



MINISTRY OF EDUCATION

GOVERNMENT OF INDIA

SECONDARY EDUCATION

Published by

THE MINISTRY OF EDUCATION, GOVERNMENT OF INDIA

Vol. VI No. 1 & 2 ° CONTENTS . April-September			iber, 1961
. 00			Page
1. The Basic Question About Secondary Education		T.N. Tolani	1
2. Secondary Education: An Intermediate Stage Or An End In Itself	•	J.K. Gibson	4
3. Books That Have Influenced Me		K.G. Saiyidian	6
4. Literature for Adoloscent Girls—Its Rôle in Character Building		Muriel Wasi	10
5. Role of the Education Press		G.C. Chatterjee	12
6. Tagore's Message to the Modren World		H.G. Callis	18
7. Guidance on Schools		N.C.S. Rao	20
8. Uses and Abuses of Psychological Tests in Guidance		Jamuna Prashad	23
9. Experimental Projects In Secondary Schools	-	J.L. Azad	26
10. From Our School Notebook Trek to Rohtang Pass Education for Democracy Rationalization of School Holidays Tagore Project		M.N. Tankha S.D'Silva J.C. Aggarwal Dr. K.C. Vyas	29
11. Education for Responsibility			34
12. Activities at the Centre			35
13. Around the States			40
14. Window on the World			47
15. Book Reviews			53

• SECONDARY EDUCATION is published quarterly. Its subscription rates are Rs. 3.00 per year and 75 naye paise per copy. Subscription should be sent by M.O. only to:

The Manager of Publications, Government of India, Civil Lines, Delhi-8.

Articles of interest to Secondary Education, for first publication, are invited. They should be typed only on one side of the paper and should not exceed 3,000 words. Contributions should be addressed to: The Editor, SECONDARY EDUCATION, Ministry of Education, New Delhi-2, and if accepted, will be paid for at our usual rates. Authors must obtain the prior permission of the Ministry of Education of they wish to republish elsewhere articles accepted by this journal.

The views of the authors do not necessarily represent the views of the Government of India.

To Our Readers

"SECONDARY EDUCATION" is a quarterly journal published by the Unio...
Ministry of Education in April, July, October and January each year.

The journal is devoted to the problems faced, and the developments and progress made in the field of Secondary Education in India and Abroad.

Besides the usual features—Activities at the Centre, Window on the World, Around the States—the journal includes illustrated articles, accounts of individual school projects, book reviews and a Readers' Forum.

Annual Subscription

Price per copy

Subscriptions should be sent in advance by Money Order to:

The Manager of Publications, Publications Brande, Government of India, Civil Lines, DELHI-8. Rs. 0.75

Rs. 300

664)

Back numbers of the journal at 50 naye paise per copy, are also available and can be had from the Manager of Publications, Government of India, Civil Lines, Delhi-8.

EDITOR

ORDER FORM—SECONDARY EDUCATION

To

The Manager of Publications, Publications Branch, Government of India, Civil Lines, DELHI-8.

Sir,

My/Our old subscription No. is.....

I/We require.....copies.

Yours faithfully,

(Name and address must be given in block letters)



With Megh Slated Roll-up Black Boards, it is quality first and every other thing afterwards. It is for this reason that they are widely used in almost all the educational institutions in Bharat.

They are recommended for use in every educational institution by educational authorities of almost all the states in Bharat. They are blessed for their Quality, Utility, Portability and durability by eminent educationists at home and abroad. They are coated with scientific paint and hence they can be written on distinctly with chalk and can be easily erased with

duster. They are non glossy and hence can be viewed clearly from any angle for free illustrative and informative pamphlets.

Please contact :



Megh Slate Factory Private Limited POST BOX NO. 24,

BARAMATI (Poona) INDIA.

P293/2/61-T4/61

YOUTH

For objection and unbiassed authoritative information on educational, cultural and youth welfare programmes, experiments and activities in India and abroad read "YOUTH".

An excellent medium for advertisements

Issued quarterly:

Annual subscription Single copy

Rs. 4.50 nP. Rs. 1.15 nP.

Enquiries regarding supply of copies/subscription should be sent to the Manager of Publications, Delhi.

ALSO ADVERTISE IN YOUTH

	Four Issues	Single Issues
Full page (8" x 6")	Rs. 350.00	Rs. 100.00
Half page (8" x 3" or 4" x 6") Quarter page (4" x 3" or 2" x 6")	Rs. 210.00	Rs. 60.00
Quarter page (4" x 3" or 2" x 6")	Rs. 125.00	Rs. 35.00

N.B. Inside front cover 25 per cent extra and only full page advertisement is accepted for this special position.

All enquiries regarding advertisements should be made direct to Shri Tarlok Chand Sharma, Advertisement Agent for Government of India publications, P. O. Box No. 1447, Delhi.

SECONDARY EDUCATION

Sale Price: 0.75 nP or 1 sh. per copy

Subscription: Rs. 3 inland or 5 sh. sterling per annum

No Import Licence Required!

For VISUAL EDUCATION at its BEST in YOUR CLASS ROOM

BUY

WORLD'S FINEST SELECTION

OF

IMPORTED SCIENCE CHARTS

Offered from READY STOCKS

WIDEST RANGE OM ALL SUBJECTS

• GENERAL SCIENCE: DAVY SMITH Science Charts (set of 32); 'PELLA' Elementary Science Charts (set of 160).

• PHYSICS :

'BLACK'S' Set of 60 Charts: Atomic Physics Charts (set of 6);

Electro Magnetic Radiation Chart etc. etc.

• CHEMISTRY :

Periodic Table of Atoms Chart;

Organic Chemistry Chart, Metals Charts etc.

• BIOLOGY :

'JURICA' Biology Charts (set of 32):

'SMALL WOOD' Biology Charts (set of 60) etc. etc.

• HEALTH/PHYSIOLOGY: 'GORDONS' Grapic Health Charts (set of 32);

'CARLSONS' Health Charts, NYSTROM Physio-

logy Charts;

German anatomical mannikins of Man & Woman

etc. etc.

• ENGINEERING :

Automobile Engineering Charts (set of 32); Locomotive & Diesel Engine Chart etc.



Write to-day for Details & Prices
Mention subjects of your interest



Estd: 1949

DIRECT IMPORTERS

Telephone: 678

JAISONS & SONS

COMPLETE LABORATORY FURNISHERS AMBALA CANTT.

Dedicated to the Service of Scientific, Technical & Medical Education



From here one could get panoramic view of the main Himalayas

•5 FFR 1962

DRAS

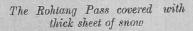
TREK TO ROHTANG PASS

(For fuller account see "From Our School Notebook")

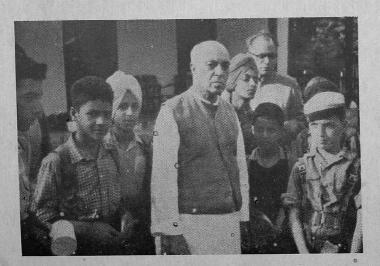
Although a jeep can be taken up to Rohtang, tourists prefer to trek the distance



Surrounding the trek are the towering cliffs rising vertically from the bed of the river Beas







Some members of the trekking team are seen here with the Prime Minister at Manali where he was holidaying at the Forest Rest House

This Issue

FEW would question today the wisdom of making secondary education terminal. The history of this recommendation is fairly old and during the last three quarters of a century or so any number of high-power committees and commissions have lent support to the idea. Yet it is a fact that secondary education is still far from being a terminal stage and that directly or indirectly the domination of its curriculum by the needs of higher education still continues. Shri Tolani in the opening article of this issue questions the practicability of making secondary education terminal. Apart from the immaturity of adolescence, he does not think that the ordinary time-table of a secondary school can provide sufficient time for developing vocational skills at an advanced level. Principal Gibson strikes a via media between the two extreme positions possible on the issue and suggests that so long as the country does not develop separate institutions for those who will continue with higher education at the end of the secondary stage and those who will not, secondary education must continue to perform the dual function of both preparing for life and for university.

Two contributors in this issue concern themselves with books. Shri Saiyidain discusses some of the Indian and foreign authors who have influenced him deeply. He expresses his preference for books which are inspired by 'social purpose' to those whose main merit is literary. Shrimati M. Wasi laments the lack of suitable fiction for adolescent Indian girls and shares here ideas about removing this lacuna.

Professor Chatterjee discusses, inter alia, various matters concerning the production of suitable textbooks for schools and colleges. One of the important drawbacks in textbooks

used in schools in this country has been that they are often prepared by university teachers who have no firsthand experience of school conditions and have hardly any understanding of the developmental needs of young children. He discusses 'nationalisation' and is inclined to question whether it has been a success, at least so far. Particularly unlucky in the matter of textbooks have been new entrants to the secondary curriculum such as general science and social studies for which hardly any books are available or even under preparation. Referring to 'regionalisation' at the university stage, says he: "Instead of the old standard textbooks which were prescribed in all the English-speaking countries at the university level we now have hastily prepared texts in regional languages which are often the result of pilfering from other sources without acknowledgement and without the ability to organise the material thus gathered into a consistent whole. What is worse, both teachers as well as pupils find such texts beyond their capacity and come to rely more and more on what are called bazaar notes."

As our readers will find, the present is a combined issue for the two quarters April-June, 1961 and July-September, 1961. Due to certain unavoidable circumstances it was not possible to bring out the April-June, 1961 issue in time. The inconvenience caused to our readers is regretted.

The Basic Question About Secondary Education

By

THE perennial question facing us today and to which both educationists and laymen have given a great deal of thought is, whether secondary education should be an end in itself, that is, whether at the end of it a student should be in a position to take up a vocation straightaway, or an intermediate stage concentrating on the general development of the individual and as such, a stage leading to further specialisation of one and two more years of pre-professional training before a student is considered fit to enter life. Schools have been called upon to assume increasing responsibility for the nation's youth, and millions of young people from different kinds of homes are committed to their charge annually in the hope that they will help them to develop into more enlight-

ened, more productive better adjusted and people. But the guestion immediately arises -should secondary education be universal

or selective; should it prepare youth college or for immediate social competence in life; should its primary function be preparatory or terminal; should it provide for differentiation or should the curriculum emphasise liberal or vocational education?

Aims in the past

From the earliest times dating back to Plato and Aristotle the emphasis has been on intellectual attainments and humanistic values. Literary education being concerned with things of the mind, the aim of education has been in the past, to say in a few words, to give students an acquaintance with the best that has been known and said in the world and thus with the history of the human spirit. This continued till about the time of Bacon who propounded the philosophy of the utilitarian character of education. It is however a distant cry from these giants of philosophy to our practical world of today to

which our system of secondary education has to mould and adjust itself. In the words of Nelson L. Bossing "the function of secondary education may be assumed to be the guidance of the adolescent in the achievement of an intelligent and satisfying adjustment to his immediate environment". However, must always be two schools thought on any controversial subject, so also in this case, we have on the one hand the view that secondary education is a complete unit by itself, at the end of which, the student should be in a position, if he so wishes, to enter on responsibility and take up some useful vocation. On the other hand the view that secondary education is an intermediate stage from where the student may branch out to specialise in any of the Humanities

or Sciences, is gaining support even as in the classical era, when Humanistic or Liberal Prof. T. N. Tolani

education held sway. there was a demand for

a curriculum change followed by the rise of Science to new heights of importance and the vast additions to the human knowledge by such luminaries as Copernicus in Astronomy, Harvey in Medicine and Descrates in Mathematics.

Inadequate end

Secondary education cannot be an end in itself for the obviously simple reason that the age span which this stage covers approximates from about the age of 11 to 17 years at the end of which full maturity of the mind cannot have been attained for launching into the complex avenues of life. Besides, all that makes a perfectly balanced individual and brings forth the latent talents and various facets of the person cannot be crammed into the few years of life at the secondary level though it cannot be denied that it may spark off these talents and partially develop the personality. Educationists all over the world

have realised that in the fast changing and complex world, the aim of secondary education can no longer be confined to education of the mind but it has got to be far wider. Secondary education aims today at nothing less than the cultivation of the whole powers of the mind, body and spirit; in short it aims at the total development of a pupil's personality. Education to be imparted should therefore aim at the physical, mental and social development of the pupil so that on the completion of the period of formal education he possesses both the desire and the ability to devote his faculties vigorously and effectively to doing his duty as a good responsible citizen in the complex society in which he lives. A question may perhaps be asked as to what is meant by a good citizen. This can be anwered as one who can perform his duties effectively of promoting the welfare of the society to which he belongs with goodwill and zeal and in doing so brings pleasure not only to himself but also to others around him. It would therefore be clear from the above that secondary education aims at training in citizenship.

Curriculum: Its scope

Having thus defined the aim of secondary education, the curriculum would have naturally to be such as would fulfil this objective. The curriculum should enable the pupil to have adequate knowledge about the way of life, the doings and the thoughts of his forefathers and his neighbours, the evolution of mankind to the present stage, the type and form of government together with its administration, elementary mathematics, everyday facts and the laws of nature governing them. He should also cultivate the power of expression in speech and writing and be good at manual work. In the past, pupils have been denied the opportunities for manual work and thus starved of the satisfaction which they derive through such activities. These should be promoted not so much with a view to enabling the pupils to earn their livelihood but to satisfy their inner urge to create, to build, to design, to develop in order that it contributes in a large measure to balanced development. It is true that not every boy will enjoy manual activity or craft work. But

this can as well be said of other subjects such as history, geography or mathematics. Manual work is, however, important for more than one reason. It inculcates in a pupil a sense to appreciate the dignity of manual labour. It enables him to be a handy man about the house capable of doing odds and ends of work and repairs. It enables him to discover his own capacity and interest and acquire some skill which can be developed further at the next stage of education. This will stand him in good stead in leisure hours.

Expansion of facilities

The Constitutional directive has enjoined upon the States to introduce free and compulsory education to all children up to the age of 14. The implementation of this directive entails vast financial resources and it may take years before we see this directive successfully achieved. As it is, the Third Plan envisages the introduction of free and compulsory education up to the age of 11. The introduction of compulsory education at the primary level in the past few years has seen an increase in the number of secondary school students on an unprecedented scale. There has been, unfortunately, no corresponding increase in secondary schools to the extent necessary to absorb the extra student population with the result that many of the existing schools are overcrowded. Some of the secondary schools run in two shifts to cope with the demand. Due also to the benevolent concessions granted by some States in bearing the expenditure on account of tuition fees to students from the economically backward classes largely from villages, secondary education is thus no longer the preserve of the well-to-do middle and upper classes only. This is obviously as it should be in a country which has before it the aim of building a socialistic pattern of society. The benefit of education which is one of our primary needs along with food, shelter and clothing should be made available to all irrespective of the considerations of caste, creed, sex and wealth.

Need for elasticity

All this has, however, resulted in an important change in the character of

secondary school population during the last few years. Whereas formerly the school catered essentially to the children of those who have had a certain amount of background of education and the pupils joined the school in the hope of improving their financial and consequently social status in society, now the school caters to the pupils from all strata of society. The secondary schools have thus children with diverse levels of intelligence, socio-economic background, interests, needs and expectations. In the circumstances it is not surprising to come across the dullest pupil alongside the brightest in the same class. The curriculum of the secondary schools should therefore be elastic and varied so as to allow for individual difference and adaptation to individual needs and interests. The reorganisation of secondary education on the American pattern with provision of large number of courses to suit the varying aptitudes and interests of pupils with only a few compulsory subjects is therefore essential.

Exploratory technical training

The Secondary Education Commission has stressed the acquisition of vocational competence as one of the aims of secondary education. It will be realised that in the complex world of today with different types of industries having specialisation in each branch, the acquisition of vocational competence to secure gainful employment is a long drawn process. This is evident from the apprenticeship scheme aiming at skilled artisans of Grade III being turned out by some of the public undertakings such as railways, ordnance factories etc., which have prescribed the duration of the scheme of not less than four years. The manipulative skill and the vocational competence of a to-

lerable standard cannot be attained in a matter of a few months as it may perhaps be assumed. The industrial training institutes under the Labour Ministry Government of India which offer institutional training to pupils seeking gainful employment as skilled artisans have courses of 18 months' duration with 40-42 hours of training in a week without any vacation fol-Towed by six mouths' in-plant training. This works out, in terms of hours, to 3120 hours of institutional training and 1040 hours of in-plant training. When we compare this with the working hours in secondary schools even the best of the secondary schools have not more than 180 instructional days. It will, therefore, be seen that the total number of instructional hours available over standards IX to XI is not more than 2800. Vocational competence that can be achieved in craft which is one of the seven or eight subjects can therefore well be imagined. Any increase in the number of hours allotted to this subject will have to be effected at the expense of other subjects. This we can ill afford to do. All that, therefore, can be done is to give pupils the knowledge of tools, materials and processes and a little practical work. This would afford the pupils an opportunity to discover their own special interests in different fields. The high school period may be treated as exploratory for the purpose of selecting the field of specialisation which may begin after the secondary stage. It will, therefore, be seen that it is not feasible to make secondary education a terminal stage at the end of which a pupil can take up a vocation straightaway without further training. The high school should be an exploratory stage and students who display special interests should be given one or two years of professional training at the end of which they would be fit to enter life with confidence.

SECONDARY EDUCATION: AN INTERMEDIATE STAGE OR AN END IN ITSELF?

A discussion of the question posed at the title of this essay can be initiated with countering it with another question: for whom? I have always liked the story in the Mahabharata where Drona is testing his pupils in their use of the bow. You will remember how his pupils said that they saw the tree, their comrades and the bird, while Arjuna said that he saw only the bird, and when asked to describe it, said, "I see only the head of the bird, not its body." At these words, the hair on Drona's body stood on end with delight. "Shoot" he commanded. This story, emphasising the importance of keeping your eye on the ball is one that we should all remember.

Teaching could be an end

What are we aiming at in education in India? First, I suppose, to make everyone literate. This will be the job of the primary school teachers, and

until there are enough graduates, and enough money to pay them, much of this stupendous

task could be carried

out by those who have had no more than a secondary education. Graduates set to teach in primary schools—even some I know who teach in secondary schools—are apt to complain that the work is not interesting enough for them. This of course is not true. This only shows that they are not interested in learning. There is nothing more exciting than seeing an idea come clear in the mind of someone you are teaching; and there is no better way of learning more yourself than by trying to teach others. Thus we could organise secondary education as an end in itself for an arms of learners who would go on to teach in primary schools. They would start to earn a living early in life. The immediate use of what they were learning themselves while at school would

be obvious to them; so the incentive to do it better would be greater; and, so I believe, as teachers they would want, and so would find the time, to educate themselves further, and much more fruitfully than the many who read for one degree after another while looking for something else to do.

Those who cannot profit from university ceducation

There are many others for whom secondary education, in society as it is organised at present, should be an end in itself. For those whose scholarship is not developed enough to merit university education at state expense and whose parents cannot afford to send them there at their own, for those who want to leave school and get on with a job, for the practical as distinguished from the bibliophile, a good secondary education can be an adequate introduction to and preparation

> for life as lived at present. The time ofcourse may come when we are able so to organise our leisure that no one will have to

do any work until he has completed a university education, and when we all have to do our own sweeping! But while primary education is not yet a stage for all, secondary education is bound to be an end for very many. It must also be an intermediate stage for some.

