throughout their life. Such programmes should be based on consideration of needs, not only as seen and felt by the people themselves but also as revealed in multi-disciplinary approaches to the analysis of social and economic problems. The main objectives of such programmes should be:

- a) to promote the optimum functioning of individuals so that they realise their full potential and also contribute effectively to society.
- b) to inculcate problem-oriented attitudes and encourage the development of decision-making skills and leadership skills.
- c) to promote the optimum functioning of social, economic and political institutions so as to maximise their contribution to individual and social development within the context of a democratic society,
- d) to assist the individual to participate effectively in a society characterised by complexity and rapid social change.

Programmes of continuing education may take a variety of forms, and provide, amongst other things, for;

1. functional literacy,
2. remedial education for those insufficiently educated,
3. refresher courses in vocational and professional fields,
4. re-conversion courses for those in need of such education or training,
5. opportunities for participation in the disciplined analysis of social

and economic problems, and in the formulation and execution of plans to solve them,

6. opportunities for the cultivation of skills of citizenship for living in plural societies,
7. awareness of Human Rights;
8. opportunities for cultural enrichment and creative use of leisure.

It must be emphasised that continuing education is a basic necessity rather than an optional extra in the less developed countries. For, if they fail to develop adequate provision for Continuing Education they cannot hope to avail themselves of new knowledge and advancing technology.

The University has a definite role to play in this movement. It has to become more responsive to the needs of society. It is becoming increasingly recognised that a University which cuts itself off from the outside world is incapable of discharging its functions.

The Conference on Continuing Education (Madras, 1970) enlisted the following types of programmes which a University may find appropriate to itself and its community :

- a) Professional courses designed to update the knowledge of teachers, scientists, doctors, engineers, etc.
- b) Courses in human relations, in leadership and executive skills, decision making processes.
- c) Courses in the humanities and liberal arts.
- d) Courses of a remedial or re-conversion nature.
- e) Action research and training.
- f) The production of curriculum materials for continuing education

# “ Educational Approach for International Understanding ”

By

Shri Subhash Chand Rattan, M. A., M. Ed., Dip. U. N. I. U.,

1864/22-B Chandigarh.

**M**AN is called a Social animal though biologically, he belongs to the animal race but socially and culturally he is a unique specie. Man is culturally advanced and his present culture and civilization is the result of his mental toil of thousands of years. This accumulated culture is not only preserved but also transmitted. Inherently, a child is very quick to imbibe the cultural traits of the society for he has been granted the capacity to learn and thus he is amenable to education. Through out the early period of his life the child is being trained\* to assimilate the culture, to acquire knowledge of life, and environment, to develop his inherent powers and to employ those powers. This sort of training is called education.

Education is something men argue about ; often it is praised; more

*(Continued from preceding page)*

- g) Training programmes for leaders in continuing education, community development projects and voluntary organisations.
- h) Education for political understanding.

It is hoped that such courses will enable the participants to usher in a Era of National Development. It has however to be noted that *such programmes* should maintain their freshness and modernity and should not be allowed to be entombed in institutions called schools, colleges or Universities ★

often it is balanced for what happens to men and nations, The words 'ought and must' pervade educational discussions giving them an imperative and urgent mood. Education may be considered in two senses, one broad, the other technical. In its broad sense, education refers to any act or experience that has a formative effect on the mind, character or physical ability of an individual. We learn from experiences. All kinds of experiences can be educative from reading a book to travelling abroad, from the views of acquaintances to a chance remark overheard in a cafeteria line. In its technical sense education is the process by which society, through schools, colleges, universities and other instructions deliberately transmits its cultural heritage-its accumulated knowledge, values and skills from one generation to another. As a product, education is what we receive through learning the knowledge, ideals, and techniques that we are taught. As a process education is the act of educating some one or educating one self.

Therefore, it can be said that *education is an anticipation from ignorance to truth. Man is born free and education helps him to realise the truth and takes him from Darkness to light, from Death to Deathlessness, from falsehood to truth.*

It is generally believed the idea of International Understanding through education originated as a by-product of the 2nd World War which shattered the very back bone of

peaceful co-existence of the Nations of the World. It made us conscious of the need for International Understanding through U. N. E. S. C. O. the specialized agency of the U. N. O. However, its History can be traced back to the first quarter of the 20th Century. In 1914, under the auspices of the Dept. of State (U. S. A.) an International Conference was intended to be held at Hague. However, due to the out-break of the 1st World War in 1914, the plan could not materialise. After the war, in 1921, the League of Nations recommended that a Commission of eminent Educationists and Scientists should be constituted on an international basis. Its main objective was to promote nations for establishment of world peace through free exchange.

It was in November 1945, that a stable foundation for International Understanding was laid, when eminent educationists, thinkers, scientists and artists belonging to the different nations assembled, to devise ways and means for the construction of a new world order through mutual understanding, good-will and exchange of ideas. A well formulated programme was laid out by the education department of Unesco in cooperation with its four main depts of cultural activities, social sciences, natural science and mass communication.

