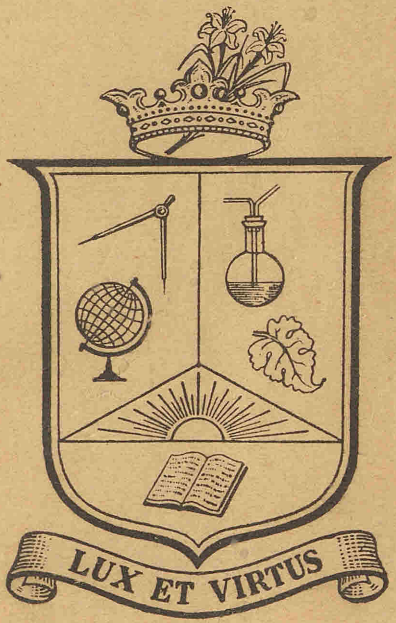
St. Joseph's Training College

MAGAZINE

1957—'58.



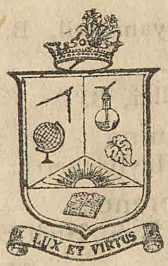
MANNANAM

St. Joseph's Training College

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MANNANAM

Vol. 1.

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Sri A. Ramaswamy Mudaliar, D. C. L. (Oxon) K. C. S. I.

Vice Chancellor,

University of Travancore & Kerala.

EDITORIAL

The editing of an Annual in the very first year of the life of this College may seem a premature venture. In embarking on it, we have been goaded on by the motive that it will serve as a connecting link between the year that is ringing out and the year that will soon ring in. Besides, it will be a reminiscence of what the College has been able to achieve, however small that achievement may be, in its infancy.

* * * *

One hundred student trainees will leave the portals of this institution this year, and will be posted as teachers in the different schools of the State. These students, particularly those who have associated themselves with this venture by contributing articles, will be constantly reminded of their Alma Mater whose memory will be an inspiration to them to pursue the ideals we have been abte to inculcate. It is expected that in the years to come, the ex-trainees will, use this Annual as a forum for ventilating their views on the many knotty problems that will confront them in their day-to-day work as teachers.

* * * *

It is a matter for gratification that the proposal to edit an Annual was hailed by our students with joy and enthusiasm, and their response was unexpectedly encouraging. The number of articles we received was more than what we could publish. We congratulate our students for their ready response and the very good work which some of them have been able to turn out. Our special thanks are due to our well-wishers and friends and the members of the staff who co-operated with our efforts by sending in their valuable contributions.

* * * *

It is hoped that our Annual will grow in strength, efficiency and usefulness in future years by bringing within its compass articles dealing with every aspect of education, and by introducing new features, the ex-trainees and other experts in the educational field extending to us their willing co-operation and encouragement.

REPORT

Mr. President, Rev. Fathers, and Gentlemen,

It is my pleasant duty to place before you a short account of the starting of the St. Joseph's Training College, Mannanam and its working in the academic year 1957—'58.

The need for providing training facilities for graduate teachers was keenly felt during the last several years. There was rapid rise in the number of High Schools during the last decade. Improvement in the salary of Secondary School teachers served to attract more graduates to the teaching profession. The Education department became more and more insistent that only trained teachers should be entertained in schools. The existing training institutions in the State could provide for only a fraction of those who sought admission. In December 1955 a Religious Week was held at Thevara. The suggestion that a training College should be started was the outcome of the deliberations of the Religious Week. Accordingly the Manager of the St. Ephrem's High School, Mannanam who is also the Prior of the St. Joseph's Monastery, the Mother House of the Carmelite Congregation of Malabar made up his mind to start a Training College in this historic place. His Grace the Most Rev. Mar Matthew, Kavukatt, Archbishop of Changanacherry blessed and encouraged the scheme; and the formal application to start a Training College was submitted to the University of Travancore on the 6th of July 1956. This application was very sympathetically considered by the Vice-Chancellor, Sri A Ramaswamy Mudaliar and the Syndicate in its meeting held on the 23rd July granted preliminary sanction to start the College during the academic year 1957—'58.

Father Prior set about collecting funds and from the beginning of January 1957 building materials were gathered and the foundation stone of the college building was blessed on the 7th of February by the Very Rev. Father Maurus Prior General. A University Commission consisting of Dr. C. S. Venkiteswara Iyer the then D. P. I., Sri Paul Varghese, M. Ed, the then Principal of the Govt. Training College, Trichur and Sri M. Gopalan Nair, M. A., L. T., Principal, the N. S. S. Training College, Changanacherry visited the site of the building on the 21st of February. On the recommendation of the Commission final sanction to start work was accorded in the beginning of July and on the 8th of July the College building was blessed by the Very Rev. Father Prior and regular work began.