End as well as stage for the present

Therefore, it seems to me, the problem is 'what sort of secondary education do we want that will both fit a person to go on and earn a living, and fit another to continue to higher education at a university or technical college". And this problem is complicated by a desire not to prescribe the future of a secondary pupil when he enters schools, but

By

J.M. Gibson

Principal, Mayo College, Ajmer.

to give him an education that will either fit him for further studies or fit him for life. It might make administration easier if we could have different secondary schools for the two different aims, and here and there we do, where the eventual aim is clear, perhaps because of circumstances of intelligence or finance. But the pupils of many secondary schools will not make up their minds on their future until near the end of that stage of education, whether it be terminal or intermediate. And so, at present much secondary education must be made suitable both as an end and as a stage.

Power to think as end and stage

What is suitable as an end will probably, suit also as a stage but what is suitable as a stage only may well not be suitable as an end. Let us suppose that the primary stage sends on pupils who can read and write and who know their tables and the practice of elementary airthmetic; what would the secondary stage add to this? To my mind, the most important single aim of secondary education should be to develop the power to think. To this one could add a long list of other important skills and attitudes: the ability to use books to find out facts, the ability to distinguish between emotion and reason, sympathy for others and for their different points of view, and so on, but whether you cease your education at the end of the secondary school or you go on to further study, nothing could, or should, be more useful than being able to think clearly.

Understanding versus Memory

There are, thank goodness, signs that the cramming of facts, at the expense of understanding and of the joy of true learning, is beginning to be looked on with suspicion. Experiments in examination that test comprehension rather than parrot learning are being widely made, and so on. But much of our secondary ducation is still at the catechism stage without being frank about it. A good memory is very useful indeed and I often wonder if we teachers could not do more to help our pupils develop this serviceable tool, but it is now possible to get along with adding machines and encycloepeadia, without memorising everything like the pandits of old. I shall welcome the day when pupils undergoing examinations are permitted to take in with them any books or apparatus that they like. Questions will be set which will demand that they either remember or can look up the information required to answer them, and are able to think how to use this information. The pupil with a good memory will save time on what he has to look up and will score in that way. The ordinary person like myself, who has forgotten his eight times table, but who gets on quite well in life without it, will, with the help of his reference books and what intelligence he has developed, be able to pass.

So, secondary education, if it is the right sort of education, should, at present, even if the reforms in examination that I advocate are not immediately made, be suited both to those who end with it and those for whom it is an intermediary stage.

BOOKS THAT HAVE INFLUENCED ME*

By

Jammu and Kashmir

. What are the books that have influenced me? Before talking about some of these particular books, let me say a few words about the basic fact that books have influenced me and what their role is in life. There are two great formative forces which can powerfully influence the development of persons—the impact of the personality of other individuals and the impact of good books and great. No doubt, every experience educates to some degree but it becomes a much more powerful force when it passes through the quickening crucible of a good man or woman's life or the creative imagination of a great writer. The company of good men is not always easy to secure; it is often a matter of accident—of birth or geography. But, in this age, at any rate, in most countries, good books are anyone's for the asking and, even in our country which is under-deveof view of libraries, K. G. Saividain Educational adviser to the Government of

loped from the point educated persons living in cities and towns. who are keen on

books can secure them without much difficulty.

I have myself been a rather eclectic reader, enjoying many kinds of books and literary forms, and have never pretended to be for-biddingly 'high brow'. Very early in my life, when I was barely eleven, I was given the opportunity to catalogue the books in my father's extensive library. Amongst these books of many hues I browsed, reading a few with understanding and many without understanding. This experience gave me a widely ranging interest in books which has persisted all my life.

It is difficult, however, to pick out individual books for special mention; it would be easier to refer to certain outstanding authors whose writings have powerfully

influenced me. I might begin by naming two great Urdu writers who have given me, through their enchanting poetry and prose respectively, a glimpse into the world of ideas and emotions without which my intellectual life would have been quite incomplete. I refer to the poet Iqbal and Maulana Abul Kalam Azad. Through their writings—I have read all of them and what a wealth of beauty and meaning these enshrine!—they have not only given me a liberal interpretation of Islam and its way of life but also a gracious view of life itself, based on an all embracing humanism and a keen sense of justice. Iqbal's was a clarion call to develop the human personality to its best and highest, in which power and compassion should both have their proper place. How does he describe his ideal man, the 'man of faith' as he calls him?

"Cool as the dew which brings joy to the heart of the tulip. Strong as the tempest which frightens the heart of the rivers!"

Superficial students of Iqbal's poetry have sensed his advocacy of power but missed his plea for love, charity and tolerance.

"Take faith and unfaith alike to thy heart; If the heart flees from the heart, woe betide the heart!"

Azad's "Tarjumanul Quran" and, in particular, his illuminating commentary on 'Alfatiha" brought me a new view of religion as a process of continuous development, with a basic harmony of purpose. It was like the flash of insight which sometimes comes to the scientist or the research worker in philosophy or mathematics when it suddenly seems as if all the jigsaw-puzzle pieces of his problem had fallen into a rational and artistic pattern. It made me see the mighty process of man's evolution as really the

A talk broadcast from All India Radio, New Delhi.

unfolding of a 'Great Purpose'. Thanks to them, narrowness, prejudice, fanaticism of all kinds became anathema to me. same lesson was reinforced by all that I read later of the writings of Gandhiji-particularly his 'Experiments with Truth' and post-partition speeches—and of Jawaharlal Nehru, throbbing with the message of a broadminded humanism and an uncompromising sense of justice. But for these influences, to which luckily my early home training and environment were congenial, my trend of thinking might have been very different indeed!

Amongst the western writers, it is diffihave read more than I can recall. Here, too, my main preference has been for books and writers who have interpreted the heart beat of mankind, rather than those that merely give evidence of literary excellence. In other words, it is social purpose rather than high aesthetic value which has appealed to me and this might even make my list of favourite books and authors seem rather limited. Anyway, this accounts for the fact that amongst the modern authors,—with whom alone I propose to deal today—I have been influenced greatly by writers like Bernard Shaw, Bertrand Russell, Romain Rolland and Upton Sinclair. They differ in various ways but share a common social sensitiveness, and the crusader's passion against all fanaticism and social injustices. In my younger days, Shaw was the great iconoclast who shattered with gusto and inimitable wit, the manifold 'bourgeois' idols which had got entrenched in all aspects of contemporary life. With unerring precision, his surgeon's knife probed into the social ills, one by one, and punctured their hypocritical facade of respectability. a tribute to his great influence that his ideas, which were regarded as dangerous heresies when he first propounded them have now been accepted as part of our thinking and Shaw has been given a place of honour in the pantheon of English literature. Upton Sinclair attempted the same kind of thing with the American society and, through his powerfully documented novels like. 'Jungle', 'Boston', and 'They Call me Carpenter', he exposed some of the racketeering

and inhumanities of the capitalist system at its worst. Behind the glittering facade he saw the misery and the exploitation; beneath the glowing flower, the dunghill! 'They Call Me Carpenter' is the dramatised story of what happens to Jesus Christ when he finds himself in contemporary America. Sinclair lacks the lightness of touch and the caustic wit of Shaw but his documenetation is incredibly impressive and his courage unequalled. I would like particularly to bring to your notice the ten volumes of his "World's End" series which is an impressive presentation, in very readable fiction form, of all the important political, social and cultural movements in the western world from cult to choose particular books because I . • the end of the First World War to the present day. • They have given me whatever little critical insight I have in modern western civilization.

> Bertrand Russell is another writer with a luminous mind—a mind like a lighthouse for whom I have very high admiration. He has written on a large variety of topics education, politics, philosophy, science, mathematics—and made a distinctive contribution of abiding value to each. It is remarkable that, in this age, anyone should have such an encyclopaedic mind, with an incisiveness and a gift for lucid expression which is almost unequalled. His "Education and the Social Order", "Conquest of Happiness" "Road to Freedom" "Portraits from Memory" "Sceptical Essays" which are for popular reading—to say nothing of his great works on Philosophy and Mathematics-provide a stimulating mental feast. I remember how when I first read his book on Education I sat up with a thrill. It gave me a compelling sense of the intimate relationship between education and the great revolutionary forces -social and intellectual-which were reshaping the pattern of contemporary life. His writings present an urbane and rational view of life as an opportunity for creative work out of which comes true happiness. It is a reasoned but inspiring call to identify oneself with great objective causes like art, literature, science. philosophy, social service; and thus conferesomething of immortality on one's puny and mortal existence. Russell denies God and deprecates religion and yet curiously, he is an uncompromising advocate

of values for which Religion has stood at its best.

The French writer Romain Rolland has likewise appealed to me powerfully. pen has been like a sword crusading for the rights of man and of down—trodden groups and nations and for the freedom of the human mind. Man's life will be poor and limited, indeed, if this great gift and responsibility of freedom-which distinguishes him from all other creatures—were denied to him by vested interests-political, social or economic. Romain Rolland lived through the tense period when intellectual freedom was seriously threatened both from the left and the right. He held that no one who had a social conscience—whether a public ' worker, an artist, a musician or a professor aboth. could remain indifferent to this dread portent and live in his comfortable "jovry tower". His great novel, Jean Christopher, is the story of a musical genius who is drawn into the vortex of the struggle for freedom because his conscience cannot compromise with injustice. In his other trilogy "Soul Enchanted", he paints the clash between the forces of repression and liberation on a Europe-wide canvas. His own credo is to be found in a collection of essays entitled "I will not rest"-surely not when the fire rages round with merciless intensity! This theme, the relation of the artist and the writer to the fight for social justice that goes on outside his ivory tower has inspired many good novels. I recall, for instance, Howard Lasts' not too well known novel "Sillas Timberaman", in which the hero is a quiet, decent, rather timid American professor who is doing research on Mark Twain and is not interested in, or concerned with, politics. But when confronted with a challenge to his inherent intellectual freedom by the Committee of Enquiry, which is to judge the 'radicalism' of his research on Mark Twain, he speaks out for the enlightened conscience of America and of mankind, and his words will bear repetition: "I hate ignorance more than anything else, ignorance and the wicked ones who use it, who fear reason and eschew logic, who curse the schelars and scientists and laugh at them and make mock of them, who fear the truth more than they fear the devil himself....My crime is that I would

not accept a tyranny over the minds of men. I would not traduce my own mind, my learning, my reason and my heritage for which many men have died"...This is the attitude of intellectual courage which has always won my admiration.

As I look back upon these influences I am ifterested to see how the tapestry of a person's mind is woven. Iqbal and Azad and Gandhi taught me reverence for religion and the value of faith. Thinkers like Shaw and Russell gave me an insight into another precious aspect of man's mind—the courage to daubt, to question and not take things for granted. And yet life has taught me that they are not mutually exclusive—man moves from scepticism to faith and life embraces both.

May I just refer to one other novel which has greatly impressed me as a study of human character, with a universality of appeal, transcending geographical, racial and cultural distances. It is by a pre-revolutionary Russian writer Gocharnov and is entitled "Obvlomov". This is the story of a voung Russian landlord who is educated, well read, interested in the welfare of his peasants and full of good intentions and schemes for improving their lot. He starts with almost all the equipment needed for making a good job of his life, both individually and socially. But he has one fatal weakness—an incurable mental and physical laziness, the incapacity to take decisions, to translate ideas into action. He indulges in long social and philosophical discussions of high significance with his group of friends and his good will and good intentions remain untarnished. But the tragedy of his life rolls on like the chariot of juggernaut, to its appointed end. Because of this crucial weakness, his property falls into disrepair, his wealth is drained away, his tenants deteriorate, his interest and enthusiasm are replaced by lethargy and despair, his friends fall away one by one, he even loses his beautiful and loving fiance who is a very fine person, because he cannot make up his mind to propose to her. Thus one sees a good and promising life falling to pieces before one's eyes. But the great art of the writer lies in the fact that, right till the end,

BOOKS THAT HAVE INFLUENCED ME

Oblomov does not lose our sympathy and love. We feel indignant, we would occasionally like to give him a thrashing but our deep fellow feeling for him remains unimpaired. There is always the lurking idea in our mind: "There, but for the grace of God, go you or 'I" The story is located in prerevolutionary Russia—it may as well have taken place in a Talukdar's family in feudal India or indeed any where else in the world at one time or another. This is its real greatness. It universalises an individual's story and

its inevitable climax while revealing the tragic and sometimes infuriating break-up of a human personality. As it moves it does not let our sympathy and humanism dry up. This is, to my mind, one of the main characteristics of great literature. It looks at life in terms of its basic values that give it fullness and dignity and grace—respect for man as man, a readiness to see the divine spark even in the hardened criminal, a passion for justice and a love that transcends all barriers and 'passeth all understanding'.

[&]quot;A man may as well expect to grow stronger by always eating as wiser by always reading".

—Jeramy Collier

LITERATURE FOR ADOLESCENT GIRLS—ITS ROLE IN CHARACTER BUILDING

By

Muriel Wasi

New Delhi

In the stream of entertaining fiction that is being produced at present, that has, indeed, been published in the United Kingdom in the course of the 20th century, one does not stop to consider if an underlying educational principle has been at work. Was all this the result of spontaneous narrative talent and the work, by instinct, of British women who had been happy through school and boarding school life at that? Or, was it part of a collective, even if unorganised, attempt to shape the character of the future women of Britain?

It is possible that no one sat down to plan this, neither a person, nor an association, nor a published nor evene a Ministry of Education. Nevertheless, with that uncanny

instinct to cooperate without being told to do so that illuminates so much of the educa- Deputy Educational Adviser, Ministry of Education, tional and social history of Britain, the stream

of good novels for girls emerged with tacit agreement on the essentials of character and character-building as the British envisage them. Implicit in the racy stories and the vivid portraiture of Angela Brazil, Dorita Fairlie Bruce, Sheila Stuart, Monica Margaret Biggs, and even Enid Blyton is a code of thought and behaviour that Britain expects of her adolescent girls. They must be kind and learn to live together. They must be honourable and, in matters affecting personal and public integrity, above reproach. They must be loyal, to people as to institutions. They must develop proportion, with a balance between true seriousness and necessary fun and Jaughter. Surprisingly, the very nicest girls in these books of high morality are not stodgy or repellantly moral; they are attractive because though basically serious, they are attuned to the life of their society, helpful, competent, collectively aware of their neighbours and with just that proportion that the Greeks sought and the British achieved as a community, however much they lacked and lack it as individuals.

What are we doing, or have we done in India that is comparable? The past is silent on this and other challenging literary-cumeducational subjects and we have, therefore, now to begin to plan to do something for our adolescent girls. The fact that we have to plan, as apparently the British did not, should not, make us over-moral, nagging, austere or censorious about the morality we intend to inculcate in our girls. We do not have to accept, or translate the British code, for we have a code of our own, that will come more natural to us, and may be presumed to be easy for our children to acquire. For,

schools and the codes born of them, must surely reflect a society, and codes inherent in societies. That is why a nation's schools

are always a more faithful portrait of society than the portraits painted of it by historians who have to collect their data from dead evidence.

I would say that our school girl code should start out as simply as possible, insisting on the minimum of sterling qualities that both writers and teachers must concentowards trate on in a mass-movement shaping the adolescent mind. The first and most essential quality to inculcate is the need to speak and act the truth under all circumstances, without reservation, without compromise, without subtlety and without distinction. Whether or not sophistication approves of this, it is absolutely vital to the business of character-building and we cannot afford to compromise on it. All school fiction must seek to impress upon children, and particularly adolescents, that the simple business of truth-telling is the

LITERATURE FOR ADOLESCENT GIRLS-ITS ROLE IN CHARACTER BUILDING

most honourable of human qualities and must not be subordinated to cleverness, wit, competitive ability and misguided kindness, from all of which we suffer as a nation.

The next quality to inculcate, and it must be plugged with an almost fanalical insistence, is responsibility—the quality of dependability, that is merely an extension of truth-telling, for it implies nothing more or less than the capacity to honour a commitment. This is a major deficiency in our national character. Battles and wars have been lost on it, and infinitely more precious, friendship and that deep-seated patriotism that springs from nothing higher than the commitment of the individual to the Nation.

The third quality to inculcate is conscious leadership, in so far as that can be inculcated with the sense of humour that destroys self-importance. For we never were so desperately in need of leaders at adolescent level. Leadership exists for both good and bad, but the quality is as rare as talent or intellect, and is essentially a moral quality based on courage, fearlessness and that dependability that we have cited as the second most important quality to insist upon in the formation of character.

It may seem strange that in saying all this I have made no reference to the major sins of our society today—to regionalism or communalism, to nepotism or corruption. But none of these things could exist

if the trinity of moral qualities that I have advocated did. It is these qualities in us that will destroy the sins of present-day society, for the sins are not essentially economic; they are irrefutably moral and economic circumstances reflect rather than cause them.

Where shall we find the writers? Among women who have enjoyed their schooling and I meet such women all the time. Sometimes they are the heads of secondary schools, sometimes merely mothers interested in the education of their daughters. Sometimes they are women who have attained distinction in public life, who feel the debt they owe for the sense of responsibility that was early inculcated into them, and would wish to repay the debt in service. Sometimes they are women who believe in the eternal moralities though they speak little of them, and would be wifling to relate their experience, even where they are without the gift of narrative that this task presupposes.

It would be worth our while to advertise for stories such as those that make the world of the British adolescent girl a delight to go and have immortalised schoolgirl heroines such as DIMSIE AITLAND, ALI-SON COMPBELL, PEGGY AND ANNE WILLOUGHBY, DIANA STEWART. THE SULLIVAN TWINS, PATTY HIRST, SYLVIA DRUMMOND, and a hundred others who flash though the pages of British schoolgirl fiction with deep seriousness and irresistible laughter.

[&]quot;Literature always anticipates life. It does not occupy it but moulds it to its purpose."

—Osar Wilde.

ROLE OF THE EDUCATION PRESS

(This article "Role of the Education Press" is an address by Shri G.C. Chatterji, Chairman, National Book Trust of India, to the delegates to the Education Editors Workshop, organised by the World Cofe feration of Organisations of the Teaching Profession from July 27 to August 1, 1961 on the occasion of the Confederatin's tenth annual Assembly held in New Delhi this year. The object of the Workshop was to discuss and explore ways in which the editors of educational journals could improve their journals in an attempt to play an effective role towards (a) the teacher and (b) education. In the course of its four-day deliberatons, the Workshop discussed problems of editorial content, editing and writing, production, finance and administration in relation to educational journalism. Eminent persons were invited to speak on these and allied subjects.

A brief account of the WCOTP Assembly is reported separately in this issue. In the context of the main theme of this Assembly, namely, "education for responsibility", the delegates to the Education Editors'. Workshop recommended that the editor of an educational journal should always bear in mind his responsibility towards (1) the readers, (2) education in general, (3) community to which the teachers belong, and (4) the employer.)