The recently started Associated School Project by UNESCO has considerably promoted a feeling of fraternity among the community of nations. The achievement in this direction in India under the inspiring lead of Dr. J. Abraham, Head of UNESCO Division of Human Rights and Education for International Understanding is highly significant.

International Understanding implies respect for Human Rights and Dignity, a sense of the solidarity of

mankind, international cooperation and to live together in peace with one another. International Understanding is generally equated with world citizenship.

Education for International Understanding would help children to understand the pride of all people for their own group and to develop respect for their feelings. According to the Secondary Education Commission, "There is no more dangerous in the world of today than My Country, right or wrong." The whole world is now so intimately inter connected that no nation can or dare live alone and the development of a sense of world citizenship. In a very real sense therefore, patriotism is not enough, and it must be supplemented by lively realization of the fact that we are all members of one world and must be prepared, mentally and emotionally, to discharge the responsibilities which such membership implies.

•Modern scientific means of rapid communication like the radio, the television, the telephone etc. have conquered both time and space. There is no more interdependence and intimate relationship in the world today. The problem of International Understanding is therefore, becoming increasingly important, because with the modern scientific weapons for destruction, 3rd World war will mean the end of the present civilization and humanity. The painful recollection of the fate of Nagasaki and Hiroshima are still vivid in the memory of the present generation. If peace and prosperity are to be created in the country, it becomes necessary to create good living conditions all over the world. In the age of nuclear weapons the people of the world have to live and die together. In the words of Nehru, "Isolation means backwardness and decay. The

( Continued on page 112 )

# *Science and Spiritual Values*

By

**Shri C. Subrahmanyam,**

*Union Finance Minister.*

( Excerpts from his Convocation Address at the Madurai University on Nov. 5 )

**W**E are living in a time of great and continuing changes. The most distinctive feature of the modern world is the phenomenal development of science and technology. This has given Man deep insights into Nature and has enabled him to exploit it for intensive utilisation of all available resources and for production of commodities and services on such a tremendous scale that for the first time in the history of the world, it has come within the realm of possibility to provide good and abundant life to every human being. It has given Man tremendous power to create or destroy. It has enabled him to fly, to land on the Moon and to explore the surface of Mars ; to cut down distances through modern communication media and transport systems; to fight illness and alleviate suffering and to prolong life ; to raise material standards of living of the people to levels which could not even have been dreamt of earlier. There is no reason in our scientific age for any one to remain unenlightened : access of the people to education and culture has tremendously increased. In fact, the actual achievements of to-day have far surpassed what the people of the ancient or mediaeval times regarded as miracles or treated as mere dreams and phantasies.

## **A Golden Circle**

These great changes have resulted from a number of factors which are characteristic of the modern age. The first is the tremendous growth of science due to the emphasis placed upon it in education, to a large number of scientists who are pursuing research in science as a whole-time career (it has been stated that more than 90 percent of the scientists that ever lived in the world are now living in our generation and doing scientific research on a whole-time basis) and to the immense investment that all modern nations are making in scientific research. Secondly, this development of science is being continuously applied to improve technology which, in its turn, has revolutionalised agriculture, created an entire superstructure of modern industry, and radically transformed all services like transport, communication, education, health or housing. The wealth, power and standards of living of a nation have therefore become co-terminus with its command over science and technology. Thirdly the new technology is itself leading to greater progress of science and a golden circle has been established for quite some time wherein advances in science lead to improvements in technology which, in their turn lead to still further advances in science.

Scientific knowledge is therefore growing at a tremendous rate at present and is being doubled every ten years or even earlier. Gone are the days when a university degree, once required, stood in good stead throughout one's life. The obsolescence of knowledge is now so rapid that, in the opinion of Dr. D. S. Kothari, a modern university degree, like a passport should be valid only for a period of 5 years. Fourthly, this tremendous rate of growth of scientific knowledge and technology has led, in its turn, to almost kaleidoscopic changes in modern societies which have become science based. In ancient and mediaeval times, the rate of social change was so slow that the knowledge and skills which a person acquired gave good service to him throughout his life and were good enough even for one or more later generations. But to-day changes in life-styles are so rapid that every individual has to keep learning all his life and that he may have to acquire new knowledge and skills or even change his vocation every few years. The modern age of science and technology has, like many other things, brought in great advantages and also created immense problems.

The modern world is also highly competitive; and unless a nation is continually alert, it will in all probability, be driven to the wall. The rich, industrially advanced and powerful nations of the world owe their position entirely to their command over science and technology; and the traditionally agricultural, poor and weak nations of the world are so simple because they lack this command over science and technology. If we in India want to survive in this struggle, desire to modernise ourselves, and wish to solve our problems of poverty, hunger, ill-health and ignorance, there is no alternative

for us except to develop science and technology in a very big way. This was realised by our national leaders very early. For instance, one of the earliest institutions of national education set up in our country, which has now become the Jadavpur University, was a technical institution. The need to develop scientific and technical education was greatly emphasised by our national leaders and most of all by Pandit Jawaharlal Nehru who gave a tremendous fillip to science education, formulated the Science Policy Resolution, and created a huge infrastructure for science and technology in the independent India.