The original permission was to admit 80 students of whom 55% would be selected by the Department and the remining 45% by a committee consisting of the Principal, a representative of the Management and a representative of the Syndicate. The ad hoc committee met on the 4th of July and made the selection of 36 from among a host of applicants. As the rush for admissions was really great

as a purely temporary measure for this year the Syndicate granted permission to admit 20 more, thus bringing up the strength of the class to 100 distributed as shown below according to the optionals:

English and	Mathematics.	10
,,	Physical Science.	3
,,	Nhtural Science.	11
,,	History.	31
,,	Geography.	16
Mathematics and	Physical Scienc.	15
,,	Geography.	2
Physical Science &	Natural Science.	10
Natural Science &	Geography.	1

The Staff. We were fortunate in securing the services of the following experienced teachers:-

Sri O. C. Varghese, M. A., L. T. (Social Studies- History and Methods of Teaching)

Sri M. C. Ittoop, M. A., L. T. (Methods of Teaching English)

Sri C. M. Paul, M. A., B. T. (Methods of Teaching Mathematics & Phys. Science)

Sri T. C. Cherian, M. A., L. T. (Methods of Teaching Natural Science & .Hygiene)

Rev. Fr. J. Kalayil, M. A., M.Ed. (Educational Psychology)

Sri D. Varghese M. A., Diploma in Physical Education of the St. Berchmans College Changanacherry acted as part time Physical Training Instructor.

Sri N. V. Varkey Drawing Master of the St. Sebastian's High School, Kadanad was part time Arts and Crafts Instructor.

105 were admitted in the course of the year of whom 4 left with relieving certificate with the sanction of the D. P. I. to join other Training Colleges and two left to take up work elsewhere. The strength at the time of presenting the students for the B. T. examination was 99. All have been presented for the examination and we hope all will fare well in the examinations which start on the 31st of March.

Practice Teaching. For practice teaching, besides the St. Ephrem's High School we had the kind cooperation of 7 other schools viz. the Government High Schools, Ettumanoor and Kudamaloor, the St. Aloysius High School, Athirampuzha, the St. Georges's High School, Kaipuzha, the D. V. High School, Kumaranalloor, the Sacred Heart High School, Sacred Heart Mount, and the N. S. S. High School, Karapuzha. The Headmasters of the above High Schools and the members of the staff concerned have laid us under a debt of deep gratitude and to one and all of them we feel highly obliged.

The Visit of the Supervising Examiners The visit of the supervising examiners appointed by the University to standardise the results of the practical work was an important event of this academic year. Sri A.N. Tampi, B. A. (Oxon) Barrister-at-Law Diploma in Education, Retired Education Director, Mrs. O. C. Srinivasan, M. A., L. T., Retired Education Director, Madras and Sri P. S. Abraham, Principal & Professor of the M. Ed. College visited this College on the 14th of February and examined the teaching of 17 students. On the 16th they visited the College again and examined the records of the practical work. The supervising examiners expressed satisfaction at the work of the students.

Social Education Camp. Social Education Camp was conducted from

the 3rd January till the 9th and all our students attended the camp. Prof. T. C. Cherian was the chief Camp Officer and student leaders and committees looked after the various activities of the camp.

Discipline. As the majority of our students are selected from teachers discipline was not a problem for us. We have managed to foster a family spirit which is so conducive to education worth its name.

The Hostel. When the College started work the problem of accommodation was rather acute. Rev. Fr. Cleophas the Rector of St. Aloysius Boarding came to our help. He found boarding accommodation for about 35 and messing facilities for many more. When the College building was completed 32 were accommodated in the hall intended to be the Geography Room. In the meantime Father Prior laid the foundation of the hostel building and in the short space of three months the ground floor was completed and was occupied on the 3rd of January. The upper floor is nearing completion and it is hoped that there will be ample provision for the next year, when we can naturally expect limitation of admissions.

Extra-curricular Activities. We could not engage in as many extra-curricular activities as we wished. A Teachers' Association for the whole College and a Literary and Debating Society for the hostel carried on useful work.

Provision is made for Badminton and Volley in the College grounds and Foot Ball and Basket Ball are played on the High School grounds. We hope to provide for Basket Ball also in the College grounds next year. We entered the Inter Collegiate Tournament in Basket Ball and played with the Nirmala College team on the Kothamangalam College ground and led the game with 15 points. In the second round we played on the C. M. S. College ground with the Kozhencherry team and had to own defeat.

The intramural tournament in Volley and Badminton as well as competions in sports were held in preparation for the College Day and the prizes will be distributed presently.

Moral Formation. The moral formation of the teacher is undoubtedly of supreme importance; and we have tried to give as much importance to this aspect of the teachers' training. A course of general ethics was given to all students and the Catholic students were given a special course in Religious Instruction.

Our Obligations. Before concluding this report I must acknowledge our thanks to those to whom they are due. Our thanks must first go to God the giver of all good gifts and to our Heavenly Patron, St. Joseph for showering on this institution abundant graces. Words fail me to record the services which the Very Rev. Father James T. O. C. D. our Prior and Manager has rendered to the cause of education in this country by raising out of nothing this magnificent educational institution. The services of Father Fabian in supervising the coustruction of the buildings are inestimable, and he has laid us under a bebt of gratitude.