I have been associated with education at various stages and in a diversity of roles for over forty years. I cannot, however, claim to have any expert knowledge of the Education Press, with which I have been mainly concerned as a consumer rather than as a producer. Looking at the consumer aspect, it would be more correct to say that my connection began more than sixty years ago as a small school boy in a village in a rural area, in what was then the prepartition Punjab. The first book I handled was an

Urdu Qaida or Primer and almost simultaneously an English Primer. These to my mind were very dull and uninviting, altho-

so far as I can now recall, the paper was of quite durable quality, the lettering quite bold and there were occasional black and white sketches, such as that of an old man sucking a hooka in the Urdu Primer and a cat chasing a rat in the English Primer. Later I was fed on a more elaborate fare with books on a great variety of subjects, such as History, Geography, Arithmetic and so on. Their appearance, however, was equally drab and their contents equally dull. How one learnt to read and write and count, and acquired some elementary know-

ledge of the world in which one lived was due more to the quality of our teachers than that of the books we had to study.

Book-teacher equation:

At the elementary stage the book is less important than the teacher and his methods. There is a gradual shift in the relative importance of the book-teacher equation as we advance higher in the educational

process. The book begins to count far more as we advance from the elementary stage to the secondary and from the secondary to the

university stage. But at no stage can we dispense with the teacher and rely on the book alone. Even when we get to the post-graduate or research stage, we still require a guide, and when we have advanced still further of being engaged upon original work of our own, we need consultation and exchange of views with co-workers in our own field. What is more, the fruits of research have to be tested in the class room if they are not to lose contact with reality and become a barren series of abstractions. It is at stage this that the teacher-pupil rela-

G. C. Chatterji

tionship is in a sense reversed. Almost all the world's great thinkers, innovators, and discoverers have admitted their debt to their pupils.

An experience as a consumer of books

I said at the beginning that I had been more concerned with books as a consumer rather than as a producer. So far I have been talking as a student consumer. In the later stages of my life my role has still been chiefly that of a consumer, but as a teacher, and still later as a Director of Education, who had some voice in deciding what the younger generation should consume in the way of textbooks, and to some extent what they should consume outside the class room in the way of library books and prize awards. Curiously enough, as teacher, in whatever institution I served, I was very soon put in charge of the library. What more, the Punjab University at a fairly early stage of my career elected me as a member of its Library Committee.

This probably was due to the fact that the library committee carried less patronage than any other standing committee of the university syndicate. Finally during the last three or four years before partition of the the Punjab, I became chairman of the University library committee, in which office I had considerable administrative responsibilities.

In all these different roles, I was still mainly concerned with the consumer aspect of educational publishing, although I had to decide not merely what I should consume, but what thousands of other people, both teachers and pupils should be privileged to consume.

But in all these matters, I did not and in fact could not act according to my own whims and fancies. I had a host of advisers in all branches of specialised learning, and it was rarely that I turned down their recommendations unless they were exceeding their budget allotments, which they frequently did. Even this I looked upon with an indulgent eye. For I found that while some heads of departments were keen to obtain books, others were largely indifferent. I

gladly transferred funds from the non-spending departments to others who were keener to have their sections well stocked.

When I became a vice-chancellor, I did have something to do with the producer side of publication. Most universities in India have what is called a publication fund. What they publish are short monographs or learned or semi-learned articles by teachers of the university or its affiliated colleges which others have refused to publish. These publications do not command any sale. A very large number are distributed free to more or less distinguished people with the compliments of the author. The only economic return is in the way of exchange arrangements with other Indian or foreign universities.

I must apologise for this long and somewhat rambling introduction, and more specially for its egotistical flavour. But I have done this not in order to project my own personality on this workshop, but to tempt others, specially our foreign visitors, to contribute something from their own experience which may throw further light on this consumer aspect of educational publications.

National Book Trust

Strictly speaking, it is only within the last year or less that I have become involved in what may be called the production aspect of educational publications. As chairman of the National Book Trust, India, I, along with my fellow trustees, am expected to produce better books in India either directly through the Trust or indirectly through others. This you will agree is a very tall and at the same time a very vague assignment. Luckily for me. I am not the first to shoulder this responsibility. The Trust was created in 1957, and its first Chairman was Dr. John Mathai, an ex-Finance Minister of the Government of India, and at the time of his appointment as chairman of the National Book Trust, Vice-Chancellor of the University of Bombay. Dr. John Mathai started without a skeleton staff or even premises in which the work of the Trust could be carried on. During the six months or so

of his chairmanship not a single meeting of the Trust could be held. He resigned for what in diplomatic parlance are called "reasons of health".

He was succeeded by Dr. C.D. Deshmukh, another ex-Finance Minister, who already held the office of Chairman of the Univer-The National sity Grants Commission, Book Trust owes a great deal to Dr. Deshmukh's drive and administrative capacity for having put its business into working shape and planned out its initial policy and broad outline of programme. He resigned in September, 1960 after a tenure of three years, as he felt that the expanding responsibilities of the Trust required a whole time chairman. It was under these circumstances that I was asked to become his successor and so got involved in the production side of educational publications. But the ten months during which I have held this office is too short a time in which to learn even the A B C of this complicated business of publishing.

Sir Stanley Unwin has remarked in his Truth About Publishing which has come to be accepted very widely as the Bible of the publisher. "It is easy to become a publisher, but difficult to remain one: the mortality in infancy is higher than in any other trade or profession". The business of the National Book Trust is still at a stage at which it is not yet safe from the risk of infant mortality. My main reason for agreeing to inaugurate this workshop is the hope that I may get the benefit of your advice as to the upbringing of the infant entrusted to my care so as to prevent its untimely demise.

What is educational publishing?

What exactly is educational publishing and how does it differ from other types of publishing business. The objective of all publishing is to produce books and to sell them in as large a quantity as possible. From our point of view we may start with a two-fold classification, viz. books which are intended to instruct and improve the mind of the reader and those which are intended to amuse him and provide him

with mental recreation. At the outset one is tempted to say that educational publishing is concerned with the former and other kinds of publication are concerned with the latter. But such a hard and fast distinction is difficult to maintain when we face the actual facts. Many a book which is intended to instruct, may also, at least in parts, be highly entertaining, and many a book which the author had intended to be mainly entertaining may also have great instructional To the first category belong such value. books as Hogben's Mathematics for the Million, or the same author's Science for the Citizen, Many of R.L. Stevenson's books, such as Treasure Island, Kidnapped or even Travels with a Donkey, while written mainly to entertain, have many a useful lesson to teach us. Or take the works of the great dramatists of the world, the plays of Sophocles and of our own Kalidasa, or those of Shakespeare and coming nearer to our own times, those of Ibsen and Bernard Shaw. Do they merely provide entertainment or have they not great instructional value as providing insight into both the comedy as well as the tragedy of human life? What I have said about drama, applies equally to the novel, to poetry, to books of travel and adventure, and indeed to any kind of book production, except such excrescenses as modern Comics and Wild West stories. But perhaps even this judgment is a little too harsh. I remember that in my childhood I derived not only amusement but also much instruction from such books as the Boy's Own Annual. But inspite of this overlapping, in a broad sense there is a valid distinction to be made between books the primary aim of which is to instruct and those in which the primary aim is to entertain. It is mainly with the first type of book with which the educationist is concerned, but he never forget that the school boy must have his fun, and he must provide as much of it as he can in his instructional books and leave some reasonable proportion of time at his disposal for recreational reading. It is here that the school and college library must come to his aid.

Most school and college libraries in India are very poorly equipped, and the tendency is to load them up with the serious and stodgy types of books. In recent years there has been a considerable effort to provide more funds for school, college and university libraries in India. But even today these libraries are full of old junk, and in the purchase of new books, not enough allotment is made for what I have called entertainment reading.

Production of textbooks

I will turn now to the question of text-books. I have already touched on this subject from the consumer angle. I now propose to deal with it from the production angle. Textbooks are very important at all stages of the educational process. At every stage of this process, the pupil has to study a number of subjects. The textbook provides him with the material which he must absorb if he is to benefit from the instruction which he is receiving at his particular stage. What textbooks he is to read is not for him to decide. The decision rests with those who are to guide his education.

At the elementary and the middle school stage, it is the Directorate of Education which decides what are to be the textbooks. But the machinery for this purpose was, in my time, cumbersome and open to many abuses. The matter in most States was handled by a textbook committee which had all kinds of interests represented on it. The number of experts on those committees was very small, and all kinds of extraneous considerations influenced their decisions. British firms had a predominant share in all books for English teaching. The printing of other books was entrusted to a particular firm which enjoyed a monopoly for a term of years. Although fresh tenders were called for after every three years, in practice the old firm was so well entrenched that new comers had no chance against it. Punjab, for instance, the same firm held the monopoly for the publication of departmental textbooks for over fifty years.

The high school Examination was conducted by the Indian universities till very recent times. Consequently textbooks for this stage were prescribed by a School Board set up by the university, which was

presided over by the Director of Education, and had a few headmasters of high schools on it, but the majority consisted of college and university professors.

The High School Board commanded a very rich field for patronage and very full advantage of this was taken by the university members of this body. The consequence was that most extbooks for the secondary stage were written by college professors who had no actual experience of high school teaching, and were more concerned with what would be required of the high school boy when he came to college, rather than what he could actually absorb by way of instruction at that stage.

At the university stage selection of text-books in each subject was in the hands of Boards of Studies. Most universities had a rule debarring a Board from recommending any book written by a member, and if they did so, requiring them to state their reasons why in a particular instance the rule had to be set aside. But in spite of this restriction many individuals got over it by having a secret share in the sale proceeds of books they had helped to place on the selected list.

This was broadly the picture before the advent of freedom. There were of course vigorous protests against what came to be called the 'Textbook Scandal' even in prepartition days. Since independence, all kinds of efforts have been made to reform the system. One of the major reforms which has been brought about is that secondary education has been taken out of the control of the universities, and has been entrusted to the care of Boards of Secondary Education. In most states, the Director of Education is the ex-offico Chairman of these Boards and there is a more adequate representation of the heads of higher secondary The university representation has been reduced, but there is a general complaint that they still have the preponderant voice.

So far as the pre-secondary stages of university education are concerned, several States have been experimenting with what is described as Nationalisation of Textbooks.

The motives behind this scheme are to rule out profiteering at the expense of school children, and remove abuses which we may classify under the general heading of nepotism. To my mind neither of these aims has been achieved. In their anxiety to lower prices the quality of subject matter, paper, printing and general get up, has gone down even lower, and newer sources of nepotism, have crept in. In any case, I suggest that your workshop may devote some attention to these schemes of nationalisation of textbooks.

Where secondary education is concerned, there has been a shift from a rather tight laced scheme of subject studies, to what is called general education and education in crafts. New subjects like general science, and social studies have been introduced. There is a great dearth of suitable textbooks in these subjects, and I do not think that this has been adequately met.

Most Boards of Secondary Education have already preparaed or are preparing their own textbooks in these subjects. But the quality of these is very poor. In my opinion the Central Ministry of Education should undertake the prepartion of books in this subject, which would ensure both a high standard of quality and also some uniformity of content in these subjects in different parts of the country.

Trends influencing educational publishing

There is one other very major change since Independence which has affected and is likely to affect still further, educational publication in this country. This is the change in the medium of instruction both at the higher secondary and the university stages from English into the regional languages. I personally consider that the policy of too much regionalisation at the university stage is absolutely fatal both to the maintenance of university standards, as well as to the intellectual and cultural unity of the country. So far as university education is concerned. I believe that we should have stuck to English till we could substitute it by a national language. I think that even now we should make an all out effort to alter this fatal and

suicidal policy. At any rate for the time being the regional mania is at large and has affected educational book production with a new type of bug. Instead of the old standard textbooks which were prescribed in all the English speaking countries at the university level, we now have hastily prepared texts in regional languages which are often the result of pilfering from other authors without acknowledgement, and without the ability to organise the material thus gathered into a consistent whole. What is worse, both teachers as well as pupils find even such texts beyond their capacity and come to rely more and more on what are called 'bazar' notes.

With the advent of freedom, another new trend has shown itself in the field of educational publishing. So far the educational system, as well as the curriculum, was designed on a colonial pattern. Since we were a subject race, it was the ruler who decided what we should read, and how the minds specially of the younger generation should be moulded. It is true that the British were a more tolerant race than many other colonial powers. But even the most tolerant foreign domination desires that the subject race should be trained to look up to it, and admire its achievements. No doubt there was a Macualay and an Adams, and a few other eminent Britishers who thought that the highest achievement of the British Rai would be to train Indians for the art of selfgovernment. But their number was small. The average Britisher in India, if he thought at all, thought more along the Kipling way i.e. he believed that the Indian had a few virtues, but he belonged to a species far inferior to that of the ruling race.

This stigma of inferiority has now to be wiped out from all our educational publications. Thus has arisen a desire to re-write our textbooks, especially in History, Civics Politics and other social sciences from a new angle. This desire is perfectly laudable provided we do not carry it to the opposite extreme. Rè-write History by all means, but be sure that you are writing history and not faking it as the colonial power had done in its own day. By all means let our children dream of the glories of our ancient past,

ROLE OF THE EDUCATION PRESS

but do not delude them with the fiction that we had discovered all about nuclear fission, and cosmic flights thousands of years ago. In other words, do not mix up history with mythology, and science with magic.

This leads me to the question as to how far textbooks should be used for indoctrinating young persons with a particular political ideology.

Mr. Birley, Headmaster of Eton, speaking of his experiences in Germany after the Second World War, when he was acting as Educational Adviser to the Military Government, said that the Nazis had completely corrupted school textbooks used in Nazi The trouble was that the Allies Germany. could not agree in what manner they were to be revised, the Anglo-American group wanting one kind of a purge, while Russians wanted quite a different kind. Eventually they solved the problem by dividing Germany and each group had its own type of revision. The moral of this example is too obvious for me to work it out in any

School texts have to be graded so as to ensure that the intellectual diet provided

for the pupil is suited to the stage of his mental development. The process of gradation of material should be, governed by psychological considerations rather than by political or religious ideologies. A State which attempts to shackle the minds of its youth within a narrow frame-work is sowing the seeds of its own disruption, for it will breed a nation of automatons and not of intelligent and sensitive human individuals.

•Educational publishing is not a lucrative field and neither publishers nor authors canexpect to make a fortune out of it. Nevertheless the incentive of economic gain cannot. be entirely ruled out from it. No one will wish to enter this line without expecting to make a reasonable living out of it. far as the private publisher is concerned, he will no doubt take care of himself. It is the poor author of educational books for whom I have much greater concern. I believe that in this country at least he has had a very poor deal. The labourer is worthy of his hire, even though what he labours at is the writing of educational books. It is only when educational authorities realise this obvious truth that we shall have a really good educational press in this country.

TAGORE'S MESSAGE TO THE MODERN WORLD*

(This year Tagore Centenary celebrations have been held throughout India and in many other countries outside. In a world divided by anger and hate, Tagore's words emphysising the oneness of human beings have a special meaning for all).

TAGORE taught his readers and disciples that above all nations stands humanity. He believed in the unity of the human race, a unity enlivened and enriched by natural felt that cooperation and diversity. He cross-fertilization of mankind's diverse. elements-racial, cultural, religious is absolutely essential for the wholesome and complete development of our kind. "As the mission of the rose," he wrote, "lies in the unfolding of the petals which implies distinctness, so the rose of humanity is perfect only when the diverse races and nations have developed their distinct characteristics to perfection; yet all remain attached to the stem of humanity by the bond of brotherhood." That is why Tagore believed that East and West have their special lives to live, and their special missions to fulfil, but that their final goal is the same. This theme was the dominant note in his address at a great banquet in London, where the great minds of England and Ireland gathered to welcome him.

On that occasion he said:

"I have learned that, though our tongues are different and our habits dissimilar, at the bottom our hearts are one. The monsoon clouds, generated on the banks of the Nile, fertilize the far-distant shores of the Ganges; ideas may have to cross from East to Western shores to find a welcome in men's hearts and fulfil their promise. East is East and West is West—God forbid that it should be otherwise—but the twain must meet in amity, peace, and mutual understanding; their meeting will be all the more fruitful because of their differences: it must lead both to holy

wedlock before the common alter of humanity."

The towering greatness of Rabindranath Tagore may be measured by the fact that he did not see irreconcilable opposites where less understanding mortals saw only incompatibles. Tagore was able to reconcile individualism and socialism, and he was equally capable of making nationalism and inter nationalism appear not only compatible but mutually indispensable to each other. This is no denial that Tagore was a nationalist. A great patriot, he dedicated a large portion of his work exclusively to India, to the cause of its independence and Yet Tagore never indulged in the chauvinism which historically characterizes totalitarian states and is a frequent cause of national self-destruction. On the contrary, Tagore courageously attacked the "false" nationalist, who, he says, always looks suspiciously outside and in the process forgets to take cognizance of the internal causes which give rise to social and political disease. "If the inside is not healthy," Tagore explained' "it will breed disease no matter how pure the outside may be. . . But I agree with you when you want to rely on yourself for reforms, both internal and external.'

It is rare indeed to find any suggestions of anger or hatred for anybody in the world in Tagore's patriotic poems, which radiate love, encouragement, and humility. "Let the promises and hopes, the deeds and words of my country be true, my God", reads one of his verses. "Keep watch, India", he sings in another, "Come with thy treasure of contentment, the sword of fortitude and

Reproduced from the article "Rabindrapath Tagore" by Helmut G. Callis in *The American Review*, April 1961. Mr. Callis is a Professor of History at the University of Etah, U.S.A. and is at present in India as a Fulbright research scholar.

TAGORE'S MESSAGE TO THE MODERN WORLD

meekness crowning thy forehead." In the concluding sentences of his splendid essay on 'The Situation and the Description,' he writes passionately: "I will never accept that we have no hope but in the begging bowl. I have faith in my country. I respect self-help."

Looking forward to the day when India would be free, Tagore spoke out in words of flame against Western imperialism. Had Communist imperialism existed in his time he would have condemned it too. Tagore did not quarrel with anybody in particular; his argument was with predatory power as a general evil, as a cancer of the human soul, a dangerous social disease which ultimately brings death to the afflicted exploiters themselves.

To his last breath Tagore retained supreme faith that social harmony and world peace would finally be reached by the path of cultural conciliation between the Orient and the Occident and that the realization of the fundamental unity of the human race would thus be consummated.

He believed that mankind could save itself from destruction only by a return to the spiritual values which are basic to all religions and that to India, home of both Hinduism and Buddhism, belonged the mission to lead this religious revival which would reawaken Asia and the West and, in the same process, reform India itself.

Although this message, like that of Swami Vivekananda, singled out India as spiritual teacher to the world, Tagore never ceased reminding his countrymen that they had much to learn from the West's down-to-earthness, vitality, and dedicated search for truth.

By elucidating ideas of life different from those of the West, Tagore has presented the West, with a challenge to its ways and aspirations. At the same time, he has reminded the West of its own deepest sources of inspitation. The best men in India and the West have always been fighters in a common cause for the same ageless ideals—ideals modern men need to revive to lift a new and better world out of the ashes of the old, a world, to use Tagore's words,

"Where the mind is without fear and the head is held high;

Where knowledge is free;

Where the world has not been broken up into fragments by narrow domestic walls;

Where words come out from the depth of truth;

Where tireless striving stretches its arms towards perfection;

Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;

Where the mind is led forward by thee into everwidening thought and action—

Into that heaven of freedom, my Father, let my country awake."