It is because of these efforts that we have been able to modernise our agriculture to a great extent, to create a huge industrial structure in both public and private sectors, and to build up a large reservoir of trained high-level scientific manpower, in numbers ranking third in the world. This has given us the capacity to modernise and develop our country, and to assist similar programmes in several other developing countries of the world. While we can rightly feel proud of these achievements, there is hardly any room for complacency and we have still a long, long way to go. Science education must become an integral part of all education. As the Education Commission recommended, the teaching of science should be compulsory till the end of class X. Ultimately, some study of science should become a part of all courses in humanities and social sciences beyond class X, just as some study humanities and social sciences has to be included in all science and technology courses as well. Science must also enter out-of-school and adult education through non-formal channels. The quality of science teaching has also to be raised considerably so as to



achieve its proper objectives and purposes viz. to promote an ever-deepening understanding of basic principles, to develop problem-solving and analytical skills and the ability to apply them to the problems of material environment and social living. Two programmes deserves special emphasis in this regard: (1) the preparation of competent and dedicated Teachers and (2) the production of modern, well-designed, effective and cheap teaching and learning materials prepared from locally available assets.

### 'Scientific Temper'

I would like to highlight three important points in this regard. The first is the need to create a 'scientific temper' in the society as a whole in order to raise it out of its traditional and feudal attitudes or as Gokhale put it, "to liberate our people from the thralldom of old-world ideas".

My second point is that the greatest need to-day is to spread science and technology to rural India where 30 per cent of our people live and which really is 'the India'.

Let us also not forget that the difference in life-styles between our modernised cities and the stagnant and traditional villages is far wider now than that which existed between towns and villages say, at the end of the eighteenth century. It is this neglect of villages which is the main cause of our poverty and backwardness and unless it is replaced by a new policy which places the highest emphasis on rural development, no plans of modernization and development are likely to succeed. "Villages" said Rabindra Nath Tagore, "are like women;" in their keeping lies the cradle of the race.

### Banishing Poverty

Our Prime Minister, Mrs. Indira Gandhi gave a new thrust, while

inaugurating the Indian Science Congress at Waltair early this year, by laying stress on the fact that "the challenge before leaders of science and the moulders of national and international policies is to direct the known and proven capacities of science towards removal of hunger, want and the diseases of privation." This timely call prompted me to take the unorthodox step of presenting, along with the traditional budget documents, a paper outlining a new strategy for integrated Rural Development. The challenge facing us is one of harnessing the potential of science and technology for the optimum use of all natural assets—human, animal and physical—for banishing poverty from our midst. What I high lighted in this paper was the need for a substantial and fundamental departure from existing approaches to the problem of merely committing some more resources to existing programmes or adding some more new programmes.

My third and the last point has two aspects; one negative and the other positive. The negative point is that we should avoid the dangers which are now becoming increasingly apparent, and which are inherent in the wrong pursuit of science and technology. Science and technology could produce material plenty which gave immediate and obvious relief to long suffering humanity—a relief which it had not received by the earlier pursuit of religion for several centuries. Consequently, an impression arose that religion is not important, that moral and ethical values could be relegated to a secondary position, that the pursuit of material satisfaction (or sheer consumerism) was all that mattered, and that we were entitled to do all that was possible or that there was no essential difference between *could* and *should*. This led to a reckless use of science

and technology, especially by two major vested interests; the profit-oriented capitalist trader or industrialist and the power-oriented soldier. The consequences of this double domination over the use of science and technology is now well-known; there is a tremendous waste everywhere and all available natural resources are being depleted at a tremendous rate.

The depletion of non-renewable scarce resources especially, portends a sheer disaster to the future of man. The armament race that has now become almost global and the stock-piling of nuclear weapons has created a very explosive situation where a small error or madness may generate a holocaust which may totally destroy all life on earth. Moreover, the very pursuit of endless consumerism has generated immense tensions and created several unforeseen social problems (including an inordinate growth of crime) so that man is probably more unhappy to-day than at any time in the so-called barbaric past.

#### **Moral and Ethical Order :**

My positive point is that we should avoid these pitfalls by while accepting science and technology from the West, dissociating them from blind consumerism and mercantilism on the one hand and power-oriented imperialism or colonialism on the other. This view was strongly advocated by Mahatma Gandhi who repeatedly stressed that the moral and ethical order was supreme, that we must distinguish between 'could' and 'should' and that even science and technology must be made subordinate to moral and ethical principles. The world is all increasingly realising that if religion alone was unable to solve the problems of the world till the end of the 18th century, science and technology of the last two

hundred years have also been equally unable to solve these problems and have probably made them more complex and difficult. The solution obviously lies in combining science with religion or in creating an age of 'science and spirituality' as Vinobaji has suggested. It is here that our rich cultural tradition can help us, not only to solve our problems, but also to give a lead to the world as a whole.