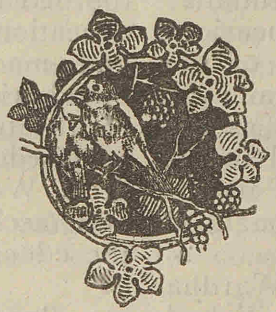
I must now turn to my esteemed colleagues on the staff of the College. My thanks to them are no mere formality. I know that the success of

our work is due to their hearty and generous co-operation in the working of the College. My thanks are due to one and all of our students for the excellent family spirit that they ever strove to preserve in this College. I may assure them in return that if they continue their works in their various schools in the spirit which they evinced, they will be crowned with complete success in their work.

Mr. President and Mr. Sheppard allow me to thank you for the readiness with which both of you accepted our invitation to be present at this functions. Mr. Joseph is a great educationist and he is the son of great Headmaster, one who is remembered with as much veneration as Dr. Arnold of Rugby and his type. Mr. Sheppard also is great as a teacher and he can claim as his forbear a great teacher of English in this country. It is very gratifying to see that Mr. Sheppard has to his credit a couple of grammar books and he is editing a number of English Text books.

In conclusion I thank all the guests who have found it convenient to grace this occasion by their presence.

L. D. S. Mque.



STRAY THOUGHTS ON EDUCATION

PROF. THOMAS SRINIVASAN, M. A., L. T.

Of all the things that are waiting for reconstruction at the hands of the national government, education is the most fundamental. It is also a crying need. The British government of India never really envisaged the educational structure as a whole. In the 19th century the Hunter Commission, in this century the Sadler Commission were busy probing the structure and content of Higher education.

Odds and ends of education. After the introduction of the Montague-Chemslford Reforms education became a transferred subject in British provinces. Ministers popularly elected were anxious to get on with the task of spreading Elementary Education. The hiatus between the two structures was left to be considered at a later stage by the Mudaliar Commission on Secondary Education. The drive and the energy of the chairman of that Commission and the fact of his official position as the head of a University have led to the implementation of some of its recommendations, strangely enough, at the University stage.

In the meanwhile the Wardha system of education of Gandhiji had broadened into the Basic System of Education. Congress ministries, in their zeal for Gandhism are pushing ahead with this system; training schools, lower and higher, elementary schools are fast being converted into Basic Schools and new Basic Schools are proliferating.

Thus the Indian system of education is conspicuous for its lack of a system. In fact it cannot be called an Indian system at all. It is not rooted in the past of our nation; it does not stem from our national needs, nor our psychology. The great fact of the past ten years has been the political integration of the whole country. Economically too we have been taking a new road inspite of the emphasis on small industries. India is giving in for large industries on a mechanistic basis. As such Technological education must be given the highest priority.

It cannot be said that the dimensions of the educational problem in India have been realised by the administrators of the land. The first requisite is to clear the ground of the detritus of the past. The whole educational process must be integrated and made to articulate to certain broad principles conceived in the light of the future for which the country is poised. We want technological progress. We want therefore a scientific and mechanical bias to be given to the education of our young.

Secondary Education is the key. In the West education today falls into two great halves There is the education for all which today is recognised on all hands to be no less than Secondary Education. It is here that on the one hand the cultural content of education is stressed and on the other the equip-

ment for a scientific career takes place by the study of general and specialised sciences, of Biology, of Chemistry and of Mathematics which is the best discipline preparatory for engineering careers. It is this section of education which determines the life of a nation.

It is from the 'real' schools that German technology derived its strength. Today more than one half of Russian youths are put through scientific courses. It is the secret of their advancement in agriculture and engineering industries. It is this field that lies sadly neglected in India. Education in all its secondary reaches lacks aim and drive; we are busy with literary, even only verbal training at a time when we ought to instill in the young minds habits of thinking and doing, the eagerness for knowledge and the awareness of science.

It is in this sphere also that there is the greatest amount of misjoinder of aims to methods. We are busy discussing duration when it is evident that Secondary Education in India is an aimless drift from school to University. We are quarreling about language and neglecting the teaching of things and the inculcating of the habits of investigation and construction.

Inculcating a scale of values. When we have well and truly laid the foundation of a national system of education at the popular level for the masses in the secondary stage, we could well afford to leave the stage of higher education to shape itself. Here too we must however be clear about our aims and precise about our means. What is the purpose of the seven and half lakhs of students who are crowded into our colleges in predominantly literary courses? University education is meant to provide for leadership, for the advancement of knowledge. At present we are allowing our best minds to float about on a sea of circumstance, aimlessly, listlessly with disappointment in their hearts. It is only by the drastic reforms of Secondary Education that we can divert to constructive channels the large mass of young talent that now goes to waste.