[&]quot;Hatred ever kills, love never dies. Such is the vast difference between the two. What is obtained by love is retained for all time. What is obtained by hatred proves a burden in reality, for it increases hatred. The duty of a human being is to diminish hatred and to promote love."

GUIDANCE IN SCHOOLS

Guidance is a process of assisting a pupil through his own efforts to discover and develop his potentialities so at to achieve personal happiness and social usefulness. Thus defined guidance becomes an integral part of education. It becomes the function of every teacher not only to teach but to guide his students so as to enable them to utilise their talents to the full.

What we need in our schools today is not guidance of an incidental and haphazard kind, but an organised guidance programme as an integral function of the school. What are the essentials of such a guidance programme? What is the guidance personnel required for its implementation? What role can the teachers play in guidance? These are some of the questions that merit consideration.

At one time it was believed that guidance and counselling work in schools was the

concern of the specialists and teachers had no real part to play in it. As a result of experience in developing and organising guidance activities in schools, it thas been

realised that guidance should not be looked upon as a highly specialised service and every teacher has to be entrusted with guidance responsibilities in addition to teaching. course the need of a guidance specialist in psychological analysis and remedial treatment of an emotionally disturbed child is there but what is emphasised is that guidance is a fuction of the entire school and every teacher is a guidance worker. The function of the professionally trained counsellor is to co-ordinate the guidance activities of the school and to supplement these activities by specialised work as may be needed. Though the counsellor (guidance specialist) is entrusted with the function of initiating and organising guidance programmes in school, the cooperation of the teachers is vital to its success. Teachers contribute to the guidance function in a variety of ways: they supply useful data on the personality of the child for cumulative record; they identify children with problem tendencies, help pupils in making adjustments to the curriculum; they are aware of the individual differences amongst pupils and adopt their teaching to suit varied abilities and needs of students; they stress the educational and vocational outcomes of their subjects; they cooperate with the entire staff in studying the needs of the guidance programme, in helping to get it started and so on.

In order to acquaint the teachers with their new role in the guidance programme, orientation courses and short-term training courses have to be organised. In addition, every school should have the services of a teacher-counsellor or counsellor, who should be professionally trained. The mini-

> mum training requirement for a teacher who wishes to qualify himself as a counsellor might be a Bachelor's Degree in Education with one year's professional diploma

course in guidance and counselling.

Next we may consider in broad outline the main essentials of a guidance programme in school. This would consist of the following services: (1) orientation services (2) pupil information services(3) supplying of educational and vocational information (4) group guidance (5) counselling service (6) follow-up placement services.

Orientation Services: In any comprehensive programme of school guidance, orientation occupies an important place. The term orientation is used in a restricted sense to denote the process of adjustment to a novel and perplexing situation. In any

By

N. C. S. Rao

Director, Bureau of Educational and Vocational

Guidance, Prantiya Shiksha Mahavidyalaya;

Jabalpur.

new Environment an individual faces many problems of adjustment. For example, when a boy enters the high school at the end of primary schooling, he has to know and adapt himself to the rules, regulations and extra-curricular offerings of the new school. He has to adjust himself to many new teachers and fellow-pupils. The broad purposes of orientation may be stated as follows:

- (i) To guide the student in becoming acquainted with the new institution in order that he may adjust himself happily in the new environment through participating effectively in its life thereby using its opportunities to further his growth.
- (ii) To guide the student in assessing his own abilities and attitudes so that in the light of this knowledge he may formulate his educational plans and objectives.
- (iii) To inculcate desirable attitudes towards his learning experiences and work habits.
- (iv) To guide the student in his growing awareness of the educational and vocational opportunities in his social environment.

Such orientation services as an essential element of a guidance programme are needed at the fourth class or delta class and the school leaving class *i.e.* XI class of the higher secondary school. The counsellor or career master meets the boys in groups and gives orientation talks on educational and vocational themes.

2. Collection of pupil data is another important aspect of guidance programme. Data is collected through questionnaires, observational records, interviews and testing. Cumulative Record is an instrument of individual study and guidance. It contains information on scholastic progress, home background, predominant interests and special aptitudes and skills of the pupil. Class teachers maintain the Record Card and it is the counsellor who co-ordinates them. The Cumulative Record is also used to identify children in whom there is a discrepancy between ability and achievement so that proper guidance may be provided.

- 3. Supplying of educational and vocational information is an important element in the guidance programme. In fact this is one of the earliest phases of organising guidance work when the services of specialists for counselling are not available in school. Occupational information denotes accurate and usable information on jobs, industries and processes. In planning one's education or vocation such information is vital. Some ways of learning about occupational opportunities are:
- (a) An occupational information course could be offered. Some of the techniques used in the course might be individual reports by students, group reports, informal discussion, class talks on vocational orientation and selected occupations, career talks by experts in the field of business and industry and use of audio-visual aids such as films and filmstrips.
- (b) Occupational information may be gained through a study of related subjects. All subjects have some vocational significance. Every subject teacher should be expected to assist his pupils to obtain significant information concerning the occupations which are closely related to, or depend to a large extent on his subject.
- (c) Organisation of a career conference for a group of schools in the locality is an excellent method of disseminating occupational information. Representatives of business, trade or industry meet with students for discussions on particular occupations. To such meetings parents and teachers are often invited. The purpose of a career conference is to stimulate the interests of the students in certain occupations and provide adequate information on advantages and disadvantages, assets and liabilities of particular occupations.
- (d) Field trips and visits to work sites and factories are always a source of much information for interested students.

In recent years, occupational informa-

tion unit of D.G.R. and E. of the Ministry of Labour has prepared a number of pamphlets, guides to careers and occupational fields, and Reviews for the use of guidance workers in school. Besides, the Vocational Guidance Rureau, Bombay, Y.M.C.A. Calcutta and the Rotary Club, Bombay have also published occupational information material of value to counsellors. If this information is supplemented by job and training information of local import, it would go a long way in meeting the needs of guidance workers in schools.

- 4. Group guidance is any group enterprise or activity in which the primary purpose is to assist each individual in the group to solve his problem and to make his adjustments. There are certain common problems confronting students that can advantageously be discussed in a group. The problems of learning and motivation, study-habits, adjustment problems of adolescents, rights and duties of citizenship are some of the themes which lend themselves to group dis-It is the teacher-counsellor counsellor who sponsors group guidance activities in the class room as a supplement to individual counselling work. The discussions are conducted in a permissive atmosphere. The exchange of opinions and the different points of view expressed on the problem are helpful in clarifying doubts and difficulties and are conducive to better insight and understanding on the issues involved.
- 5. Counselling is considered as the culminating phase of the guidance programme. Counselling service in school can exist when the services of professionally trained counsellors are available. Counselling is defined as "consultation, mutual interchange of opinions deliberating together." The process of counselling involves a clearing up of the problem by discussion. In counselling all the facts about an individual are gathered together and all the experiences of the student are focused upon the particular problem to be solved by him, where he is given direct

and personal help in solving the problem. The scope of counselling service in school is wide. The counsellor will help emotionally disturbed children to come to a happier and more satisfying solution of their problems; sie will help scholastically backward children to overcome their educational deficiencies; he will also counsel children with educational and vocational problems.

6. Placement and Follow-up Services: An organised programme of guidance work in school is incomplete without placement and follow-up activities. National Employment Service is the recognised agency operating in the field of placement services and the oschool should work in collaboration with the vocational guidance units of the State Employment Service. The school can assist the State Employment Service by furnishing information ont he applicant's school record teachers' ratings, extra-curricular activities and facts about physical health. The State Employment Service, in turn, can furnish information to the school on job specifications, employment opportunities and general employment market trends in the community.

Follow-up is an evaluation device. One of the functions of the school counsellor is to follow up the educational and vocational careers of those whom he has guided. By the use of follow-up procedures the counsellor can discover to what extent the individual guidance programme has been effective. The results of the follow-up study can be used by the school for improving the guidance programme, for helping those in need of further guidance services and for purposes of in-service training of faculty and staff.

Thus an organised programme of educational and vocational guidance work in school contains as its essential elements the following aspects of guidance service: Orientation services; pupil information service, occupational information service, group guidance, counselling service, and follow-up and placement activities.

USES AND ARUSES OF PSYCHOLOGICAL TESTS IN GUIDANCE

By

Dr. Jamuna Prasad,

Director, Burean of Psychology, U.P.,

Allahabad.

URING the last two decades it has been increasingly realised that school children should receive guidance at different stages of their education. Various commissions appointed to make recommendations at the secondary and university levels have unequivocally emphasised this need. It is not confined to school children alone but the increasing complexity of our life has made guidance essential as a part of the general social planning also. As a result of this felt need in educational, vocational and social fields, efforts are being made to launch the programme of guidance in schools in particular and open clinics for the guidance of public in general. It is easily supported by

the fact that almost every State has already set up or is going soon to set up its own educational-vocational guidance bureau. Some

child guidance clinics and psychiatric centres have also been set up in the recent past.

Divergence in approach

Two clear cut trends in guidance are emerging in our country. There is one group of psychologists which is more in favour of applying non-testing techniques in guidance. They have pointed out on different occasions in various conferences and through articles contributed to leading journals of our country the weaknesses of the testing techniques. Another group favouring testing techniques is equally vehement in decrying the non-testing techniques as subjective, unscientific and unreliable. It is high time that guidance workers, engaged in this nationbuilding task, removed this confusion regarding the techniques of guidance that would suit India most so that some generally agreed pattern may soon crystalise. experience of American and British psychologists in the field of guidance is there to help them in this respect. The present article is also designed to throw some light on this controversial issue. Its scope is of course limited to discussing the uses and abuses of psychological tests in guidance.

The two almost antithetical approaches to guidance are:

(i). The clinical approach which is typically represented by the views held by a certain section of guidance psychologists. It emphasises the counselling aspect most and permits the use of psychological tests very sparingly. There are individuals who have on certain occasions publically claimed that they do not consider the use of psychological tests necessary even for the assessment of the

level of the client's intelligence and abilities. They feel that the psychologist can have a reasonably accurate idea of the indi-

vidual's functional intelligence through interview only, and it would not be very far from what he can know a bout him by administering the tests. What they emphasise is to help the client to develop a self-understanding through counselling so that he may be able to decide his problems independently. Depending upon this technique only is open to serious objections. It places a very heavy premium upon the psychologist's insight which is obviously more open to errors of judgement than an objective test.

(ii) The actuarial approach, on the other hand, in its extreme form excludes subjective judgements altogether and reduces guidance merely to the task of fitting a square peg in a square hole i.e., obtaining information about the individual's intelligence, abilities, aptitudes, interests, personality qualities etc., by means of objective tests and matching his profile against the available profiles of jobs and courses, and finally taking decisions about him, of course, never making it obligatory upon him to accept it. It is an analytical approach depending heavily upon

objective tests and neglecting the synthetic aspect of the client's personality altogether. Criticism has been levelled against relying upon the psychological tests in guidance by various experts actively engaged in the field of guidance, but none of them has given any alternative and more acceptable solution. It is against the background of these two approaches that the uses and abuses of psychological tests in guidance can be clearly understood.

Difficulties in adopting scientific methods

In addition to the above divergent approaches to guidance and consequent difficulties about the techniques to be developed, there, are certain problems in this field which are peculiar to this country and any judgement about the usability or non-usability of psychological tests in guidance should take them into consideration. The most striking problem is the non-availability of properly standardpsychological tests. Efforts no doubt, been made to prepare some group tests of verbal intelligence but we are miserably handicapped as regards the tests of aptitude, interest, ability, personality qualities etc. Even the available intelligence tests, which are very few in number cannot stand the vigorous test of reliability and validity. Moreover, ours is a vast country having no homogeneity in population and therefore requires the development of tests on a regional basis. There is lack of trained personnel and under such cumstances it is better not to administer a test than to administer and interpret it blindly. There is shortage of guidance clinics and if one is opened we are not able to man it. Job and course analyses have not been made and we are still in the dark about the psychological requirements of various jobs and courses to which the individuals are to be guided. What little guidance is being done is not followed up by validation studies. No systematic efforts have so far been made to do fundamental work preparatory research to construction of test batteries. Lack of co-ordination in research is another problem which needs our immediate attention.

The abuses

In the light of these considerations and

certain others in general, applicable even to the most advanced countries in this field. the following abuses of psychological tests may be pointed out. To apply a test for the purpose for which it has not been designed is one of the greatest abuses. It is frequently observed that a test originally constructed for selection purposes is used for guidance. Diagnostic tests are used for the assessment of personality and attainment. A specifically constructed to predict one set of variable such as a verbal test of intelligence may be used for the selection of technical training. Tests prepared for one kind of population and a particular age-group are employed for other populations and age groups without adapting them and changing the norms. Foreign norms are used to indigenous groups blindly. Unstandardized tests are frequently used and interpretations are based on raw scores. Tests are being constructed by those having no scientific knowledge of and training in the technique. Judgements based on such tests are not only likely to be misleading but erroneous too. Even the most carefully constructed tests have a low validity, meaning thereby that their field of applicability is very much limited. Sweeping judgements from the tests as well as their condemnations are made without regard to this fundamental limitation. Very often there is confusion regarding the nature of the tests leading to erroneous interpretations. Ouite often even the manuals fail to state clearly what fundamental abilities or aptitudes, interests or temperamental qualities the test is expected to measure and that too to what extent. In the absence of such information a novice or one who has not received a sufficiently advanced training in test construction and interpretation is either quite unable to interpret it or does it wrongly. Lastly the tests are administered without understanding the nature of 'the problem with which the individual is faced. It is a commonly observed phenomenon that a routine testing is applied without probing into the need of the case. Sometimes due to the non-suitability of the tests the psychologist instead of admitting his limitations applies substitute tests which in no way are suited to the requirements of the situation. This quite often leads to an unnecessary wastage of time and effort and long and orduous process of administering individual tests is gone through even when some shorter tests could be equally well relied upon. The vice versa is also frequently observed which is unfortunate indeed.

Methods to be adopted

In order to place the guidance on sound scientific footing it is essential to have a combination of clinical and actuarial techniques. In the context of modern developments in measurement in education and psychology it appears fantastic to relegate psychological testing to the background altogether. Undoubtedly, psychological testing occupies a subordinate place in guidance and serves as a means and not as an end but none the less it should be an integral part of this process. A counsellor equipped with the fore knowledge about his client's intelligence, abilities, aptitudes, interests, temperamental qualities, prognostic possibilities etc., is definitely in a more advantageous position than one who takes up a case as it comes to him and tries to know everything about the individual through counselling.

Undeniably counselling occupies a central place in guidance but it is definitely a time-consuming affair and requires counsellors who have a thorough insight into human behaviour. By and large a counsellor who sincerely wants to help his client cannot deal with as many cases in the limited time at his disposal as stand in need of guidance. One or two sessions of counselling cannot be considered enough to develop a self-understanding in the client or an understanding of the case by the counsellor himself which is a pre-requisite of successful counselling.

Broadly speaking the clients can be classified into two groups: (i) those requiring prolonged counselling due to some emotional educational or vocational problems and (ii) those who do not suffer from any such handicaps but are undecided about, their future courses and careers. The former group needs a detailed diagnostic analysis through interview, social work, psy-

chogolical testing etc. In such cases the role of the counsellor is very important and his whole success in handling them depends upon how well he has diagnosed it and what his prognostic findings are. Naturally the role of psychological testing in such a detailed diagnosis cannot be over emphasised. In their absence the counsellor will be behaving more or less like a quack who claims to have made so-salled brilliant diagnoses of physical ailments without making use of any modern medical tools. All such counselling cases must, therefore, begin with determining the needs of the client, deciding upon the psychological tests to be used in the diagnosis, supplemented by other diagnostic measures and subsequently followed by therapeutic sessions. But this kind of prolonged diagnosis and therapy is not necessary in case of the second group. There we can safely depend upon the psychological tools, supplemented by the information from the home, the school and the client himself for understanding him and assisting him in arriving at an educational or vocational decision. In such cases prolonged counselling sessions are neither necessary nor justified under the existing dearth of trained counsellors and a heavy strain upon the national economy. Studies both foreign and Indian are available to show that group predictions based on psychological tests have higher validity than those done without them. In case of school children it has been found that tests of scholastic attainments supplemented with intelligence tests have a higher validity than the scholastic test alone. In some studies intelligence tests have been found to be better predictors of ultimate success in grammar schools in England than the scholastic tests in English or Arithmetic. It would, therefore, be highly desirable to develop dependable psychological tests as early as possible in our country and apply them on a large scale in our schools for guidance purposes. It would also act as a real help to a majority of our school population in developing an insight into their own assets and liabilities and enable them to decide about their future courses and careers, ultimately leading to the partial elimination of wastage and stagnation in our schools which, in addition to other causes, is considerably due to lack of adequate guidance.

EXPERIMENTAL PROJECTS IN SECONDARY SCHOOLS

By

J. L. Azad

In the task of imparting knowledge and skills, the educator has to constantly replenish and re-orientate his thinking and methodology so that learning situations could become more interesting and purposeful. necessitates continuous experimentation and research on the part of the teachers without which education, like any developing phenomenon, is apt to stagnate and become burdensome. The exploits of man into outer space and other developments in science and technology have opened up new vistas of knowledge and the teaching system has to be attuned to encompass and relate this vast knowledge to life. This is possible only if the teachers are always on the lookout for new ideas and new methods for teaching their pupils. In the absence of an experimental attitude

on the part of the teachers the educational institutions will not be Senior Research Officer, Planning Commission

able to fulfil the twin aims of extending the

boundaries of knowledge and helping to develop a whole personality.

Right Attitude towards Problems

It is recognised that conditions in Indian schools are not very favourable to conducting experimental projects. The educational authorities are, more often than not, indifferent if not unsympathetic to 'innovations' in education. The rigid curricula, fixed hours of schooling and a cramping system of conventional teaching leave little scope for experimentation. Besides, the poor financial returns for the teachers which compel them to resoft to private tuition and other methods of adding to the family income, hardly leave any enthusiasm for teachers to think of undertaking new experiments.

In spite of these limiting factors the fact remains that the teachers can do a lot in this direction if they have the necessary intellectual endowments and are encouraged by their principals and the other educational authorities. The essential pre-requisites are: a love for the profession, an inquisitive and an analytical mind and a capacity for seeing through things. It is also necessary that an encounter with difficult situations should not dampen the enthusiasm of the teachers. but should be taken up as a challenge and met squarely. The teachers should identify and isolate the problems and not lose sight of the details, howsoever minute they might be. An example of a Russian teacher may be given to illustrate the point. The Mongolian Republic of the USSR, because of the nomadic character of the tribes inhabiting it, was extremely backward in education. The total number of schools in one

of its districts was 23 and the maximum enrolment in each class was 10. The education of girls was unthinkable. In these condi-

tions a Buryat Mongol teacher—Baltakhnow —with some of his colleagues started a campaign for children's education. He met with partial success when the Second World War intervened and he had to suspend his activities temporarily. After the War, Baltakhnow, rendered invalid in action, was appointed Director of Education of the district. He knew that the nomadic tribes of hunters and shepherds of the district could not realise the importance of education except through their own social customs and traditions. The tribes used to celebrate lavishly the onset of the hunting season when it was their custom to send off the community hunters into the forest with all manner of festivities and rejoicing. Baltakhnow decided to make use of these celebrations for the children going from primary to junior secondary schools. He prevailed upon the Buryat chief of the locality and farewell festivals were organised for the children who went from primary to secondary schools. The

result was that the district is now faced with the problem of insufficient school accommodation.