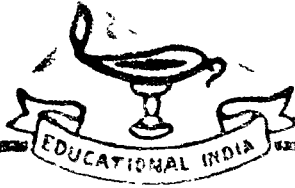
I think I have a right to expect that this city where the well-equipped and internationally famous science departments of the university stand face to face with the Meenakshi Temple would make its own unique contribution to creating this fusion between science and our spiritual values.

---

*(Continued from page 108)*

world has changed and old barriers are breaking down, life becomes more international. We have to play our part in this coming Internationalism."

The Educational Approach to the problem of International Understanding has not only a psychological but also a sociological basis. Aggressive designs and tendencies for exploitation and expansionism leading to the social conflicts are the products not so much of inherent biological or psychological urges, as to the social conditions that engender prejudices in the minds of one group against another. Such prejudices in course of time develop into enduring attitudes of hate and jealousy on the part of the members of the groups for the persons belonging to an out group. It is evident, therefore, that nations should understand the minds and win the hearts of one another. They should develop favourable social attitudes towards the out groups if world peace is to be ensured.



## Teachers' Code of Conduct

**T**HE teacher's recognised code of ethics tends to strengthen the cohesiveness of profession and bestows intimate advantages on practising teachers. Where it acts as an aptitude test of teaching for the new entrants, there it serves as a reliable evaluative criterion. Some of its salient features, we venture to list below with an eye on our socio-economic conditions, politico-cultural sensitivity and national complex of aspirations and actualities.

**A** wide-awake teacher should establish intelligent and friendly cooperation between the home and the school, retaining professional dignity and welfare of the pupils. Animosities and jealousies are evidences of emotional immaturity and should be avoided consciously for securing personal satisfaction, students' well-being and co-workers' harmony.

**W**HILE inculcating democratic principles (whose essence is the delegation of responsibility according to special aptitudes and training), he should not exploit his classroom prestige for promoting sectarian propaganda and partisan politics.

In keeping with his loyalty to the nation and the objectives of the school system, he should exercise his fundamental right to offer constructive criticism and to educate both the pupils and the school patrons. This temper necessarily requires respect and sympathy for human differences, both in achievement and in the capacity for achievement. This intense faith in educability should extend logically to the appreciation of group intelligence and the enlightened interpretation of school practices and policies on a continuous, determined basis.

**H**E should dignify his calling on all occasions by owning his contribution to society (savouring the satisfaction of both "who he is" and in "what he is"). At the same time, he should improve his teaching effectiveness by being devoted in class teaching, skilful in written assignments, enthusiastic in co-curricular participation, keen on professional growth and alive to the urgency of cultivating personality traits in terms of performance in varied spheres and contexts.

**E**SCHEWING organisation rivalry and divisive competition, a forward-looking teacher

should seek professional accomplishment and advance through systematic study, purposeful travel and directed experimentation bearing on instructional improvement and clarification of curricular confusion and irrelevance.

**UNRESERVED** acceptance of merit, experience and efficiency should be the determinant of selection, retention and promotion in service, disregarding extraneous impressions and influences.

**UNILATERAL** discharge of duty and adoption of scientific attitude to persons, problems and perspectives apart from striving to make educational objectives explicit and diversified should characterise teacher's thinking.

**BOLD** dissociation from underhand methods of recruitment, commercialised exploitation of pupils, unfair means of examination, invigilation and evaluation, popularisation of money-spinning but interest-spoiling "Keys or notes" and departure from the dreary monotony of mediocre, take-it easy teaching routine should be nurtured and projected.

**SCRUPULOUS** conformity to this recognised code of teacher's conduct shall chiefly contribute to the enhancement of professional stature in these dimensions; 1. Presenting a uniform test of suitability and adequacy for prospective teacher. 2. Providing an acceptable frame-

work and yardstick within which and whereby practising teachers can assess their role and worth.

3. Offering a sound criterion and spectrum for the application of Mental Health approach.

4. Assisting in the projection of teacher's functional philosophy of life in a more defined manner for crystallising right attitudes towards work, play, leisure and worship.

**I**N this way, the teachers' code of conduct will tend to ascertain the extent to which our expectations of a teacher (covering the aspirations of parents, students, society and administration) are fulfilled in the context of the goals of education and the targets of the institution. It will act as a source of reference and inspiration, while holding a mirror to the reciprocity of society and the nature of immediate surroundings which form the climate of work-congeniality and work-consciousness. Its firm fixation and vigorous adoption will cut out the tendency of double standards and double talk if not tall talk so very pervasive among the teaching fraternity and those intimately associated with it. The claims of national pride, social solidarity and educational sovereignty dictate that we encourage and maintain a close adult look at the minimum prescription of a teachers' code of conduct which is both workable and worthwhile. This procedure will make our sights clear and the strategy strong, while guiding the learning-teaching process realistically.