While giving a technical bias to our secondary education we must not however forget the humanities. Technical education cannot help our students to acquire a scale of values; it will only produce men accustomed to obey regardless of the demands of the human personality. Education must help to produce men of rich personality, aware of the great values that constitute civilised life.

All told the education of India holds out the biggest challenge to the constructive ability of Indians.

Audio-Visual Aids in Education

C. M. PAUL M. A., L. T.,
Lecturer in Physical Science & Mathematics.

Now-a-days audio-visual aids have definitely captured an important place in the modern methods of teaching. It is a pure psychological fact that children always love pictures and they observe them with keen interest and attention. The pupils cannot remember all the details however much they may read about them from books or they may be instructed in the class by the teacher. The triplet goes,

If I hear, I forget,
If I see, I remember,
If I do, I learn.

So if they have seen pictures, studied them, and interpreted them the impression and information gained are more lasting and they can recollect them whenever necessary. Pictures prepared with care and forethought become valuable illustration in class teaching. Not only do they take away from the children the feeling that they are learning but also the sight of pictures in a great relief to their work and diminishes the class room fatigue. If the pictures are coloured they become more and more vivid and entertaining and the impression more lasting. As times advanced and scientific inventions supplied better modes of illustration Magic lanterns and other devices began to be used. So it is highly useful for the teachers under training to know about some of the scientific aids in teaching, their purposes, uses, and working.

Projecting lantern was the first to enter this field of education and it was first used in our country by the European Missionaries to illustraite their Bible classes. Pupils assembled in large numbers because naturally the pictures attracted their attention. Teachers in schools also saw the use of lantern projectors and they found how more vivid and colourful illustrations can be given to the pupils by projecting lanterns than by their own drawings on the black board.

A picture can be projected in no time under modern conditions with the aid of electricity if a ready lantern is fitted in the class room. Otherwise the teacher takes much time to draw a diagram on the black board and if he has not artistic tastes his figure becomes imperfect and unattractive. So every school must possess a lantern projector and it must be fitted in a central room where the teacher can assemble his pupils if he thinks that he has to illustrate his lesson by slides. It is not enough to procure a lantern of suitable power but it is more important to make a collection of necessary slides. Many educational slides on different topics are already in existence and they can be ordered for the school use. But it will be found necessary to make one's own slides for illustrating one's own

lessons. So the teacher should know how to make lantern slides.

Ordinarily slides are made by getting the positive prints from the photographic negatives upon sensitised glass plates of suitable size. (3″×2¾″) But the teacher can improvise his slides in the following manner. One surface of the glass plate is etched or roughened by acid or emery. Then the drawing is made on it by coloured pencil, crayons or ink and it is then used as a slide. One advantage of this slide is that it can be washed away with soap and water and used again for another drawing. If the picture is of the proper size the glass plate can be placed over it and the picture traced out.

Another method is to give a coating of clean shellac or gelatine solution to the glass plate and to draw the figure on it. This slide also can be washed and used for another picture. A fourth way of making a slide is to get the matter typed or drawing made on cellophane paper covered by carbon paper and to get it bound between two cover glasses. Thus the teacher can make a large number of slides useful for illustrating his lessons

Magic lantern has now given place to the Epidiascope or the Reflectoscope. By the former we can project only transparent pictures and slides are to be got ready. But the epidiascope projects also opaque pictures by reflected light. So any picture or paper, post card, or in the text books can be projected for explanation. It is a valuable aid in the teaching process since it does away with the need of drawing the picture on the board and at the same time gives a fair-size diagram on the screen for the teacher to illustrate and explain. It saves time, and enables the children to understand the details. In the Epidiascope there is also an arrangement for projecting transparent pictures and some are furnished with attachments for the projection of film-strips.

If stationary pictures can serve as valuable aids for illustration, then certainly moving pictures are bound to produce greater effect and better results. As a medium of instruction the cinema is unique. Its greatest value lies in the readiness with which it attracts pupils of all ages and all tastes. The instructional and educative value of the common films are of secondary importance, but if they are well produced having topical bearing with a view to class room instruction then they will have an important educative value.

Advantages of film in education are manifold.

1. The distant scenes, places and objects of educational interest in all branches of Science and History, Industry and Agriculture, etc., are brought nearer to the pupils. They can see in pictures how the various processes are actually going on in their proper natural setting, thus bringing the children into direct contact with the realities of life.

2. It replaces to a certain extent the school excursion. It is not posible to take pupils to every place of interest to see first hand how the different factories or processes are at work. The film visualises the scenes as best as they can. Moreover, there are not every thing that the pupils should see in the surrounding neighbourhood. So this is the best way for the pupils to see them at work.

3. Some functions such as Exhibitions or Fairs, Dharbars or coronations, annual festivals or conferences which do not come often, can be filmed and shown to the pupils at different places at all times. Thus the film also helps as a record of events which are not repeated so often as to enable the pupils of all times to see it.