Need for Understanding

In the educational institutions, as anywhere else, teachers come across a large number of problems, like those faced by Baltakhnow, which offer them sufficient scope of experimentation and study. A few examples may not be out of place: Some students fail to show any progress in learning. This may be due to mental retardation or environmental factors or a score of other causes. Again there may be a simple problem like late-coming. A record of attendance would show the habitual late-comers and the teachers could probe for causes. they have to come from a long distance and there is no suitable transport arrangement; or both their parents are employed and the children have to attend to household duties (particularly in the case of girls). Another instance would be the habit of smoking on the part of the young students particularly in rural areas. It is probable that the elders. in the family are all smokers and do not mind their children having a puff. In one case it was found that the grandfather of a student used to smoke a "hukka" and he would insist upon the young boy to see that it was in perfect smoking condition before it was given over to him. This "compulsive smoking" made the boy an addict at an early Attending school without wearing the prescribed uniform could also be probed in order to find out how far the weak economic condition, carelessness or indifference of the parents is responsible for the lapse. In the few examples given above, it is clear that the teacher will have to have an insight into every 'irregularity' so that he can exercise his corrective influence with sympathy and understanding.

Projects for Experiments

The nature, scope and frequency of experimental projects will necessarily vary from institution to institution and in some cases, class to class. In fact, every teacher will have to look out for the problems peculiar to classroom teaching and other aspects of

the educational system. There cannot, therefore, be a rigidly uniform set of problems that could be taken up in our schools. The following broad fields may, however, be suggested for experimentation and study by teachers in secondary schools.

Testing: It is the bounden duty of the teachers to familiarise themselves with the intellectual and other endowments of the students. To this end, the students could be subjected to periodical intelligence and, achievement tests and a cumulative record of their progress maintained. Some of the enterprising teachers could devise their own tests suited to the students.

Methods of Teaching: Since the aptitudes and abilities of children vary markedly, it is necessary to experiment with different methods of teaching so that students of all levels could learn easily and with the utmost economy of effort. For this purpose, various experiments could be attempted. example, in the teaching of languages, the translation and direct methods could be tried on two sets of pupils and their relative progress assessed. In the teaching of social studies the utility of dramatisation, storytelling, visits to historical places and collection of old coins etc., could be analysed. The effectiveness of conventional and modern audio-visual aids could also be put to an experimental study.

Developing Social Behaviour of Children

(a) In order to give an opportunity to the students to learn the techniques of democratic government, the schools should organise boys' parliaments where election by popular vote could be introduced.
(b) The students may be drafted for social and community service during summer and other holidays. An element of healthy competition may also be introduced in this activity so that the boys may have a sense of competitive achievement. (c) Hobby clubs, dramatisation, sports and other activities, with emphasis on group participation may be organised so that the students may learn to subordinate self to the social group. (d) Prefectorial system under which students are elected as prefects to look after the various

SECONDARY EDUCATION

arrangements for activities like school meals, sports, debates and other organisational matters may be introduced. (e) The students may be encouraged to make suggestions for the improvement of the working of the school. They may also be asked general questions which are normally not dealt with in classroom teaching. It may be made clear to the students that their suggestions would be treated in strict confidence. (f) To develop a habit of self-analysis among the students, it would be useful to introduce a 'silefice period' in the school time table which may extend from 6 to 10 minutes. During this period, the students may be asked to sit quietly and think about themselves, their achievements and failures.

Evaluation and Assessment

The following projects could be attempted to improve the examination system:

Cumulative record of the students should be maintained on the basis of mental tests which should include an assessment of the progress made by the students in physical health, general behaviour etc. The performance of the students at the daily home tasks, should also be recorded and reckoned in the final evaluation. Students should be given definite curricular assignments and

their performance recorded. Another interesting experiment would be to conduct "unsupervised" examinations and adopt "self-evaluation" techniques. This would also cenable the teachers to know how far the students are honest otherwise.

The list of projects given above is not exhaustive: it is meant only to serve as a broad guide for teachers in the content of which each teacher could think out his own specific topics. The intention is to kindle the interest of the general mass of teachers to take up projects for improving the content and procedures of teaching. The Ministry of Education have a scheme under which financial assistance is given oto "enterprising schools that are eager to try out experiments intended to bring about some improvements in school practices which would lead to the enrichment of the pupils' learning experiences". While the school would be welcome to take advantage of the Ministry's scheme, it will be admitted that a number of projects do not entail any financial expenditure. Most of the projects . suggested in this article belong to this category. The main requirements are enthusiasm, industry and imagination on the part of the teachers and a measure of encouragement from the educational authorities.

'Education is an atmosphere'

When we say that education is an atmosphere we do not mean that a child should be isolated in what may be called a 'child environment' specially adapted and prepared, but that we should take into account the educational value of his natural home atmosphere both as regards persons and things and should let him live freely among his proper conditions. It stultifies a child to bring down his world to the 'child' level.'

—Charlotte Mason

From Our School Notebook

I

Trek to Rohtang Pass By M.N. Tankhq, Head of the Geography Department, Punjab Public School, Nabha.

Last June I took a party of 16 students of the Punjab Public School, Nabha, originally known as the Sainik School, for a trek to Rohtang Pass. This was a party of very young boys, most of them below the age of 13. This adventure was the very first of its kind for them and, as was to be expected, it excited them with an explorer's sense of keen expectancy.

Rohtang Pass, about 13,400 feet above sea level, has always been an abiding attraction to those who visit Manali. A visit to Manali is in fact considered incomplete without a trek to the Rohtang Pass.

Manali lies about 24 miles form Kulu. Its name is no longer unfamiliar. Our Prime Minister has in recent years gone there often for a holiday. Because of this, Manali has shown a spurt of activity. A number of new buildings have come up and among them is the tourist bungalow situated very near the Benon's fruit orchard.

From Manali a jeepable road has been laid up to Rahla, a distance of about nine miles. Efforts are being made to take it right up to Rohtang Pass (13,400'), which will connect Kulu with the Lahaul Valley.

Although a jeep can be taken up to Rohtang, tourists prefer to trek the distance. Midway between Manali and Rohtang, the P.W.D. has built a Rest House,

originally known as 'Kothi' (hence the name of the piace) which is generally used as an overnight halt for tourists going to Rohtang Pass. The bridle path, now converted into jeepable road, runs all along the river Beas. Surrounding the trek are the towering cliffs rising vertically, from the bed of the river. The vegetation around is that of deodar, pine, oak and silver fir, which gradually disappear as one goes higher up. Beyond 10,000 feet the mountains are almost barren. But the scenic beauty never ends; the snowladen mountains at high altitude take the place of the vegetation at low heights.

Due to the heavy snowfall this year, the snow line had come down as low as 10,000 feet. The entire Rohtang Pass was covered with thick snow and offered an ideal spot for skiing. Every member of our team, including the two boys below 11 years of age, reached the top.

Fortunately the weather favoured us and we spent about two hours on the top. Some of the boys went exploring the region and one of the boys asked me: "Where is the Beas Kund, the famous 'Kund' which is the source of River Beas"? He was right. There was no 'Kund' as such. It was buried under thick snow and only the top of the stone, under which the so-called Beas Kund lay hidden, could be seen. It is only after the rains, when the snow melts that this 'Kund' becomes visible. It has several springs which bubble forth under the bed of the huge stone and form a small stream which is called the river 'Beas'. This stream, as it passes down the valley, gathers strength from its numerous tributaries and forms a huge torrent at Manali.

A walk of about two furlongs towards north-east brought us to the head of the Lahaul Valley. From here one could get a panoramic view of the main Himalayas. Overhanging the cliffs, about 4,000 feet below, flows the river Chandra.

Rohtang Pass is an ideal spot for young trekkers who wish to take mountaineering as their hobby when they grow up. It is easily accessible and the tourists get a good glimpse of the snow-covered Himalayan peaks and a thrill of the snow under their feet. A few hours walk would lead them to Lahaul Valley, which shows the route to various high peaks in the Western Himalayas. About 15 miles north-east of Rohtang Pass lies the famous Sonapari glacier (16,500 feet above sea level) in the Pir Panjal range.

П

Education for Democracy By S. D' Silva, Headmaster, St. Joseph's High School, Wadala, Bombay.

One of the aims of secondary education is to train pupils in a democratic way of life. Ours is a democratic republic and every pupil should learn not only how to live for himself or herself but also how to live as an effective citizen. One of the ways to attain this end is through active participation in the community life of the school which is nothing but a miniature society that trains students to live in a democratic set-up.

The purpose of this article is to give a brief report of experiments carried out during the last six or seven years in St. Joseph's High School, Wadala, to educate the pupils for democracy.

Various activities of the school are carried on through units or groups. These groups are based on principles of democracy such as the right to vote, freedom of speech and equality. The essential goals set before us are to achieve through these processes, cultivation of such basic attitudes as tolerance, cooperation, respect for oneself and others, a sense of justice and social service.

For the purpose of organising co-curri-cular activities "Circles" known as English Literary Circle, Hindi Literary Circle, Science and Geography Circle, Art and Craft Circle have been formed. For each of these circles one pupil is elected from each of the divisions of the secondary standards, that is, from V to XI. The members so elected elect among themselves a chairman, a dec-chairman and two joint secretaries. The Headmaster of the school and two members of the staff are the ex officio president and advisers respectively. The activities of each circle such as debates, panel discussions, general knowledge competitions, elocution contests, performances., exhibitions and excursions are all planned and carried out by ethe students themselves.

To foster esprit de corps, we have formed Houses known as Alloysius, Bosco, Savio and Xavier. 'The school assembly every Saturday morning gives pupils an opportunity to speak on a topic previously assigned. The students are very enthusiastic about this. To induce a sense of healthy competition among them marks are given. The name of the best speaker of the day is announced by the Head of the school, and the flag of the House he represents flies for a week above the door of the Vice-Principal. Marks are also awarded every month for studies, good behaviour, physical training, etc. These are totalled at the end of the month, and diplayed on the notice board so as to stimulate emulation. The Head of the school compliments the best House of the month. Thus the members of each House cooperatively strive for the honour of their House and among the Houses there is a spirit of healthy competition. The annual sports are also held House-wise.

To train pupils for social service we have the Road Safety Patrol. The main purpose of this squad is to help pupils and school staff to cross the road in front of the school when traffic is heavy. The members of the Road Safety Patrol have been doing their duty efficiently. The Headmaster selects the members and also a teacher to form the Patrol. The captain and the vice-captain for this group are selected by the Héadmaster. Care is taken to obtain the permission of the parents before one is enrolled for this duty. The members wear an epaulete belt and a beret to facilitate recognition by the pupils and the public. The members of this Patrol take a pledge to carry out their duties faithfully and to set a good example by observing the road safety rules themselves. Most of the members of the Road Safety Patrol are from the higher standards. The qualities needed are leadership, reliability, punctuality, knowledge of traffic rules, keeping within the limits of authority assigned to one, good attendance record, courtesy, and a spirit of service.

The next organisation that deserves mention is the Junior Red Cross unit of the school. The main purpose of this is to render first aid and see to the cleanliness of the school and its surroundings. This unit is formed with two boys chosen from each division of the secondary standards by the class-teacher. A counsellor from among the members of the staff is appointed by the Head of the school. At the first meeting five office-bearers are elected—president, vicepresident, treasurer and two joint secretaries. Under each of these office-bearers there are five group leaders appointed by the counsellor. Each of the five groups particular duty to perform each day-such as giving first aid for minor injuries, informing the parents if the case is serious, seeing to the cleanliness of the school, and the orderly movement of pupils as they go in and out of their classrooms as well as to maintain silence in the classrooms during the recess period.

m

Rationalisation of School Holidays and their Use By J.C. Aggarwal, Principal, Government Higher Secondary School, East Patel Nagar, New Delhi.

It is difficult to emphasise sufficiently the importance of rationalisation of holidays generally observed in the schools. It appears this problem has escaped the attention of our educationists, administrators and others interested in school education. The problem of rationalisation of holidays and their proper use must be seen in the light of the

present-day concept of education. There was a time when education was understood only in terms of the 3 R's but such a notion is no longer acceptable. The present trend of education appears to be in terms of 7 R's that is, reading, writing, arithmetic, rights, responsibilities, relationship and recreation. In other words, education aims at producing an individual trained in the "art of living together"... Such a training cannot be provided in a vacuum. It is an art which is acquired through practical conduct. Bookish knowledge does not enable students to acquire it. This raises an important question. Do our schools provide opportunities to the students towards this end? It is common knowledge that except a few schools which are placed in favourable circumstances. other schools fail to provide adequate opportunities. Que of the important factors for such a sorry state of affairs is the lack of time at the disposal of the school authorities. The situation is worse in the "double-shift schools" which are rapidly springing up and have become a necessary evil in big towns.

Endless Holidays

In a year, there are autumn and winter breaks which account for one month sliced out from the academic session. About a month and half goes in the school examinations. In addition to these, there are gazetted holidays, annual functions, school sports etc., which consume considerable time. Towards the end come three weeks of near-holidays between the annual examinations and the actual commencement of the summer vacation.

Though rapid changes have taken place in the educational sphere, the system of granting holidays has not undergone any change. Nowadays there is a unanimous stress that co-curricular activities should find an important place in the scheme of educational activities and also a general complaint of falling educational standards. These are valid criticisms but how is the situation to be improved? It appears that one of the alternatives through which we can to an extent remedy the situation is to examine afresh the total number of all kinds of holidays and to explore whether we could appropriate

a part of it for educationally useful purposes.

For this purpose, it is suggested that summer vacation can conveniently be reduced by two weeks and autumn break can altogether be eliminated. Time so saved may profitably be utilised on the lines suggested below.

Birthdays, anniversaries of great men and national leaders should be celebrated; attendance of teachers and students should be made compulsory. The number of such functions may be about 15. This will also do away with the complication created by restricted holidays.

The last Saturday of the month should be exclusively devoted for cultural programmes like story telling, 'debates, discussion, mono-acting, songs and the celebration of House Days etc.

There should be no teaching work on the last working day of the month and this should be utilised by teachers in preparing a sort of cumulative record for each individual pupil in all classes. The present practice of not allowing any or little time for this purpose seriously defeats the purpose for which such evaluation is meant.

Educational tours, A.C.C. and N.C.C. camps should be planned during summer vacation or the winter break.

Workshops, seminars, refresher courses etc. for teachers should be organised during holidays. The present tendency of deputing teachers to attend during the school session deprives the students of instruction and dislocates the normal working of the school.

Annual function or the sports day may be celebrated immediately after the annual examination. This will help in keeping the students engaged on worthwhile projects. A few teachers may be deputed to guide the students in making necessary preparations and other teachers may remain busy in tabulating and preparing results.

Cutting down holidays and using them in the manner suggested will provide enough

time for co-curricular activities and at the same time result in arresting deterioration in standards.

IV

Tagore Project By Dr. K. C. Vyas Principal, New Era School, Bombay.

ONE of the activities undertaken by our school during this year was the Tagore Project. Tagore Centenary was being observed throughout India and a number of programmes, cultural and educational, were arranged all over the country with the idea of acquainting the people with the personality of Dr Rabindranath Tagore. We also felt that this was the right occasion to give our children an opportunity to get acquainted with the great personality, his work and his various other achievements.

Having agreed to plan a project on Tagore, the teachers of the school got together towards the end of 1960 to work out the details of the project in their different subjects. The language teachers of Gujarati, Hindi and English were asked to select poems, short stories and dramas connected with Tagore and work them in as part of their syllabus for the year. We also created a Tagore corner in our school library in which books by Tagore in English and regional languages were made available for the children. Teachers of History and Geography drew up an outline of study in which Tagore's birth-place, his outstanding achievement 'Shantiniketan' and the story of his life were included. The teachers of Fine Arts were to interpret Tagore the artist to the students.

The central idea of the project was to so conduct the project that it would permeate the whole school. The various activities were so arranged that all the students of the school could participate in the project.

Drama is the most imaginative way of enthusing children and getting the utmost cooperation from them. On July 14 the children of standard XI staged two plays of Tagore—one in English called "Kabuliwala" and one in Gujarati "Vishikarana". On

August 11, children of standard VIII performed the play "Castaway" in English. On September 29, the children of standard VI performed the "Palace of Cards" in Gujarati and two children recited the dialogue on "Kutchh and Deviyani". The children of standard V gave an effective performance of the simplified version of Tagore's "Natipuja". Another class gave anecdotes from Tagore's boyhood in a small skit written by our teachers called "Nanakadov Ravi".

The Government of Maharashtra had combined the inauguration of the Tagore Centenary with the Bengali Literary Conference held in January this year. This programme lasted one week during which many dramas of Tagore were performed in Bengali Gujarati and Hindi. Ours was one of the two schools that participated in these celebrations. Our students gave a Hindi version of Tagore's "Sacrifice" at the Brabourne Stadium on January 2 before the audience of the Bengali Literary Conference and the invited guests.

We organised recitation and elocution competitions in which some of the poems recited by the children were—Sunday, the Palm, Sympathy, Fruit Gathering, the Hero, the Song of the Returning Youth, Songs of the Heralds of Spring, and from Gitanjali.

Rabindra music also formed part of our project. We had employed a special teacher to teach these songs to the students of standards IX and X. On February 20 our children gave a programme of Rabindra songs at the Nanavati School under the

auspices of Children's Little Theatre. Later, we were invited by All India Radio, Bombay Station to give a programme of Rabindra music on the radio.

Class magazines are a regular feature of our school. Every class in our school brings out in manuscript form a class magazine. This year we gave special encouragement to children to write articles on Tagore, his life and works. The children of standards VI, VII, VIII, IX and X have brought out manuscript magazines with impressive articles and illustrations on Tagore. Some of these class magazines afford a real insight into the children's capacity to do creative writing, given proper opportunity and guidance.

Finally, lectures by people who personally known Rabindranath Tagore were organised. These visitors were asked to tell the children their experiences with Tagore and what they knew about the life of the great poet. The first visitor was Kaka Saheb Kalelkar who spoke to the children about Tagore's love for nature and talked to them about the poet's literary works like Gitanjali etc. Another speaker was Shri Guru Dayal Mallic, who has spent more than 20 years in Tagore's Shantiniketan as a student and teacher. Children were visibly moved when Shri Guru Dayal read to them in a vivid and graphic manner the drama "Post Office".

Apart from the knowledge that our students have gained about Tagore, the project has been of immense value to the school in creating an atmosphere of singing, music and aesthetics.

"EDUCATION FOR RESPONSIBILITY"

THE tenth annual Assembly of the World Confederation of Organisations of the Teaching Profession (WCOTP) met in New Delhi this year. The conference was held at Vigyan Bhavan where the flags of 70 nations fluttered in majestic array for a week from August 1 to 7, 1961. Bach year WCOT convenes a conference to discuss mattersPof urgent concern to teachers and have mat in previous years in Oxford, Manila,e Rome, Washington and other Next year WCOTP will meet in Stockholm.