# Readers' Forum

## A Representation — U. G. C. Pay Scales - Implementation by A. P. Government.

By PERI SUBBARAYAN, M. A., M. Ed.,  
Lecturer in Sanskrit, Seethampeta.  
RAJAHMUNDRY. - 533104.

Sir,

I have to congratulate the Government of Andhra Pradesh for implementing the U. G. C. pay scales to College Teachers. Also, the Government did justice by imposing certain conditions. Really, the conditions they prescribed viz., M. Phil or M. Litt do motivate the college teachers to hurry themselves for Research in which our people lag. In this connection I would like to bring one more genuine point which the Government ignored,

If the object of implementing U. G. C. scale is to encourage and attract the efficient minds into teaching profession, it is equally important to treat equally the intellectualls who acquire Masters Degree in Education in any form i. e., M. Ed., or M. A. Education.

*(Continued from preceding page)*

IN conclusion, the determination of an apt code of teachers' conduct will offer unfailingly a ready focus to concentrate on. Also, its earnest adherence will act as a stimulating goal if not a tempting laurel to look up to. Thus it can serve to condition and control the teacher's outlook and his teaching outcomes in step with the spirit of prevailing ethos and professional respectability.

— R. C. Wadhera.

As a matter of fact M. Ed , or M. A. Education in any way are not inferior to so called M. Phil or M. Litt. Courses. M. Ed./M. A. (Edn) are Research degrees which concern with research in the field of Education itself. Also the time one spends to get specialisation in getting M. Ed /M. A (Edn) is two years (including B. Ed., in case of M. Ed., as no other Graduate or Post Graduate is allowed to sit for M. Ed., without B. Ed.,) which is sufficient to Master the problems of education and to open the eye for Research.

The terms EDUCATIONLIST and TEACHER are separable only in verbal expression and in spelling, but not in their meaning. It is not dogmatic to say one cannot be an educationlist unless he is a teacher and the vice-versa. If Theory and Practice are the two distinct identities then only we can speak of Education and Teaching separately. It is this naked truth which made U. G. C. to open departments of Education in almost all Universities and encourage M. Ed., Degree by vacation and Correspondence courses all over India.

So keeping all the views the Govt. of A. P. should honour the teaching itself by implementing the U. G. C. scales for M. Ed., and M. A. (Education) Degree holders.

Finally I request the government to implement U. G. C. scales to the teachers who did M. Ed./M. A. Education as they did in the case of M. Phil or M. Litt. Degree holders ie., without imposing 5 years Service condition.

RAJAHMUNDRY, } Yours faithfully,  
Dt. 9-10-76 } (P. SUBBARAYAN)

## Subscribers !

Have you renewed your  
Annual Subscription for

'Educational India?'



## THREE PRIORITIES: ENERGY, AGRICULTURE, EDUCATION

By PROFESSOR ALFRED KASTLER

*Professor Kastler, you made a very eloquent appeal for the reduction of military spending. You suggested a cut of ten per cent, which you said would not lessen the security of the developed countries, but would, if it was applied to the development of education, agriculture and of new sources of energy, make it possible to bring about a complete change in the Third world situation in the space of one generation. If you agree, let us take energy first. What new sources were you thinking of, and how could they be used?*

I was thinking mainly of solar energy. It has two major qualities which make it the energy of the future: it is not exhaustible, like oil, and it does not cause pollution. We already have some techniques for exploiting it, but in order to apply them on a large scale we need to make them less costly. This will enable them to get their agriculture started, desalinate sea water, and develop a fertilizer industry.

*What practical measures will have to be taken?*

We shall need to perfect a method of mass-producing solar cells, so that they can cover large areas. (This technique is already being used to fuel satellites.) This will give us a purely static method of producing energy, without any moving parts. This means it would not be subject to the wear and tear of friction, as machinery is. The installation costs would probably remain high, but depreciation would be very slow.

*And other sources of energy?*

There is also wind energy. It would not surprise me if we were to see sailing boats back again in 20 years' time. And we could have wind-engines in our houses to produce power.

---

In the following interview, recorded in the Unesco studios, the Noble prize-winning French physicist, Professor Alfred Kastler, gave concrete illustrations of the ideas he had put forward at the Roundtable on Cultural and Intellectual Co-operation and the New International Economic Order held at Unesco House last June.

---

*And energy from the tides?*

France is very fortunate in this respect. By constructing two breakwaters at right angles, we could close the bay at Mont St. Michel, without doing any harm to the site itself. A colleague of mine at the French Academy of Sciences, has demonstrated that this would produce at least as much energy as five big nuclear reactors of a 1,000 megawatts each.