4. The film develops the imaginative and interpretative powers. The children watch the pictures and try to explain and understand them. There is always an endeavour on their part to make it intelligible for themselves because they cannot help but wait to hear the explanation from others as the pictures are constantly changing.

5. The pictures of great factories, the products of great engineering skill, such as great irrigation and hydro-electric projects, great steel works, coal mines, oil refineries, agricultural and dairy farms, etc., make the children visualise the great romance of science and help to inspire in them the vast possibilities of science. They might catch a spirit out of it so that they may choose a vocation which really appeals to their taste and imagination.

Thus film has great educative and cultural values. It supplies a bridge between actual things and the descriptive explanations of the teacher. However much the teacher may take pains to explain the details, it always makes the children understand better when they actually see them at work. Therefore it must be one of the programmes of school work to take children occasionally to cinema shows when educational films are exhibited.

Some schools now possess the sub-standard (16 m.m.) cinema film projector and it is becoming popular in schools. Its use is entirely free from danger since the film is non-inflammable. There are many educational films already available and the school should possess a few important ones. The Educational department and the U. S. Bureau of Education also lend films to schools which can be obtained and shown to pupils. The teacher must have seen the film beforehand when he can make a note of the special points to stress and to see the unsuitable material through quickly. The use of sound film as a teaching medium is hardly justified owing to the extra cost and trouble involved and the inability of the pupils to follow the explanations given in the film.

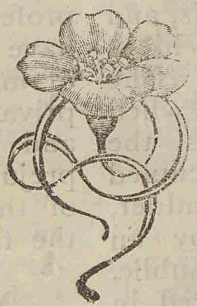
Another new aid in education is the Radio Broadcast talks. Radio has now-a-days begun to enter the sphere of education. Broadcast talks on educational matters by eminent educationists and technical men in different professions are now a regular feature of the B. B. C. The B. B. C. broadcasts special seasonal courses in different subjects for the benefit of the school children. Pamphlets giving details of the course are prepared in advance and sent to all schools. In India also educational broadcasts are now a regular feature of the programmes of the All India Radio. The talks of distinguished men of science and Industry, Politics and History at the microphone may arouse enthusiasm which is unique in its own way. The Microphone is now-a-days largely used to arouse political consciousness in the country. Thus speeches of eminent men are made possible to be heard by the population at large which but for

this scientlfic aid would have been impossible.

However, there are handicaps in this kind of educative publicity. Most of the schools are not provided with receiving sets or are too poor to get provided with these. The radio broadcast talks do not synchronise with the teaching in the class room and the topics of the broadcast. Many children are poor listeners and cannot follow the talks.

In this connection it is important to remember that these talks are not intended to replace the teacher but to help him in his regular teaching. After broadcast the teacher should revise the subject matter with the help of pictorial illustrations and demonstration and give black board summaries and refer to books where the pupils can find additional literature on the matter.

There are other aids such as Television sets which make it possible to see the person and hear his talk simultaneously, and the film recorder which records speeches and reproduces them afterwards. These audio-visual instruments are too complicated and costly for our schools to possess and operate. But audio-visual aids help the teacher to make his teaching more effective and interesting and so every teacher must get trained in the working of these modern instruments.



The Ideal Teacher.

M. C. Ittoop M. A., L. T.,
Lecturer in English.

There is always a gap, more or less wide between how things are, and how they ought to be, i. e. between the actual and the ideal. The ideal points to perfection, and it is humanly impossible to attain perfection in any art or walk of life. But the ideal is the goal to which all human efforts should be directed, though it is hardly ever reached. A Person's success in any walk of life is measured by how far he or she is near to the ideal regarding that profession. Teachers who make conscious and relentless efforts to bridge the gap between the possible and the ideal as completely as they can, may be said to be 'ideal' in a restricted sense.

Any teacher worth his salt must realise how sacred his calling is, and strive with might and main to achieve as much proficiency in his art as he possibly can. There was a time when the teacher's profession was the 'sorriest of trades, the teacher occupied the lowest rung of the social ladder, and was looked down upon by an uniformed and unsympathetic public. The present times have ushered in a change for the better. The teacher's role in giving the right formation to the children, committed to his care, is being increasingly appreciated; he is being better remunerated, and the present attitude of the powers that be, bids fair to invest the teaching profession with the means of decent living. The days when the members of this profession were put on a par with clerks or menials, are gone, never to return.

But the pity is that teachers do not seem to realise this. They seem to be still labouring under an inferiority complex, and do not rise equal to their high mission. They are slow to realise their duties and responsibilities, while they are only too keenly alive to their rights and privileges. Many are so fully absorbed in the fight for increased rates of salary, security of service and other emoluments that they have no time to do full justice to the task they have undertaken, and the public have begun to stamp the teaching profession as a mercenary job. They have no scruple to resort to all sorts of money-making pursuits, such as private tuitions, writing of guides, and other similar activities most prejudicial to the proper discharge of their duties and detrimental to the future welfare of the pupils.