Formed in 1952 at Copenhagen, it tries to foster a conception of education directed promoting international understanding, improving teaching methods and professional training of teachers and the promotion of closer relationship between teachers in different countries.

The theme of this year's conference was "Education for Responsibility". Inauguratconference, Prime the Jawaharlal Nehru said that modern education had failed in its mission to promote world understanding and peace. "The fact. remains that we have produced a pugnacious type of humanity and not the cooperative type". Modern education has gone a long way in its achievements, some of them breathtaking, but it has signally failed in its basic task of training people for world fellowship. Dr. Shrimali, Union Education Minister, emphasised in address the urgency of this basic mission in the present context of international crisis.

At the end of its deliberations, the conference recommended a five-point programme to the world's educators on "education for responsibility". In the main resolution, the delegates, declared that "education for responsibility grows out of the convictions held by the society with regard to fundamental, moral, spiritual and rational values. c.....The complexity of the forces affecting to educ tion in general. These assemblies students in all parts of the world points to the urgency for teachers to demonstrate by example as well as by direct teaching their respect for these fundamental values, their concern for service to others, and their willingness to participate in civic affairs". To this end the WCOTP recommended that the teachers should recognise the importance of (a) the fundamental. moral and spiritual values on which just law, family and society are based; (b) inculcation of a right attitude to and respect for law; (c) the development of a critical attitude so that the individual retains the right to object to and or amend the law; (d) the encouragement of an inquiring mind to help the individual make a sound judgment; and (e) action in accordance with the principles underlying the declaration of human rights.

> By another resolution the Assembly declared that if the teaching profession was to be in a position to undertake its responsibility, it was essential to raise the economic and social status of teachers to a level commensurate with the importance of the teaching profession. The workload of the teacher should be regulated to ensure both the physical and mental health of the teacher and the efficient discharge of his duties.

Activities at the Centre

Central Advisory Board of Education

The proceedings of the 28th meeting of the C.A.B.E. and also of the informal meeting of the Directors of Public Instruction and Directors of Education held in January, 1961 were finalised and forwarded to all concerned for necessary action.

A Coordination Committee of the C.A. B.E. has been set up with the Secretary, C.A.B.E. as Chairman and secretaries of the standing committees of the Board as members. The functions of the Coordination Committee are:

- (a) to draw up a list of items to be discussed at the various meetings of the standing committees,
- (b) to set up study groups for examining and evaluating various schemes and development plans in different fields of education,
- (c) to draw up priorities for investigations to be made by the study groups.
- (d) to give general guidance in the working programme and operational techniques of the study groups, and
- (e) to undertake all other functions which will be necessary for the compilation of information and location of educational problems at all fields.

Central Institute of Education

The Institute's schedule of lectures, seminars and practice teaching continued as

usual. During this period the Institute finalised the following reports.

- (1) (a) report on the construction and standardisation of an achievement test in Hindi for class VIII.
 - (b) manual of instructions for the report
- (2) study habits of good and poor students.
- (3) manual of instructions for "A Verbal Group Test of Intelligence (for 14 plus)"

Extension Services

The Extension Services Department of the Institute arranged a workshop on the "preparation of challenging assignments for science students of classes IX and X" in April 1961. The workshop was attended by 22 science teachers.

Two meetings of the principals of Delhi schools were held on April 6 and May 10 respectively. The first meeting, attended by 19 principals of higher secondary schools, discussed "Parent-Teacher Associations in Schools", and the other, attended by 44 principals, discussed "Helping Students to Utilise Their Holidays Fruitfully" and "Challenging Assignments in Mathematics".

Central Bureau of Textbook Research

DURING the period under review, the Bureau organised two exhibitions. One

was an exhibition of curriculum materials for the benefit of local teachers, publishers and members of textbook and syllabus committees arranged at the Central Institute of Education, Delhi. The other was an exhibition of textbooks and curriculum materials organised at Bangalore during the All India Conference of the Principals of Training Colleges. About 400 exhibits were put up for display at this exhibition.

The Bureau completed a brochure on "Assignments in Science for the Middle Grades". It started work on a preliminary analysis of textbooks in humanities in primary and secondary grades for assessing their role in the promotion of emotional integration of the country. For latest information on textbooks, it has sent out detailed questionnaires on the following topics to the State Departments of Education.

- Textbook selection and prescription procedures.
- 2. Nationalisation of textbooks
- 3. Free supply of textbooks
- 4. Production of cheap and durable textbooks.

Central Bureau of Educational and Vocational Guidance

The diploma course in Vocational Guidance for 1960-61 for the training of counsellors ended on May 29, 1961. The valedictory function of the course was held on the concluding day.

Preparation of Tools

Science Selection Battery. The correlations between the predictor and the criterion variable, that is, the composite science group have been computed for one school. The data from other schools included in the sample are being analysed. Ninth grade norms for the Mechanical Reasoning Tests, Spatial Relations Tests, Arithmetic Test, Verbal and Non-Verbal Tests of the Battery have been prepared.

Merit Scholarships Tests. Items for various tests for the age-group 5 to 11 have been devised and tried out in some schools.

On the basis of this trial, items to be included in the final tests have been selected.

Occupational Information Programme

The Bureau organised a three-day "Plan Yow, Carear" exhibition in the Delhi Public Library. The exhibition was visited by about ten thousand persons.

Guidance

The Bureau has prepared (a) a scheme for guidance services in the country for implementation in the Third Plan; (b) a paper on the training of career masters, along with a proposed draft syllabus for an optional paper in Guidance at the B.Ed. level, for the annual conference of the All India Association of Training Colleges; (c) a note on the introduction of guidance in schools for the conference of Education Secretaries held in June 1961; (d) a scheme for the introduction of Guidance in the schools in the Union Territories; and (e) a pamphlet for pupils in the "Need for Guidance" series.

Directorate of Extension Programmes in Secondary Education

Extension Services

ZONAL conferences of honorary Directors and Co-ordinators of extension services for the north-western and eastern zones were held at Bikaner and Calcutta respectively. These conferences highlighted the need for greater co-ordination between the work of the extension centres in a State and the State Education Department. They also emphasised the importance of defining priorities in the work programme of the extension centres so that within the limitation of manpower and resources available the maximum results could be achieved.

Joint Conferences of the State Directors of Public Instruction and the honorary Directors and Co-ordinators of extension services and representatives of the Government of India were convened in the States of Madhya Pradesh, Madras, Kerala, Punjab and Mysore. The entire programmes of extension services were discussed in detail for

the Third Five Year Plan so that the activities of the centres could be in harmony with the needs of the State Education Departments.

Grants-in-aid amounting to Rs. 7,24,622.00 were sanctioned to 53 departments of extension services for meeting the expenditure of the centres for the period ending 31st December, 1961.

Examination Unit

The Central Examination Unit. of the Directorate of Extension Programmes in Secondary Education drew up a programme of ten-day workshops for lecturers of training colleges. The Unit also worked out if detail the programme of examination reform during the Third Five Year Plan with particular reference to items contemplated during 1961-62. The work falls under various heads, namely, construction of test items on new objectives, orientation of teachers, preparation of learning experiences, involvement of training colleges, studies of internal assessment and preparation of necessary literature. It was also decided that the programme had to be tackled on two fronts, immediate and long-range.

A workshop on developing learning experiences on integrated units in social studies was organised in May 1961 in the Dev Samaj College for Women, Ferozepur.

The Unit screened various experimental projects received from the various States and submitted comments on each of the projects to help the Directorate in selecting good projects for financial assistance.

Seminars

The all-India seminar of selected headmasters held at Hyderabad in March, 1961 deliberated upon educational administration in secondary schools, experimentation in secondary schools, educational and vocational guidance programmes, school libraries, internal assessment, cumulative records and effective follow-up of seminars.

Science Teaching

A detailed programme of work in science

teaching for the Third Five Year Plan was drawn up for the first quarter of 1961-62. This programme has four aspects.

- 1. Science teaching and science teacher preparation;
- 2. Science clubs;
- 3. Science fairs and science day.
- 4. Science talent search.

The outline of a report has been worked out on the position of science teaching in India, indicating the present position and future plans.

Working papers on the programme of science talent search in India and use of science kits as well as the formulation of an effective programme of pre-service preparation of science teachers were prepared for the sixth conference of the All India Association of Training Colleges which was held at Bangalore. An exhibition of literature on science teaching, science clubs and science talent search was also arranged on the occasion.

Introduction of Free Education

Exemption from payment of tuition fees upto class VIII has been sanctioned in all government and government aided schools in Delhi with effect from the academic session beginning Ist May, 1961.

Central Institute of English, Hydcrabad

The fifth regular course of the Institute ended on 31st March, 1961. This was followed by the organisation of two seminars held at Srinagar during May, 1961. The first seminar which was meant for State Directors of Education, Chairmen of Secondary Education Boards, Principals of Training Colleges and Professors of Education in the universities started at Teachers' College, Srinagar, on 5th May. This seminar was organised with a view to apprising the educational administrators and training college professors of the existing position of English teaching in our high schools and the consequent necessity

for effecting crucial reforms in the light of the latest thinking and research in the field.

The topics dealt with in this seminar included:

- 1. The New Grammar
- 2. Phonetics and the Teaching of Pronunciation.
- 3. What is a Method?
- 4. The Effects of a Bilingual Situation on Education.
- 5. The Structural Syllabus in High Schools.
- 6. Discipline.
- 7. The Methodology of Teaching High School English.
- 8. Subject Responsibility.
- 9. Spoken English in High Schools.
- 10. The Training Schools.
- 11. High School English Examinations.
- 12. The Training College Syllabus: Structures.
- 13. The Training College Syllabus: Present Practice.
- 14. Training College Staff.
- The Training College: Syllabus: Methods.
- 16. The Training College Syllabus: Practical Work—the Extension Services.
- 17. The Training College Syllabus Spoken English.
- 18. Oral Examinations.
- 19. The Vocabulary of High School English.
- 20. The Inspector's Role.
- 21. An Investigation into the Vocabulary of High School Pupils.
- 22. Text Books.
- 23. Follow-up Work.

The second seminar to which Professors of English and Chairmen of the Boards of Studies in English were invited was held at Teachers College, Srinagar, on 22nd May, 1961. The seminar was attended by 29 official delegates (22 university professors and 7 university readers) and 2 lecturers in English. The topics dealt with by the speakers and the delegates at the seminar were the same as discussed at the above seminar.

A special feature of this seminar was

the appointment of a sub-committee which was entrusted with the task of producing a statement regarding minimum objectives and requirement at the P. U. C. level. The statement prepared by the sub-committee was unanimously accepted by all the delegates. It is hoped that this would serve as the basis for examination reform at the P. U. C. level.

The Institute gave a short training course to the secondary school teachers of Jammu and Kashmir State. This course orgenised by the Education Department of the State who utilised the expert services of the C.I.E. staff. The course was in session from 8th June to 22nd June. It was attended by forty-six secondary school teachers. Only the most important and essential features of English language teaching were included in the programme. The programme worked out for this course was of a severely practical nature. Teachers were given daily practice in useful skills like the construction of substitution tables, the ability to speak within a restricted vocabulary, the production of English sounds etc. They were also trained in the techniques of textbook analysis. The next regular course started at Hyderabad on 10th July, 1961.

Emotional Integration Committee

In pursuance of the recommendations of the State Education Ministers' Conference held at New Delhi on the 4th and 5th November, 1960, the Government of India in the Ministry of Education have set up a Committee on Emotional Integration to examine the role of education in promoting emotional integration in national life and to suggest suitable programmes in this regard.

The Committee consists of the following:

- 1. Dr. Sampurnanand Chairman
- 2. Shrimati Indira Gandhi
- 3. Prof. T.M. Advani
- 4. Prof. Hiren Mukerjee, M.P.
- 5. Shri M. Henry Samuel, M.P.
- 6. Prof. M.N. Srinivas.
- 7. Bhai Jodh Singh
- 8. Shri A.E.T. Barrow, M.P.
- 9. Shri Asoka Mehta.

ACTIVITIES OF THE CENTRE

10. Shri A.A.A. Fyzee.

The terms of reference of the Committee are:

- (i) To study the role of education in strengthening and promoting the processes of emotional integration in national life and to examine the operation of tendencies which come in the way of their development;
- In the light of such study, to advise (ii) on the positive educational programmes for youth in general and the students in schools and colleges in particular, to strengthen in the processes of emotional intergration.

Scheme of Assistance to Voluntary Educational Organisations working in the field of Secondary Education.

During the current financial year a sum of Rs. 350 lakhs has been provided for sanctioning grants to high/higher secondary L multipurpose schools and teacher training institutions. A sura of Rs. 55,000/- was sanctioned to the following institutions till 30th June, 1961.

(a) Shri Jawahar Vidyapeeth Higher Secondary School, Kanode (Rajasthan) 5,000,000

All India Federation of Educational Associations. 19-Windsor Place, New Delhi. 50,000.000

I am able to love my God because He gives me freedom to deny Him.

Hround the States

ANDHRA PRADESH

Examinations Without Invigilators

Sri Kotha Venkaiah Chowdary Memorial Zilla Parishad High School has sent an interesting report of conducting "examinations without invigilators". The school, introduced class tests for Form VI without invigilation some six years ago. The students on this occasion had behaved so well that in subsequent years the experiment was extended to the lower Forms. ing to the procedure followed the teacher dictates questions to the pupils and then retires to the teachers' room. The pupils scatter themselves to answer the test. At the end of the scheduled time the teacher returns to the class and collects answer books.

During 1959-60 quarterly examinations for Form VI also were conducted on these lines. This year the experiment was extended to the annual examinations. Question papers were distributed to the examinees soon after the first bell with instructions not to look into them until the third bell was given. There was not a single case of a student trying to look into the question paper before the third bell had gone. The school concludes that if trust is placed in students they respond readily and are eager to show that such confidence is not unjustified.

Andaman and Nicobar Islands

Three higher secondary schools exist in this Territory. The o higher secondary multipurpose school for boys at Port Blair prepared its first batch of candidates in both science and arts courses, for the higher secondary examination held by the Second-

ary Board of Education, West Bengal in 1961. The higher secondary school for girls at Port Blair and higher secondary school at Biglapati in Car Nicobar will present candidates for the higher secondary examination in 1962 and 1963 respectively.

Both the higher secondary schools at Port Blair have their school parliaments consisting of members selected by the students themselves according to prescribed rules. The parliaments meet once in three months to discuss school problems such as organising literary associations, publishing manuscript magazine etc. A manuscript magazine containing articles written by students and teachers was brought out on 14th November, 1960. The Naval Wing, NCC (Junior) held their first NCC camp in the month of April 1961.

DELHI

School Television Project

All India Radio in close collaboration with the State Education Department and with the assistance and cooperation of the Ford Foundation of America has launched a scheme of school television for the higher secondary schools of Delhi.

Aim and Scope

The primary purpose is to put out regular, systematic, in-school instructional programmes. 'Educational Television' can mean many things. There is some education in almost all forms of television programmes. But when we talk of 'Instructional Television' it is very specific. Instructional Television is confined to the teaching-learning situation, and is a part of the

formal classroom syllabus of a given grade of a school system.

Again this projectedoes not envisage that television will offer total instructions in a given subject. The complete course will not be taught (entirely) by the TV teachers. Under this scheme the TV and the classroom teachers form a team of equal partners using their skills to complete the prescribed syllabus. The TV teacher imparts basic knowledge. The classroom teacher develops the basic concepts, clarifies them, clears the misunderstanding, gives words and evaluates pupils' progress. He also inculcates among students good viewing habits and attentive and critical listening. Thus his role is a little different from that of the conventional teacher but in no way subordinate. Because he is relieved of imparting basic knowledge, he can plan carefully post-telecast activities and get enough time to pay individual attention. He also gets more time for preparing lessons for other classes. As is known, the classroom teacher has to teach, at times, different subjects to a number of classes during a single day. The TV lesson enables him to devote more attention to his other assignments.

Keeping in view the dearth of good and qualified science teachers and the poorly equipped science laboratories of most of the local higher secondary schools, it has been decided, in consultation with the State education authorities and local headmasters, to utilise TV as a major instructional resource i.e. the TV series would cover the major content of the prescribed course. Nearly 150 TV sets are being installed and every higher secondary school with electricity is being given at least one set. In order to ensure advance preparation of lessons, a Video tape-recorder has been obtained. The classroom teacher would remain an integral part of teaching-learning situation. On his cooperation, competence, skill, ingenuity, enthusiasm and attitude towards TV will depend the success of the scheme.

Constant contact between the TV teacher and the classroom teacher is indispensable for fruitful results. For this a tele-class Supervisor has been appointed to maintain regular contact with the viewing schools. His main job would be to ascertain the reaction of the teachers and the students to each TV lesson. Besides this, classroom teachers would be requested to send in their reactions regularly.

Besides science programmes, a weekly series of TV broadcasts in English and Hindi will also be put out. These will not, strictly speaking, cover the prescribed syllabus but would be a sort of supplementary programme dealing chiefly with "Speech Training".

To plan the broad outlines of the TV courses, subject committees of subject specialists have been constituted. These committees would define the subject matter to be covered on the TV.

Every year some time in May or June a workshop of the TV instructors, representative classroom teachers and curriculum specialists will be organised to plan the detailed outlines of TV lessons to be put out during the ensuing academic year in a given subject as defined by the representative subject committees. Besides formulating the detailed lesson plans and methods of presentation, suggestions for the classroom teachers for conducting the pre-telecast activities and follow-up work for each lesson would also be finalized in this workshop. This would form the content of the "Guides for Teachers" which will be prepared and supplied to each classroom teacher well in advance to enable him to integrate the TV lesson with his regular class teaching.

Experience in other countries where TV has been used for teaching purposes has shown the following advantages.

- 1. Television, as a communication medium, is unique in its ability to bring many audio-visual aids—motion pictures, filmstrips, slides, drawing and other instructional devices into the classroom.
- 2. The TV lessons are planned jointly

by the television instructors, classroom teachers and curriculum specialists. This results in better planning.

- 3. The TV instructor is able to Edevote more time in preparing and presenting the lesson. Moreover as the lessons are prepared in advance, the course prescribed is likely to be covered in good time and systematically without excessive haste nearer the examination time.
- 4. The television teacher has at his disposal better equipment, artists, e librarians and specialists.
- 5. TV lessons are regularly re-evaluated. The classroom teachers convey their reactions after each lesson. Besides, the TV teacher can observe his own performance, as most of the lessons are pre-recorded. He also observes his performance with the students and teachers and gathers their reactions personally. This helps him a great deal to improve upon his previous performances.

The success of the scheme chiefly depends upon the quality of the television lessons and the understanding and cooperation between the classroom teachers and TV instructors. Given a fair trial, it is hoped that the scheme would provide equal opportunities to all secondary school students to benefit by the best talent available, and the general standard of teaching would improve in the long run, as the project would be a sort of refresher course for the in-service teachers.

Indian Educationists to Study Soviet School System

A three-member delegation of Indian educationists left for the USSR on September 15, 1961, to study the Soviet school system.