*There are not many places in the world where this could be done?*

No indeed. There is one at Fundy Bay on the east coast of North America, on the border between the United States and Canada. Of course, the initial capital expenditure would be heavy, especially for building the dykes. But there again, once they were built they would last a long time. So depreciation costs would be small, and again the power

produced would be inexhaustible, since its source is the energy that comes from the rotation of the earth. The exploitation of tidal energy would slightly reduce the speed of rotation, but the reduction would be so small as to be imperceptible.

*Food is another crucial problem for the Third World. The increase in agricultural production is far from keeping up with population growth, and the development of agriculture has become an absolute priority for these countries. But what methods ought to be adopted?*

Not modern agro-business methods - that is to say, those which use machines and reduce the need for human labour. Machines have to be used, certainly, but they should be of a comparatively simple kind; and above all, we should employ human labour. We have a model that can be taken as an example by other countries: China, which has succeeded in overcoming the problem of hunger. In 1962-1963, China was threatened with famine. The Chinese government at once concentrated all its efforts on the development of agriculture; on the encouragement of industries useful to agriculture, such as fertilizers; and on irrigation. The building of big dams as well as making it possible to irrigate the fields, also prevented floods and provided sources of energy.

*A third subject - perhaps the most important, since it conditions all other activities - is education. I believe you have very precise ideas on education, not only as it concerns the Third world?*

In France, at present, they are trying to make education uniform. This is a very serious mistake. One of the artists among our colleagues at the round-table stressed the need to develop a child's personal initiative. But they are doing just the opposite.

*And even if there is equality of opportunity, there is not necessarily equality of talent.*

No, but I don't think talents should be judged according to a scale of values. Manual skills are as important as intellectual skills. The human brain only

developed because the hand developed at the same time. *Homo became sapiens* because he was *faber*.

Even in intellectual occupations the hand plays an important part. Take a musician like Yehudi Menuhin. He only became a great artist by acquiring a manual technique. This is true too not only, of course, of a painter, but also of an experimental scientist: a biologist and a physicist and a chemist all have to roll up their sleeves:

*Another problem related to education which is a hindrance to development is the "brain drain" or the "exodus of the able."*

I think this exodus is due to a gap in international legislation. We have now managed to legalize intellectual property on an international level. The author of a book, the originator of a scientific discovery or a new technique, a composer - all these are protected, and can profit from their work or their invention, even on the international plane. No one is supposed to reproduce a book or a recording anywhere without paying a royalty to those concerned. In other words, the idea of intellectual property is accepted. But not the idea of intellectual debt.

When material wealth is transferred from one country to another, compensation is paid, either in money or in kind. But when intellectual wealth is transferred, this doesn't happen. We might well consider institutionalizing the concept of intellectual debt.

In France, a student at the Ecole Polytechnique is taught and given board and lodging by the State all the time he is a student there. But he undertakes to give the State ten years' service. He may go into private industry, but in that case either he himself or the firm he goes into has to repay the cost of his training. I think this system could be applied internationally, and that it would make relations between countries easier and less strained.

*One of the reasons young people, especially young scientists, leave their own countries is that they feel isolated at home and cut off from the stimulating atmosphere of the international scientific community. You are the chairman of the scientific council of a remarkable body which aims at countering this.*

You mean the International Centre of Theoretical Physics at Trieste-Miramar. It was founded some twelve years ago by a Pakistan scientist, Abdus Salam, Professor at Imperial College, London, and well known for his work in theoretical physics. He suggested the idea to the International Agency of Atomic Energy in Vienna, the Italian government offered to accommodate it at Trieste, and Unesco, and other organizations such as the United Nations, the Ford Foundation, and SIDA (the Swedish agency for development), contributed to its financing. Several hundred physicists meet at the Centre every year: there is a Winter College which lasts three months, where physicists from developing countries and physicists from industrialized countries are able to meet, to the great benefit of all. This arrangement enables scientists normally living in isolation to come and steep themselves in modern physics. They are asked to undertake to go back to their own countries afterwards. And they are allowed to attend for three years running. This enables them to keep in touch with contemporary science and to transmit this knowledge in their teaching.

*Wouldn't it be a good idea to set up centres like that in other branches of science?*

It certainly would. Trieste-Miramar is a centre for theoretical physics. It has a very fine library, but no laboratories. So we have established links with the laboratories of Trieste University. I think the same sort of centre ought to be created for experimental physics and electronics. This branch of physics is extremely relevant to developing countries, which, even as things are now, have to use electronic equipment in medicine, engineering and communications. But often this equipment breaks down and

has to be sent back to the maker. This means a considerable loss of time and money, and it would be a great improvement for these countries if they had good technicians of their own who could do the repairs on the spot.

*During the roundtable, Peter Brook, the theatre director, spoke of the individual nature of artistic creation, its aloneness. I imagine that the attitude of scientific creators is quite different?*

Yes, it is. I can well understand the feeling that is uppermost in an artist; he is proud of his work, which is unique. Goethe put it very well: "Das hochste Gluck der Menschenkinder ist doch die Personlichkeit" (The greatest happiness of man is his personality).