My long experience in secondary schools has borne out that teachers who have a deep faith in their religion, conscience in the day-to-day discharge of their duties, and confidence in their own fitness for the task, score remarkable success. By a conscientious teacher, I mean, one who has real love for his pupils and

who is prepared to make sacrifices on their behalf. For, teaching more than any other job, calls for sacrifice which is always engendered by love, and this love springs from one's faith in the Fatherhood of God, and the brotherhood of man. The only enduring motive of love is the conviction that the child undergoing education has an immortal soul, and that every teacher has to give an account to God as to how far he has been able to make of the children under his charge 'fit for life'– life not only in this world but also in the next. Is this not the reason why we have to love and be interested in the aborigines in the wilds of Africa, so ugly and even repulsive in appearance and behaviour, while we do not care a jot for other two-legged creatures like the gorilla and the orang–utang except as exhibits for the zoo.

It is most regrettable that educationists, while they emphasize that education is a preparation for life, treat of the subject as though by life is meant only this earthly life which is not even a drop in the ocean compared with the life after death. The spiritual aspect of education is either kept in the background or is totally ignored by authors on treatises on 'education and its aims'. I have listened to platform speeches on the aims of education in which the religious aspect has never come up for treatment. Perhaps the speakers feared to tread on 'forbidden ground.' The appeal made by great thinkers and even eminent politicians to base education on an appreciation of spiritual and ethical values, has so far been a cry in the wilderness, or has fallen on deaf ears. Woe upon the future generations if this materialistic outlook on education is allowed to continue any further! It will in the long run bring in its train the weakening of the nation, and lay axe at the very root of democracy.

Teachers, coming out of training institutions, often live in a fool's paradise. They think that they have known the last word in theory as well as practice, and can rest on their oars for the rest of their career. No one can swim well by merely learning the rules of swimming, the more he practises the art the more proficient he becomes. Educational theories are not static but dynamic; they are ever growing, the old giving place to the new or being presented in a new garb, and the results of investigation and research being added on to them from time to time. Practice is being modified every day in the light of the findings in the theoretical sphere. Hence, it is simply foolish to think that a teacher who has undergone his training need not keep himself in touch with the new developments of theory and practice. He has to be a student all his life. He should avail himself of all opportunities to add to his general as well as professional knowledge. He must keep himself abreast of the results of experiment and research, carried on by experts in the field. He must read newspapers and educational magazines. He must take part in educational conferences and seminars, attend refresher courses, discuss the problems of everyday work with his compeers, and be continuall improving his technique and approach to make his teaching as effective as possible.

Syllabuses, text books, notebooks, guides, audio-visual apparatus, etc.

are at best aids, but can never be substitutes for the teacher who is always the pivot of educational re-organisation. The quality of the work turned out rests almost entirely on the intellectual, moral and spiritual resources of the teacher. In the words of Cardinal Newman, "an academic system without the personal influence of the teacher upon the pupils is an Arctic winter." Every teacher has to be an all-round personality, 'an accomplished craftsman with the dash of the artist in his make up.'

A good teacher should give his whole time and energy to the sacred mission of giving the right formation to the young ones, entrusted to his care. It is a sin to dissipate his energies by taking to pursuits that promise a monetary return, and instead of enthusing, encouraging and stimulating the children, become examination- ridden, resort to spoon-feeding and produce mental starvation in his pupils. Such teachers are guilty of the mass production of a set of stereotyped individuals', in-capable of original thinking, and are no better than a herd of 'piglings', unable to raise their heads, look at and enjoy the beauty, order and harmony in the universe, to make their imagination (if they have any) soar from the known to the unknown, and realise the 'glory' of the creator by appreciating the unfathomable wisdom and intelligence behind cre-ated things.

A high integrity of character, built on the firm foundation of a deep faith in God and respect for spiritual and moral values, is the hall-mark of a successful teacher and an indispensable factor of his personality. It is always noticed that teachers who have respect for their religion, whatever that religion may be and live a life in conformity with its teachings, discharge their duties conscientiously, efficiently and well, and take an unselfish interest in giving the right formation to children. It has to be deplored that the selections of personnel for the teacher's post is almost wholly decided by their academic and professional attainments. A minimum of such qualifications has however to be insisted upon, but the choice must fall on the limited few who have a real vocation for the work, and a personality and character that will stand them in good stead in their efforts to make children fit for life, in the more comprehensive and wider sense of the term.