The delegation was led by Shri Raja Roy Singh, Joint Educational Adviser to the Government of India, Migistry of Education.

The other two members of the delegation are Shri N. D. Sundaravadivelu, Director of Public Instruction, Madras and Miss Sarla Khanna, Director of Public Instructor, Punjab.

The delegation is likely to stay in the USSR for about three weeks.

HIMACHAL PRADESH

During the period under review, 6 middle schools and 3 high schools in Himachal Pradesn were raised to higher secondary schools.

A sum of Rs. 10,000 was earmarked for the purchase of textbooks to be supplied free to the deserving students in this Territory.

A short-term training course of two months duration was organised for the teachers who had offered Science in the Matric or Intermediate, in order to meet the growing demand of science teachers. Forty teachers received this training during the period under report.

KERALA

A provision of Rs. 467.44 lakhs has been made in the Third Five Year Plan for the expansion and improvement of secondary education in Kerala. The schemes covered under this provision include: (1) opening of new secondary schools (Rs 50 lakhs); (2) inspectorate staff (Rs 10 lakhs); (3) improvement of facilities for teaching core subjects (Rs 30 lakhs); (4) improvement of libraries in secondary schools (Rs 10 lakhs); (5) supply of furniture to departmental seconddary schools (Rs 15 lakhs); (6) revision of salary scales of private secondary school teachers (Rs 100 lakhs); (7) building programme for secondary schools; (Rs 46.44 lakhs); (8) extension of sites—departmental secondary schools (Rs 5 lakhs); (9) conversion of high schools into higher secondary schools (Rs 140 lakhs); (10) conversion of high schools into multipurpose schools (Rs 36 lakhs) and (11) starting of a model eschool for meritorious children (Rs 25 lakhs). A provision for the training. of secondary school teachers has been made under "Collegiate Education."

At the end of the Third Plan period, nearly 30% of high schools will be converted into higher secondary schools and there will be about 67 multipurpose higher secondary schools in the State. A good number of both departmental and private schools will be equipped for teaching core subjects. Two hundred and fifty departmental and 500 private secondary schools will be brought under the scheme "Improvement of Libraries".

Laccadive, Minicoy and Amindivi Islands

- The next higher class standard IX has been opened in the high school at Ameni, in May, 1961. A new building is under construction for the institution. The Island students, who were till recently studying in schools in the mainland for want of facilities in the Union Territory, have been admitted in this school. They are provided with free food and residential accommodation in the hostel attached to the high school. Two teachers' quarters for lady teachers have been completed. Books required for free supply to the students have been purchased. The school has a library with reference and other books. Its science laboratory has been adequately equipped. A museum too has been started. For provision of education at secondary level, this is the first and the only institution.

MADHYA PRADESH

During the summer vacation this year, four seminars of teachers of higher secondary schools and a short term orientation course for physical education for women teachers of secondary schools were held at different places in the State. The four untrained M.A. and seminars covered M. Sc. untrained M. Com. lecturers: lecturers; trained graduate lecturers (Science and English) and principals of basic training colleges and district education officials.

A hockey coaching class was organised at Bhopal in June this year for the benefit of good hockey players from various schools in the State.

MADRAS

In addition to the 133 school improvement conferences held up to 8th December, 1960 in different parts of Madras, five more such conferences were held during the period under report. Over 21,000 high and elementary schools have so far benefited by the improvement schemes undertaken by these conferences. The cost of the schemes undertaken in these 138 conferences is Rs 641 lakhs; of these, schemes worth Rs 442 lakhs had already been completed by 31st March, 1961.

At the end of March 1961, the Midday Meals Scheme in the State covered 10,09,101 pupilss in 26,314 elementary schools. In addition, 17,301 pupils are also now provided with midday meals in 568 secondary schools on a purely voluntary basis.

MANIPUR

During 1960-61, 7 new high schools were given recognition by the Gauhati University and 18 new schools were allowed by the Education Department to open higher classes. Twenty three graduate teachers from high schools and 22 undergraduate and matriculate teachers from M.E. schools are undergoing training in B.T. and C.T. courses in the D.M. College. Seven undergraduate teachers have also been deputed for training in physical education in Madras. Two seminars on the teaching of Science and Geography were organised. The Administration gave grants to secondary schools for construction of school buildings, hostels, teachers' quarters as well as for construction of playgrounds. The students of secondary schools participated in the sixth National School Games Meet held Trivandrum and won the fifth position in the whole of India.

A novel method that the Director of Education has adopted is the allotment of two schools to each of the members of the Directorate and Secretariat staff for toning up their general condition.

ORISSA

The various committees of the Board of Secondary Education, Orissa, proposed

further measures for the expansion and improvement of secondary education in the State. The Syllabus Committee recommended courses of studies for the High School 1965, Higher Certificate Examination Secondary School Certificate Exangination 1966 and for classes VI, VII and VIII for the school session 1962-63. The Committee also recommended textbooks for the High School Certificate Examination Higher Secondary School Certificate Examination, 1965 and for classes VI, WII and VIII for the school session 1961-62. About 500 books in different subjects were submitted for consideration as textbooks in secondary schools.

The Recognition and Grants Committee recommended the introduction of new optional subjects in the proposed two Girls' High Schools and the recognition of class X of a proposed Boys' High School. Its subcommittee for re-examining the conditions for opening higher secondary and post basic schools held two meetings and made their recommendations.

The experts of the Board on the teaching of English, General Science and Social Studies visited 24 high English schools in the State to advise the subject teachers and to give demonstration lessons.

During the period under review a sum of Rs. 59,426 was spent on the improvement of secondary education in the State. In addition, a sum of Rs. 34,500 was spent on the social welfare activities of students in the secondary schools.

The Board arranged a holiday excursion camp at Puri for the students of secondary schools of age-group 9-12 from 22nd May to 28th May, 1961. Forty-seven students from 9 schools attended the camp. Another holiday home was also arranged by the Board at Puri at the instance of the Orissa State Council for Child Welfare for a batch of 50 students for a period of 21 days from 27th May to 14th June. Students from these schools including one girls' school took part in the course.

A re-offentation course in English for the

teachers of M.E. and basic schools was conducted by the Board at 16 centres in the State. About 250 teachers participated in the course.

RAJASTHAN

The state of education in Rajasthan at the end of the Second Plan showed an increase of 7190 in enrolment at the high and higher secondary stage. In 1959-60, the enrolment in the high and higher secondary schools in the State was 0.74 lakh pupils (0.67 lukh boys and 0.07 lakh girls). At the end of the Second Plan, the figure stood at 0.86 lakhs (0.78 lakh boys and 0.08 lakh girls). The pupil-teacher-ratio, the cost per pupil and the percentage of trained teachers at the end of Second Plan was 1:21, Rs 117.5 and 44% respectively. During 1960-61, 226 (205 for boys and 21 for girls) government primary schools were raised to middle schools; 59 government middle schools and 23 high schools were raised to higher secondary schools; and 7 government glrls middle school were raised to higher secondary schools. A new training college at Jodhpur with an intake capacity of 120 students started functioning from 1961-62.

The report of the Secondary Education Committee set up by the Government under the chairmanship of Shri G. C. Chatterji is almost ready and will be out shortly.

The Committee had been set up:

- 1. To examine the cases for low standard of attainment of higher secondary students and heavy percentage of failures at the higher secondary examination.
- 2. To examine in detail the curriculum of pre-higher secondary and higher secondary courses and to make specific recommendations for its simplification, rationalisation and coordination, with different stages of education viz., primary, middle and higher secondary.
- 3. To make specific recommendations

for improving the standards of teaching and performance by students in the middle and the higher secondary classes.

4. To consider other relevant aspects of the problem and to make recommendations with a view to actaining desired standards in the field of higher secondary education.

During the period under review the following seminars and refresher courses were held for the improvement of secondary education.

- 1. A refresher course for B.Sc. trained teachers from 18th May, 1961 to 16th June 1961 at Dungar College, Bikaner for enabling a B.Sc. to teach class XI with better confidence. Twenty five candidates took up Chemistry and the other 25 took up Physics as their special subject for this training.
- 2. Workshop Method Seminars—cum Short Term Training Course for headmasters of high and higher secondary schools at Jaipur and Bikaner.

Besides these seminars, State Bureau of Educational and Vocational Guidance, Rajasthan conducted three weeks' course for career masters during the period and trained about 100 teachers for secondary schools.

UTTAR PRADESH

The Gurukula Kangri Vishwavidyalaya, Hardwar is embarking on a new experiment to blend the good points in Eastern and Western culture and in their ways of living.

It has been decided that the living standard at the Hardwar institution should be raised.

The boys used to know both Sanskrit and English, but their knowledge of Sanskrit was better than their knowledge of English.

It is now felt that every boy should be as efficient in speaking in English as in Sanskrit.

Separate staff will be engaged to fulfil this objective. The existing language staff has been instructed to use only one of these languages in their conversations with the boys.

The Gurukula Kangri is also thinking of inviting the Union and State Education Ministries to hold seminars of eminent educationists here to explore the possibilities of how the gurukula concept can be exploited. Such a seminar will benefit all those who have to plan to meet India's educational requirements.

The Gurukula was intended to purge education of the defects of the examination-ridden system, to institute and promote research in Indian philosophy, science and history, and to produce literature concerning modern sciences and ancient Sanskrit learning in the mother tongue.

WEST BENGAL

In the field of secondary education, West Bengal was far ahead of targets at the end of the Second Five Year Plan. Out of a total number of 1978 high schools, 743 have already been upgraded. Besides 201 senior basic schools have been established.

During the quarter under report, 26 schools received grants for housing of students, 14 for housing of teachers, 15 for assistance to teaching in science (Rs. 5,000 each), 3 for improvement of teaching in other subjects (Rs. 15,000 each). Ninety-four schools were taken up for the improvement of their libraries.

During the period from April to June 1961 the State launched on the Third Five Year Plan. A special feature of this Plan is the emphasis proposed to be laid on women's education. A number of residential girls' schools in selected areas with facilities for cheap residential accommodation are proposed to be set up during this Plan period. The first two or three schools are expected

SECONDARY EDUCATION

to start functioning from the next academic session.

A further improvement of the service conditions of teachers has been contemplated in the shape of improved pay scales, housing facilities specially for women teachers in rural areas, extension of training facilities at government cost to existing as well as prospective teachers, and similar other benefits.

The average man is three and a half cubits tall, but he lives in a house that is much taller, and has plenty of room for the freedom of movement so essential for health and comfort. This applies equally to education. A boy should be allowed to read books of his own choice in addition to the Prescribed textbooks he must read for his school work. His mental development is likely to be arrested if he is not allowed to do this, and he may grow into a man with the mind of a boy.

-Rabindranath Tagore



AUSTRALIA

School of the Air

THE education of Australian children living in isolated sparsely settled areas in the interior, has proved to be a problem for both educators and parents. Until a few years ago the only organised teaching available for such children was that of the correspondence schools, which was supplemented by the school broadcasts provided by the Australian Broadcasting Commission. Certain features of this type of education lack of direct contact of pupil with teacher, postal delays etc.—made this a somewhat unsatisfactory met hod of teaching. Australia's answer to this general problem has been its School of the Air. It employs modern two-way radio to provide personal pupil-teacher relationship, which had so long been denied to the outback child. Through this personal contact the correspondence lessons are now aided by speedy explanations and corrections.

There are, at present, three Schools of the Air in South Australia, two in New South Wales and one in Queensland. The movement for the establishment of such schools started about 10 years ago. In 1953, a teacher was appointed officially by the South Australian Department of Education to its first School of the Air at Alice Spring.

Typical procedure at a School of the Air is as follows: Just before 10 o'clock the principal teacher takes her seat at a table in the studio-classroom, with a microphone in front of her. The studio is air-conditioned, sound-proofed and tastefully decorated. It has modern school furniture for seating special groups participating in radio lessons, and a piano. A large wall map shows the location of each of the many pupils served by the school. At 10 a.m. the theme-call is played; then the principal teacher calls in her invisible school, its pupils seated at their transceivers hundreds of miles apart from each other. Through the studio loudspeaker, she is answered by a peculiarly affecting rush of small voices, some clear, some scarcely audible, giving their call-signs from distant homesteads. The eagerness in that clamor of calling voices is haunting proof of the loneliness which School of the Air is helping to dispel. As she hears the class, the principal teacher gets them down on her writing pad and so records the pupils who are "present". The other two staff teachers check the calls coming in with a rush. Thus the roll is marked for the day. The teacher now announces the morning hymn, led by a recording of a choir, and the far-away pupils in front of their transceivers join in singing the 23rd Psalm. Then the teacher asks: "Would someone like to sing the hymn alone?" And among the babble of call signs coming back, she selects one pupil. Then from the loudspeaker comes the voice of a child's singing, distorted at times by atmospherics but clear and confident, heard by both her fellow pupils and her teachers.

After a word of praise for the singer, the lesson proceeds quickly to items of news and then to the weather chart, with constant emphasis on oral expression and voice communication. Next, perhaps, comes a composition lesson—each sentence being an individual contribution from a lonely youngster speaking hundreds of miles away. Sometime a play is given, for which the young actors prepare appropriate costumes even though the audience cannot see them. Parents have been surprised and delighted at the confidence displayed in such activities and at the joy of the participants in working with others to create something.

Finally there is a "question and answer" period, dealing chiefly with the formal work of the correspondence lessons. The session closes with the call signs of the pupils coming in with their "Goodoyes".

All School of the Air pupils are enrolled at the departmental correspondence schools in New South Wales. Queensland, Western South Australia. There is Australia or close cooperation in all States. In New South Wales a weekly report on each pupil's work-praising good work and improvement, itemizing all errors, and giving helpful suggestions—is sent by the correspondence school to the School of the Air. One lesson period each week is devoted to these reports -pupils correcting spelling errors, correcting orally mistakes in arithmetic or reading good passages from compositions. In return the School of the Air sends a weekly report on each pupil to the correspondence school. Parents report favourably on the benefits of this procedure, as do also the correspondence school teachers.

In South Australia all teachers in charge of Schools of the Air must be trained at the correspondence school and be familiar with its work: they must have personal contact with the teachers who grade the pupils' work, and must assist both mothers and pupils in coping successfully with the work

of all grades. In addition to the daily morning lesson there are now three 30-minute sessions in which reports from the correspondence school teachers on each pupil's written work care discussed, corrections heard and problems straightened out. This stimulates pupils' interest and acts as an incentive.

There is instant experimentation with different types of lessons in order to improve teaching techniques. Lessons include reading, speech training, composition, picture talks, arithmetic, music appreciation, social studies, current affairs, drama—including oral expression miming, singing, dictation, weather observation, verse speaking, and nature talks.

Possibly the greatest achievement of the School of the Air is that of providing the children of outback areas with social experiences—a vital element of personal development: belonging to a school like other children do, having direct communication with teachers and with each other; having a small community of their own. Shyness is overcome. All—even 5-year-olds—now sing and take part in lessons and plays. The School of the Air holds out unlimited opportunities for educational and social service.

SWEDEN

Swedish School Starts a Stock Exchange

Children at a secondary school in Uppsala, Sweden, will soon be learning the workings of the world of finance in their own stock exchange. They will be able to buy and sell the equivalent of real shares in an experiment aimed not at producing future brokers, but at developing an interest in trade and in increasing savings.

(Unesco News)

Swedish Adults Take Part in School Curricula Tests

About 1,500 Swedes (both men and women) between 18 and 30 years of age and representing a dozen different occupations were tested on their knowledge of mather

maties and language as part of a programme of research on school curricula carried out in Sweden. Their test scores were compared with those of young people just leaving school to find out how much they had retained of these subjects.

In most branches of mathematics, the results showed a sharp decline from school leaving to adult age. Skill in estimating, on the contrary, showed an improvement. As regards language, it was found that from school to adult level there was a tendency towards improvement, particularly as regards vocabulary. (Unesco News)

SWITZERLAND

Educational Publishers Meet in Geneva

A meeting of educational ptblishers from 22 countries organized by Unesco, was held in Geneva during July, 1961. It was the first meeting of its kind called by Unesco, though the Organization has, in the past, arranged for meetings of educational and textbook editors.

The meeting discussed possibilities of international cooperation in the preparation and production of textbooks; textbooks and international understanding; and the activities of Unesco and the Internation Bureau of Education in relation to textbooks.

The need for increasing the supply of good textbooks adapted to local conditions has been listed high among priorities by educational leaders in Africa, Asia, the Arab States and Latin America. International assistance to help meet this need has, in some cases, a long history, based mainly on private initiative, and was the subject of much discussion at the meeting.

Member States have called on Unesco for help in this field to supplement what is being done privately or bilaterally and a programme of work has been developed. The Unesco Secretariat felt, however, that it could contribute to increasing cooperation between countries and also expand its own programme along sound lines by bringing together representatives of national textbook

publishers within an international framework (Unesco News).

UNITED KINGDOM

International Understanding

A course in international understanding was recently held at Shoreditch Training College, Egham, Surrey. This course, which takes place annually and is open to all teachers, aims at promoting knowledge and understanding of the Commonwealth. The Indian subcontinent was the subject of this year's course and several Indians, Pakistanis and Ceylonese participated in it. papers and magazines from the three countries, indigenous food prepared by expert chefs, a concert of music and dancing, an Indian commercial film, visual aids and an exhibition of arts and crafts lent by the High Commissioners of India, Pakistan and Ceylon and the Commonwealth institute were all part of the plan to give the full picture. The course was experimental in that the number of formal lectures had been cut down to considerably less than in previous years and more time given over to group work so that there was greater opportunity for an interchange of ideas between students.

The lectures, of which there were nine altogether, dealt with historical, political, geographical, economic, social and cultural aspects of the Indian subcontinent. The guest speakers were top people in their subjects and they were enabled to speak with complete freedom by a guarantee that what they said would be in no way publicized outside the college.

The group worh was done under four headings: standards of living and economic development, cultural and social aspects, constitutional questions and international relations. There were 60 students, divided into seven groups, each group taking one of the four main subjects and each person within the group preparing a paper on one aspect of the subject. A special library was used to collect information and, at the end of the course, each group contributed its discoveries to a communal pool of know-

ledge. Apart from this plan, the groups were used for general discussion of the lectures and met after each lecture to frame questions to ask the speaker. These often turned out to be very astute and searching, so that question time brought to right some of the most interesting facts and views on current topics.

U.S.S.R.

An Amateur School Film Studio

The rural secondary school of Konstantinovka has its own collective farm ("Dawn"), two clubs, and a hospital. The first pupils" agricultural bridge was organised in this school, as well as a children's machine and tractor station; it also has its own construction combine. Many of its graduates qualify as tractor-driver, combine operator or animal-breeder and stay to work in their native village. Along with these academic and practical facilities, it promotes aesthetic cducation through its clubs literature, drama, music, choirs, expressive arts, artistic gymnastics, photography, etc. Recently, however, emphasis has been placed on technical clubs. All these groups (collectives) were, however, more or less separated from one another. Two years ago the pedagogical staff sought to correct this situation and to bring about greater unity in the extra-curricular groups by establishing a film studio.