But the scientist has a completely different feeling, for scientific work is collective and never personal. To begin with, it is based on all the science of the past. And then, in science, except in fields like mathematics or theoretical physics, you work together, in a team. So that the uppermost feeling in a scientist is not aloneness but solidarity.

—Unesco Features

*Approved by all the D. P. I.'s*

## *Have you subscribed for 'Educational India'*

**which alone gives the  
Progressive View Points in  
Indian Education?**

*Editor*

**Prof. M. Venkatarangalah, M. A., D. Litt,**

*Mg. Editor*

**M. V. Subba Rao, B. A., B. L.**

*If not —*

**Send In Your Order to-day**

**Annual: Rs. 10/-**

**'Educational India' Office,  
MACHILIPATNAM**



# The Need to Educate the Developed Nations' Public for World Changes

By Mr. GORDON GREENWOOD

Gordon Greenwood, born in Terowie, South Australia, in 1913, has been Professor of History at Queensland University since 1965. He is a member of the Commonwealth Advisory Committee and Editor of the *Australian Journal of Politics and History*.

Speaking at the Roundtable on Cultural and Intellectual Co-operation and the New International Economic Order, held at Unesco House last June, Prof. Greenwood stressed the importance of educating the public in developed countries in the need for change in world economic relations. The following is an abridged and edited version of his address.

Converting the blueprint for a new economic order into reality is essentially an educational task and it is a task for each of the communities to which we belong.

In pubs, in clubs or wherever people congregate they are talking about sport, finance, taxation, and a hundred other matters, but they are certainly not talking about the sort of issues being dealt with here.

Of course, we need a vision and to strive towards the achievement of that vision, we need what Coleridge called the shaping spirit of imagination. But, equally, no good purpose can be served if we delude ourselves into believing that this economic transformation can occur easily or without considerable opposition. The reason for such opposition stems partly from the basic nature of men and women, who naturally enough are interested in their personal life and advancement.

In national politics in almost every country the big issues are domestic. Only very rarely are they international issues. We have to face the fact that there are real problems in the developed countries as in the developing ones, problems of serious unemployment and of inflation. There is a feeling on the part of a great many people that taxation has now reached exorbitant levels in relation to the individual's right to dispose of his income.

The point I am trying to make is that to achieve a new international order you must seek a transformation of attitudes on the part of the developed communities. For you are asking the individual in these countries to make

what will seem to him a great economic sacrifice. But attitudes can be changed. And this is ultimately an educational job that requires a new effort in the schools and the tertiary institutions.

In my adult lifetime I have seen two fundamental changes occur in attitudes within my own country, Australia. One was over the question of migration and assimilation. If one looks at the essays written in schools there is no question that a revolution has occurred and that the young today feel a responsibility towards the migrants from many countries who settle in Australia: they adopt a positive and a welcoming attitude in trying to make them feel at home.

A second instance, is the profound revolution that has taken place in attitudes to Asia. Before the Second World War only one or two Australian universities had Asian departments related mainly to Japan or China. Now virtually every university is very heavily involved in such areas as Asian history, sociology, international relations, politics, languages and culture.

The change in attitudes can be seen also in the efforts of the national student union, of voluntary bodies and in a basic interest among the young in Australia.

But taking the time to change attitudes through the educational mechanism is not the only way. Another is to be seen to be defending legitimate national interests. And this brings us back to the point I made about human nature. You will only get the kind of sacrifice you need from people in the developed societies, if you can convince them that it is in their long-term interest. That is the vital point we have to make, the

# REVIEWS

**FOURTEEN PORTRAITS OF OUTSTANDING PERSONALITIES:** By Sri Kowta Rammohan Sastri. Published by Kowarsi Publication. Price: Rs. 10/-.

This small yet interesting book is a "Portrait Gallery" of eminent men of East and West by Sri Kowta Rammohan Sastri.

Sri Sastri, who is now the grand old man in the world of portraiture, was the direct disciple of Sri Promode Kumar Chatterjee who is now enjoying a retired, old and prayerful life in the Aurobindo Ashram at Pondicheri. He produced a band of enthusiastic creative artists in the famous Andhra Jateeya Kalasala at Machilipatnam, Andhra Pradesh, in the early decades of this century.

Those were days of non-co-operation and national movement. The Kalasala was started by eminent men like Dr Bhogaraju Pattabhi Sitaramayya, the famous author of the History of the National Congress, Kopalli Hanumantha Rao and Mutnuru Krishna Rao, the well-known editor of the "Krishna Patrika". Outstanding poets, craftsmen, men of letters, artists and painters were the alumni of this institution, who challenged the British rule on the emotional and intellectual planes. Sri Kowta Rammohan Sastri was one among them.