Is it not the dearth of 'ideal' teachers with a deep faith in religion and high integrity of character that accounts for the indiscipline that prevails in educational institutions, resulting in a fall of standards in the attainments of students at all levels, and for which no remedy has yet been found? 'Knowledge is power', but it can be a power for good as well as for evil. Teachers, imbued with a high moral sense, rooted in religion only can inculcate the need of discipline in children, and build their character on foundations that shall endure. The minds of children, we all know, are wax to receive and marble to retain,' and the shape that children receive, bear the impress of the personality of the teacher. Any amount of reform in syllabuses, methods of teaching, the language and content of textbooks and the aids to teaching, will not improve

the quality of teaching by one iota if these are handled by teachers who have no character. Hence, the selection of teachers, endowed with the qualities already referred to, should be the first step towards any attempt at educational reorganisation. This is the secret of the high standard of instruction that certain types of institutions, especially private-managed ones, are able to maintain, and that have been time and again commended by all fair-minded educationists, nay, politicians who have made a comparative study of the standards in the different types of institutions.



SPUTNIK! .... SPUTNIK!

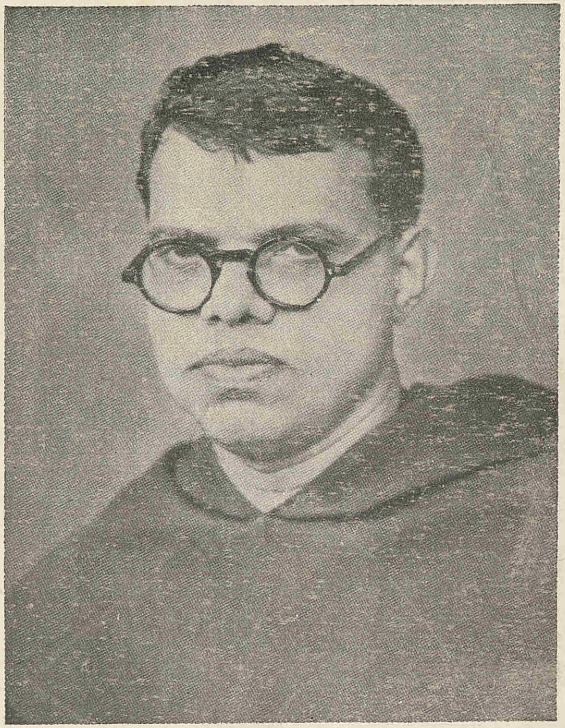
P. ABRAHAM ZACHARIAH, B. Sc.
B. T. Student.

The bus was humming forth over the dizzy depths of the railway crossing, where human minds could not but stop to ponder over the artificial heights and depths created by man in no time. All on a sudden attention was challenged by an enthusiastic crowd, eagerly lifting their eyes, pointing to the sky and crying 'Sputnik.' Their eyes were being fixed on a yellow speck in the sky. I was anxious to have a look at this man-made glory of the twentieth century. I craned my neck out of the bus and peered into the clouds. Had it not been for the timely warning of my friend, my head would have been jammed by the loaded lorry that brushed past the side. All along the road I could see small crowds desirously looking. Reaching my destination, alighting from the bus, I halted and began to search in the clouds "Ah! there it is," I cried. Some said, "Oh! It's not moving." I said, "It is." "Being at a distance it appears not moving. Observe after a few hours and you will see." Hours passed by. That yellow speck was the cynosure of all eyes. Even late in the night that speck had little changed its place. Poor me! it was some faraway star.

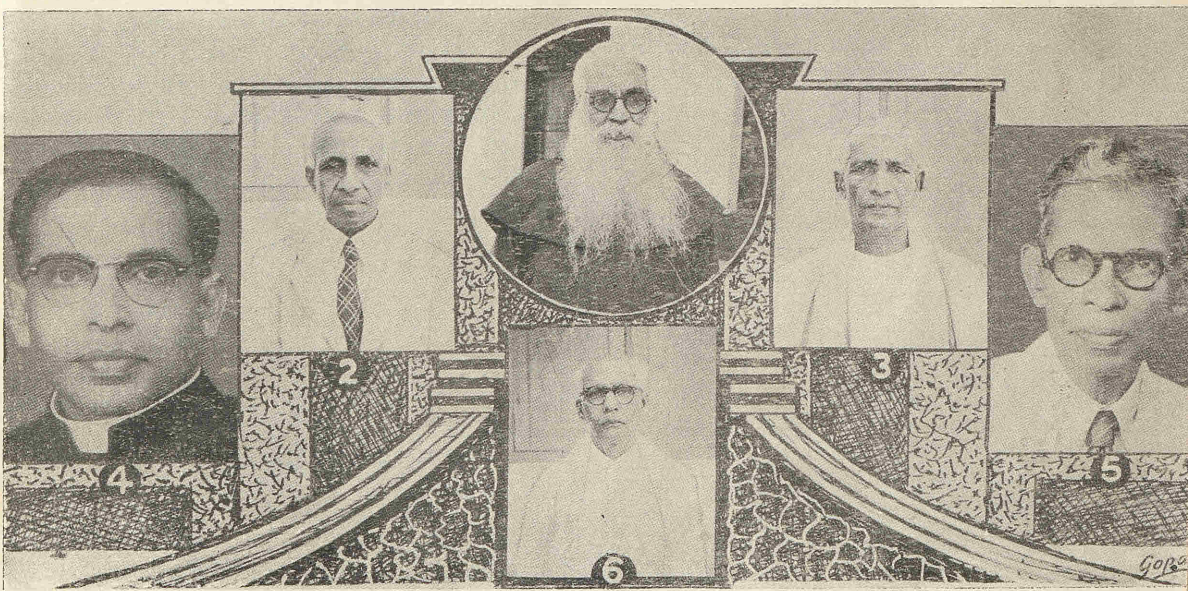
It is only true that the artificial Moon had astonished the world, thanks to the engineering skill of the Soviet scientists. They have turned what seemed a remote dream into a tangible achievement. While the world was still talking and wondering about the first sputnik, news came of the launching of the second one, much bigger and with an animal inside. It aroused tremendous interest among all. Radio stations and observatories all over the world recorded the 'peep.' And it is reported, it gained so wide an acclamation from the public that even little babies are named after this Soviet marvel of science. As such it will not be out of place, to take a few pages of this magazine to consider the striking aspects of these space experiments. Though with some initial failures America also is now able, though not in equal measure, to set on its orbit its 'Alpha- 1958.'