Making their own films required the cooperation of many other persons and posed new and interesting and challenging problems for young technicians, photograhers, artists, literary students, singers and musicians. Eight clubs (160 members, over half of the pupils) were involved in the work.

By establishing a school film studio, the school staff solved not only problems of an aesthetic education but also organizational problems of a large student body, problems of developing work habits in the students, of a sense of responsibility and disciplined behavior. The student staff included chief operators artists and sound operators, and a studio director. The literature and drama

clubs were the first to be involved; students discussed sceneries for future films and rehearsals were conducted. Their first film was a revised versich of a former radio performance of "They Fought for This Motherland," directed by their history teacher. This required much fesearch and many interviews with villagers and veterans, to ensure absolute authenticity. Many technical production problems had to be solved (such as that of making their own movie camera). Procuring the proper film was another major problem: it could not be purchased, so they had to make their ownbuying amateur film, cutting off the end perforations with a machine made especially for this purpose, and then—their greatest achievement—they invented an accurate machine for making automatic perforations by using an ordinary treadle sewing machine, replacing the needle with a steel implement, numerous members performing the various operations. All this required patience, persistence and ingenuity. Processing the colour reversible film called for research and much technical experimentation. The next hurdle was that the events of the film took place in the late autumn while production time was March, cold and windy. No inside scenes were possible in the school studio with its weak optical equipment and lack of a powerful projector. The creative council met and decided to film the scenes on the village streets. Battle scenes were particularly difficult.

This project exerted considerable influence on regular school work, and the morale and discipline of the school as a whole. More and more students participated in the project.

Film amateurs are becoming more and more numerous; they work in clubs, in childrens' technical stations or as individuals. The above experiment shows that every rural school is capable of organizing an amateur film studio. But these schools should be helped by the center with equipment, such as this school acquired in obtaining the inexpensive amateur camera "kiev", and should be supplied with film and chemicals, Such school film studios play an important, part not only in the aesthetic

education of pupils, but also in the entire teaching-upbringing work of the school.

Learning by Radio and Ty in the Ukraine

Lessons by radio and television are proving more and more popular in the Ukraine Republic of the Soviet Union, both among young and older listeners.

Twice weekly during the past year, programmes have been broadcast for lower secondary school pupils in which a wide range of subjects are treated in a simple, practical way likely to arouse the interest of young listeners. Besides subjects in the normal school curriculum, there is also a series of broadcasts for senior pupils entitled "Advice from an Older Friend" in which workers, engineers and others talk about their jobs in factories, laboratories, kolkhozes, etc.

A popular programme for advanced students started two years ago is a weekly correspondence course, specially adapted to the needs of young men and women who wish to continue studying in their spare time. Lessons are broadcast in the morning and repeated at night so that the maximum number of students can participate.

For televiewers, in the Ukraine, there are now two English language courses broadcast on Sunday mornings. A first-year course is given for beginners who have no knowledge of the language, followed by a second course designed to enable viewers, after two years' study, to read, write and speak English. (Unesco News)

UNESCO

Ghosts in Marathi—Frogs in Tamil

As part of its Literature Translations Programme, the United Nations Educational, Scientific and Cultural Organization (Unesco) is giving assistance this year to the translation and publication of no less than 26 works from the literatures of Denmark, England, France, Greece. Italy, Norway, Spain, the United States and Russia. These famous classics will be

translated into Burmese, Thai, Vietnamese, and ten different languages of India. The complete list of titles to be translated into Indian languages is as given below.

Hamlet (by Shakespeare), From English: Into Telegu Macbeth(Shakespeare) into Oriya Othello (Shakespeare), into Hindi Leaves of Grass (by Walt Whitman) into Assamese Walden (by Thoreau), into Assamese, Bengali, Kannada and Puniabi

From French: Tartuffe (by Moliere), into
Hindi
Le Bourgeois Gentilhomme
(Moliere), into

Hindi

From Greek:

Agamemnon (by)

Aeschylus)

Antigone (By) into

Sophocles)) Tamil

Medea (by)

Euripides))

The Frogs (by)

Aristoph-)

anes)

From Italian: The Prince (By Machiavelli), into Assamese and Telugu

From Norwegian: Ghosts (By Ibsen), into Assamese and Marathi

Wild Duck (Ibsen), into Marathi

The Viking of Helgeland
(Ibsen), into Marathi and Malayalam

From Russian: War and Peace (by Tolstoy), into Assamese and Oriya.

From Spanish: Don Quixote (By Cervantes), into Hindi and Oriya

SECONDARY EDUCATION

It is now more than twelve years since the Unesco Translations Programme was begun. At first, the project was confined to translations from and into Arabic. Since programme has gradually the developed until it now covers ten So far more Uthan 90 distinct series. volumes of translations into English and French have already been published, and more than 150 others are in process of translation or publication. These translations into English and French are from the literatures of most of the major areas of the world, and in particular those of Asia. The translations from Asian languages into English and French are undertaken within the framework of Unesco's "Major Project" for promoting mutual appreciation of Eastern and Western cultural values. The translations into Indian languages are being commissioned by the Sahitya Akademi (National Academy of Letters).

'Education is a discipline'

By this formula we mean that discipline of habits formed definitely and thoughtfully, whether habits of mind or of body. Physiologists tell us of the adaptation of brain structure to habitual lines of thoughts, i.e. to our habits.

Charlotte Mason



Picture Source Book for Social History—Late 19th Century By Molly Harrison and O.M. Rayston. Published by George Allen end Unwin Ltd., London. 1961.

THIS is a unique book. It consists of 92 well chosen pictures depicting every side of English life in the Victorian age.

As the book is meant to serve a reference purpose, it rightly begins with an index. The text has been chosen with good care, depicting the adventurous age when the old order was changing rapidly 'yielding place to new'. Customs and fashions of those days have been presented with provocative introduction and delightful commentaries taken from the *Punch* poking fun at new ideas.

For example, today when automobiles are an accepted routine of our life, it is enlightening and highly amusing to read an advertisement stating fifteen reasons why 'an auto-car' was better than a horse-drawn vehicle. Again Ruskin's prophetic remarks on the conquest of space and time have a special relevance for us today. "Space and time did not want any sort of conquering: they wanted using. A fool wants to shorten space and time; a wise man wants to lengthen them both."

The book has an elegant get-up. It should find a place in every school and college library. Teachers of history and social studies would indeed profit from a study of this book. If we had such source books for the social history of India, it

would greatly help in a better understanding of the subject.

R. Vajreswari*

The Design and Equipment of Science Laboratories, Council of Education Press Ltd., 10, Queen Anne Street, London, W.I.

THE quality of science teaching in a school largely depends upon its laboratory. But the effectiveness of a laboratory is conditioned by its design and equipment. With the changing concept of science teaching in the secondary schools, planning for new laboratories should also be suitably modified in the light of new requirements. The present booklet describes certain important aspects of designing new laboratories for middle schools and advanced classes. Specific suggestions regarding site, space, position of doors and windows, lighting arrangement, etc. are given in the first section. The next three sections deal with the planning of subject laboratories for the teaching of physics. chemistry and biology. These sections are in the form of articles written by three experienced science masters. Each article is illustrated by well designed laboratory plans and the basic equipment required. If equipment of science laboratories means the apparatus and material needed practical work and demonstration, then the present brochure provides no such information except the ten pages of advertisements at the end. However, the term equipment in the title appears to have been used in a wider sense. A small bibliography is also appended at the end.

^{*}Lecturer St. Christopher Training College for Women, Madras.

As in the U.K. so in India, facilities for teaching science in our secondary schools are expanding rapidly, and hundreds of new laboratories are added every year. Particularly while upgrading high schools into higher secondary schools with science as elective, one is confronted with a new task of establishing separate laboratories for physics, chemistry and biology. Furthermore, new high schools come into being every year in a unprecedented numbers and a laboratory is a 'must' for all. Qualitative improvement in science teaching can only be accomplished and targets regarding the strengthening of science teaching projected in Plan blueprints can only be fulfilled if ingeniuously designed and adequately equipped laboratories are made available to pupils. This publication teachers and presents in brief very valuable ideas and experiences on laboratory designs.

The booklet will prove very useful to our school managements, education departments and teachers' colleges.

°R. H. Dave*

The Health of the School Child (H.M.S.O) 1958 and 1959 Com., Report of the Chief Medical Officer of the Ministry of Education London.

THIS valuable book contains the report of the Chief Medical Officer of the Ministry of Education, England, for the years 1958 and 1959. All aspects of the health of the school child are dealt with in great detail.

Under the title "General Work of the School Health Service", the prevalence of diseases discovered at the medical inspection, the cooperation received from parents, teachers, the hospital and the general medical practitioners for the improvement of the health of children, the work of the school health visitors and studies in child health are described very well. Special problems like smoking by school children, cleanliness of children and treatment of the handicapped are discussed. The dental health of children is thoroughly treated with respect to the

extent of incidence of dental diseases, the current practices with regard to the treatment of dental diseases, the inadequacy of medical aid in this field and the methods to be adopted by school authorities to improve the dental health of children.

Another chapter describes how cooperation between speech therapists, parents and teachers can help children with speech disorders of various kinds like aphasia and stammering. A chapter is devoted to the criticism of the defects of the present system of recording the data of medical inspection and useful suggestions are offered to improve them. The systems of medical inspection in schools in vogue at present are examined and a gevised scheme is proposed. As an alternative to the routine medical examination conducted at the times of admission and leaving school, doctors are to visit the schools at the end of each term and during the terminal visits selected cases are examin-The headmaster, the teachers, parents and physical education teachers note cases of defective children and by common consent send them up for terminal examination. This system seems to be worth an extensive trial from the encouraging results obtained in a few schools where it was tried.

Visual defects, defective hearing, food poisoning, tuberculosis and accidents are treated exclusively. Many other aspects of children's health come in for a fair share of consideration and practical suggestions are given for improving the health of children from the point of view of these defects.

The mental health of the children receives adequate treatment. Valuable statistical data are profusely supplied to illustrate the problems, correct inferences are drawn and highly useful and effective remedies are suggested.

The book is a valuable addition to the libraries of the training colleges and secondary schools. The book stresses the importance of children's health, a matter in which we in India have to go a long way yet.

^{*} Field Officer, Directorate of Extension Programmes for Secondary Education, Delhi.

The school health service has still not taken root in our country. A look at this book will show how England has progressed and and how we in India can learn a useful lesson.

H.S.S. Lawrence

Modern Science And the Nature of Life By William S. Beck. Published by Penguin Books 1961.

TROM the beginning of human civil ration thinkers and philosophers, sociologists and scientists have tried to find an answer to the puzzling question of all times that still remains a question—What is the nature of life and how did it originate? Dr. Beck's book is a vivid extension of discussion on the same question though essentially on a scientific plane. Admittedly he has got an advantage in getting a substantial initial start in the sense that the contributions of great men of the past have helped his original and critical thinking. As a book on modern science, it is an excellent and lucid exposition of the subject and has come out at a time when more and more intelligent people are taking active interest in science. The author's determined effort in trying to reach the non-scientist also, is commendable but the very nature of some of the topics may prevent the layman from grasping every detail thoroughly.

Divided systematically into four parts, the book is very absorbing for one who is interested in the subject. Dealing historically, Dr. Beck discusses in Part I how science and culture interact with each other while man is endeavouring to overcome nature and its mighty forces. Dealing with the emergence of Biology as a science the author holds the view that though it should have been the first, Biology and its systematic study appeared on the scene only after Physics and Chemistry had made sufficient progress.

The second part begins with the introduction of the Cell-theory and how it threw open the gates for knowing many more revealing facts in the field of the Living World. After discussing evolution, its process, evidences and criticisms, the author (while priting about the nature of life) tries to describe machine aspect of living systems. The third part is comparatively abstract as it deals with the analytical approach for finding facts.

The last part is devoted to 'the place of Biology in the modern world with its various problems. 'Gene' and 'Heredity' have been discussed in an interesting manner. Great optimism is expressed about the intended biological researches in the direction of synthesising the smallest living unit.

The author has made references to the contributions of a number of western philosophers but he has said nothing of Indian thought on this subtle problem. The nature of cosmos and its origin has been the subject of much discussion in Indian Philosophy; Vivekananda, who is not unknown to the American Intelligentia, has tried to explain the problem from purely scientific angle which the author could have examined.

The book would be of interest to the specialist as well the non-specialist, particularly the teachers. A teacher who wants to acquaint himself with the way Biology affects us now and the implications its progress will have for us in future, will find it exceedingly useful.

S.S. Sharma†

West Africa in History: Volume 1 (Before the Europeans) By W.F. Conton, Published by George Allen and Unwin Ltd., London.

A FRICA has in recent years shot into prominence on a surging tide of nationalism and the Continent that lay for centuries in hushed obscurity seems suddenly to have become a focal point in our columns of daily news. Even so, how many of us read with any deeper insight than what the printed word tells? Deep rooted in our minds are the pre-conceived

^{*} Principal, Government College, Vellore. † Lecturer, C.I.E. Delhi.

SECONDARY EDUCATION

notions that the vast African Continent was covered with jungles and peopled with inhabitants who had hardly any idea of civilisation until the European went there. Indeed, it will come to us as a shock to know that behind the independence movements of modern Nigeria, Ghana and Sierra Leone lies a shared memory of the greatness of ancient empires of Ghana, Mali and Songhai—empires that were no less in grandeur than our ancient Gupta or Mauryan periods of history. This memory is kept alive today in their folk tales and songs and in their common heritage of art.

West Africa in History, volume one, tells the story of this great past. In volume two, which is to follow, the author (who is Principal of a Government Secondary School, Sierra Leone) will try to show how this greatness was temporarily lost and how it is now being regained. The book is meant to be a textbook; it is

addressed to pupils and teachers and explains how it ought to be used so as to cover the year's work in the form just before that in which the School Certificate Examination is taken. At the end of the book, he gives for each chapter a list of suggested questions for the teacher's use.

The main quality of this book is its presentation, characterised by directness and simple expression. As the author says in the opening lines of Chapter One: "This book stells a story. It is a true story and I hope that you will also find it an exciting one. It is a story of how the way of life of man and woman in the West Africa has changed gradually since man first began to live here about 500,000 years ago. As we shall see, these changes were slow at first, and were not even continuous. Today, however, they are both continuous and rapid."

Kala Thairani*

^{*} Education Officer, Ministry of Education, New Delhi.

To Our Readers

"SECONDARY EDUCATION" is a quarterly journal published by the Union Ministry of Education in April, July, October and January each year.

The journal is devoted to the problems faced, and the developments and progress made in the field of Secondary Education in India and Abroad.

Besides the usual features—Activities at the Centre, Window on the World, Around the States—the journal includes illustrated articles, accounts of individual school projects, book reviews and a Readers' Forum.

 Annual Subscription
 ..
 ..
 Rs. 3.00

 Price per copy
 ..
 ..
 Rs. 0.75

Subscriptions should be sent in advance by Money Order to:

The Manager of Publications, Publications Branch, Government of India, Civil Lines, DELHI-8.

Back numbers of the journal at 50 naye paise per copy, are also available and can be had from the Manager of Publications, Government of India, Civil Lines, Delhi-8.

EDITOR

ORDER FORM—SECONDARY EDUCATION

To

The Manager of Publications, Publications Branch, Government of India, Civil Lines, DELHI-8.

Sir,

My/Our old subscription No. is.....

I/We require.....copies.

Yours faithfully,

(Name and address must be given in block letters)

No Import Licence Required!

For VISUAL EDUCATION at its BEST in YOUR CLASS ROOM

BUY

WORLD'S FINEST SELECTION

OF

IMPORTED SCIENCE CHARTS

Offered from READY STOCKS

WIDEST RANGE ON ALL SUBJECTS

• GENERAL SCIENCE: DAVY SMITH Science Charts (set of 32);

'PELLA' Elementary Science Charts (set of 160).

• PHYSICS : 'BLACK'S

'BLACK'S' Set of 60 Charts: Atomic Physics

Charts (set of 6);

Electro Magnetic Radiation Chart etc. etc.

• CHEMISTRY :

Periodic Table of Atoms Chart;

Organic Chemistry Chart, Metals Charts etc.

BIOLOGY :

'JURICA' Biology Charts (set of 32):

SMALL WOOD' Biology Charts (set of 60) etc. etc.

HEALTH/PHYSIOLOGY: 'GORDONS' Grapic Health Charts (set of 32);

'CARLSONS' Health Charts, NYSTROM Physio-

logy Charts:

German anatomical mannikins of Man & Woman

etc. etc.

• ENGINEERING :

Automobile Engineering Charts (set of 32);

Locomotive & Diesel Engine Chart etc.

Write to-day for Details & Prices
Mention subjects of your interest

Estd: 1949

DIRECT IMPORTERS

Telephone: 678

JAISONS & SONS

COMPLETE LABORATORY FURNISHERS AMBALA CANTT.

Dedicated to the Service of Scientific, Technical & Medical Education



CONCENTRATION

was the secret of sucess

of Arjun's Archery!!

HEADS OF HIGH SCHOOLS AND
PRINCIPALS OF EDUCATIONAL INSTITUTIONS
can create many more Arjuns in their classes with the helpoof
OUR SLATED ROLL-UP OUT LINED BLACK BOARDS.

They are recommended and approved for use by Directors of Education of all states in Bharat and blessed for their Quality, Utility and Novelty by eminent Educationists at Home and Abroad.



Megh Slate Factory Private Ltd.

Post Box No. 24,

BARAMATI (Poona) INDIA

Our Out-lined Roll-up Black Boards mark the Beginning of New Era in Education 4

P293/2/61-T1/62.

YOUTH

For objection and unbiassed authoritative information on educational, cultural and youth welfare programmes, experiments and activities in India and abroad read "YOUTH".

An excellent medium for advertisements

Issued quarterly:

Annual subscription .. Rs. 4.50 nP.
Single copy .. Rs. 1.15 nP.

Enquiries regarding supply of copies/subscription should be sent to the Manager of Publications, Delhi.

ALSO ADVERTISE IN YOUTH

	Four Issues	Single Issues
Full page (8" × 6")	Rs. 350.00	Rs. 100.00
Half page ($8'' \times 3''$ or $4'' \times 6''$)	Rs. 210.00	Rs. 60.00
Quarter page (4" x 3" or 2" x 6")	Rs. 125.00	Rs. 35.00

N.B. Inside front cover 25 per cent extra and only full page advertisement is accepted for this special position.

All enquiries regarding advertisements should be made direct to Shri Tarlok Chand Sharma, Advertisement Agent for Government of India publications, P. O. Box No. 1447, Delhi.

Telephone No. 221289

Gasplants, Gasholders, Burners, Taps

COOLING TOWERS, STEEL TANKS, LAB. EQUIPMENTS

MANSFIELD OIL GAS CO. LTD., CALCUTTA-15

Post Box No, 124

Phone No. 24-2382 (3 Lines)

BRANCH : 301, LINGHI CHETTY STREET, MADRAS-1.

P-293/3/62T/-3/62

For All Kinds of Minerals, Rocks & Geological Specimens in Cabinets & Loose.

. Contact:

STARKE & CO.

138, Kamla Market, NEW DELHI.

Phone: 229157

Grams: CHINACLAY

P293/4/62

TO LET