Sri Sastri is a man of wide travel-experience, who on his journeys, drew the portraits of contemporary great men by interviewing them. Fourteen such portraits, done in a very original way were compiled in this slender volume with an Introduction by Dr Stella Kramrisch. We agree with the Doctor

*(Continued from preceding page)*

gospel we have to spread. We have to show that the alternative of not making this kind of sacrifice, of not entering into this kind of commitment, will prove catastrophic not only for the developing countries but for you and for me, for the developed societies as well. And I believe you can do it.

— *Unesco Features.*

in saying that the artistic quality of the drawings may not be obvious to the average observer.

The fourteen personalities covered by Sri Sastri in his book are Gandhi, Tagore, Nehru, Dr Radhakrishnan, Annie Besant, Sir C. P., M.R. Jayakar, Nandalal Bose, Ramanujan, Sir C. V. Raman, Alexander Fleming, Corneille Heymans, G. K. Chesterton and A. G. Gardiner. The portraits of Gandhi and Tagore are in dry point and the portrait of Srinivas Ramanujan is in ink. The portrait of G.K. Chesterton is the best of the fourteen in likeness as well as in technique as a portrait in those days was judged by its resemblance to the original.

Apart from its artistic value, this little book is a land mark in the history of Andhra in particular and of the country in general. As the quotation from Francis Bacon which appears before the preface aptly says, "Let him also see and visit the eminent persons in all kinds, which are of great name abroad that he may be able to tell how the life agreeth with the fame." The portraits and drawings of Sri Sastri satisfy this and he does occupy an important place in the history of portraiture in Andhra and in the country.

In this book, besides the portraits there is narrative notes very interesting and instructive in which we come to know the circumstances under which the portraits were done. This speaks of the artist's mind as well. A facsimile of the last paragraph of a letter from Mr A. G. Gardiner describes Sri Sastri's contact with eminent men of those times, abroad.

A portraitist must have not only the art of drawing the figure of a distinguished person in ink or colour, but also the art of drawing him to himself. Sri Sastri possesses both the arts and the book under review is a monumental evidence of it.

We wish that such books were given proper display in libraries and book-stalls so that the ignorant and the seekers of knowledge get an opportunity of knowing them more intimately than otherwise. — *V. V. Tonpe.*

## Latest Exciting Books for Your Library

Inside Story of the Indian Railways:

SHRI D. V. REDDY

[Startling Revelations of a Retired Executive. There are intimate glimpses of the inner working of the enormous bureaucracy. The crux of the problem is not the railroad men or their attitudes or ignorance of techniques or lack of expertise, but sheer administrative perversity. Administration moves on hunch, hypocrisy & reckless waste of resources.

There are critical situations handled which make excellent case studies.]

Hard cover Rs. 50-00

Soft cover Rs. 40-00

### ★ SAKUNTALA

(A Play in Three Acts)

By Prof. M. V. RAMA SARMA, M. A., Ph. D. (Wales) Rs. 5/-

### ★ BUDDHISM

(The Religion & its Culture)

By ANANDA W. P. GURUGE Rs. 15/-

### ★ TWENTY—ONE

INDO - ANGLIAN POEMS

Of Toru Dutt; Tagore; Manmohan Ghose; Aurobindo; Sarojini Naidu; Ananda Acharya; Harindranath Chattopadhyaya; Armando Menezes; V. K. Gokak; Krishna murty; etc.

Edited by V. K. GOKAK Rs. 2-50

(A SAHITYA AKADEMY PUBLICATION)

### ★ MEGHA DUTA

— English Rendering with Original Text in Telugu Script

By Vidwan P. KRISHNAMOORTY

Foreword By K. R. SRINIVASA IYENGAR Rs. 3-50

## M. SESHACHALAM & CO.

14, Sunkurama Chetty St., MADRAS-600001, India.

# INDIA BOOK EXPORTS

## *Specialised Services to Foreign Customers :*

We furnish lists of books written by Indian authors—mostly in English and published in India which may be useful to all those interested in India and Indian studies.

We supply bibliographic information to be of help in selecting Indian books in any particular field of interest, by sending lists periodically and collate them with other bibliographies.

For starting a small India Bookshelf, we offer packaged selections at moderate budgets, to elementary schools, secondary schools, under-graduate colleges, graduate colleges and research departments as well as scholars.

Our service extends to procuring rare books as well as volumes of India journals. There will be no charge if we fail in locating the book.

A book containing synopses in English of fifty select Telugu novels which are fit to suit any worthwhile literary taste—East, West, North or South, from among the EMESCO publications to form a representative collection, is supplied free, on request, to publishers who wish to consider acquisition of translation rights for publication in other languages.

We also get books printed in India under our supervision for foreign universities and publishers.

No order too big or too small. All orders executed conscientiously and promptly, on reasonable terms.

May we help you? Enquiries from you are cordially invited.

*Please write without any obligation to*

## INDIA BOOK EXPORTS,

*Export Division of*

M. SESHACHALAM & CO.,

14, Sunkurama Chetty Street,

MADRAS-1

INDIA

TELEPHONE: 23418

CABLES: EDUCO., Madras.