The launching of the sputniks has incalculably extended the frontiers of the world of science It may be astonishing to know that space-travel needs only considerably less energy than conventional plane flights. With time, space-flights will substantially curtail the flights of the most efficient planes in the atmosphere because it is faster and more economical. Given the energy equal to the work required to lift a plane to a height of 3750 miles, it is possible to circle the Earth for an indefinite period. Still more interesting is the way in which precision is achieved in the targeting of intercontinental ballistic rockets and the way the sputniks are orbited.

The rocket launched on its intercontinental flight is installed in a



Very Rev. Fr. James T. O. C. D.,
Founder- Manager.



Rev. Fr. William T. O. C. D., M. A., L. T.,
Principal.

(2) Sri T. C. Cherian, M. A., L. T. (3) Sri Ittoop Manjooran, M. A., L. T.
(4) Rev. Fr. J. Kalayil, M. A., M. Ed. (5) Sri C. M. Paul, M. A., B. T.
(6) Sri O. C. Varghese, M. A., L. T.

vertical position on its launching ramp. It may consist of three or more stages. The final stage goes up to a height of 625 miles above the surface of the Earth. To ensure that the final stage of the rocket arrives at the planned area with a deviation of not more than six miles from the designated point, it must be launched along precisely-aimed grooves or a shaft, hundreds of miles long, with the aid of radio-stations. Three or four radio-stations send direct radio waves in the wake of the rocket. These waves form a sort of canal or tunnel along which the rocket speeds onwards. At the slightest deviation the rocket enters a zone where the radio-waves are more intense. The waves act on the automatic instruments on the rocket's control-panel and return it to the central tunnel.

Observations on the movement of the satellites are continued by visual means and radar. Valuable data of exceptional scientific value are obtained from these observations. The artificial satellites will help scientists to solve many extremely complicated problems connected with the study of the upper layers of the atmosphere. These upper layers of the atmosphere are of immense significance with regard to life in our planet. It is this layer that shelters life on Earth from the harmful action of solar radiation, cosmic rays and meteorites, which at times penetrate into the terrestrial atmosphere from space. Some highly complicated physicochemical reactions take place in this rarefied gaseous medium changing the solar and cosmic rays and the minute corpuscles in such a way that when they reach the Earth's surface they are rendered harmless for organic life. These upper layers also transmit the influence of certain solar phenomena upon the process, taking place in the troposphere. Changes in solar activity influence the condition of the lower layers of the atmosphere, the development of cyclones and anticyclones, the fluctuations of the water level in the seas and give rise to a number of other phenomena, for example, electromagnetic processes, arising and developing on the border of the atmosphere, cause magnetic storms and the Northern lights. The designers of future interplanetary missiles will have to take these into consideration.

These space experiments, it is impossible to carry on with rockets alone because each rocket brings us information on the condition of the stratosphere only at one point. So the creation of an artificial satellite as an automatic laboratory functioning for a prolonged period is important. Even then the programme of researches to be carried out is so extensive that a series of satellites will have to be sent up into 'space.'

Satellites sent up at present will not return to Earth. Because as they revolve in the rarefied upper layers, they lose part of their velocity, gradually descend down into the denser layers of the Earth's atmospheric envelope, and burn up as a result of aerodynamic heating. So scientists have to be satisfied with data obtained by radio from the satellites which though valuable is restricted. That is why engineers are hard at work to make sure the return of the satellite absolutely intact with all its instruments. All the more important in this connection is the creation of a satellite manned from inside.

Light is thrown on this aspect of the question, by the flight of a living

animal inside the second sputnik. The condition and behaviour of the test-animal were satisfactory during the take-off and the alignment of the sputnik on its orbit and also during further movements right up to the end of the experiment. The important factor here is that the test-animal spent a long time in a weightlesss condition while travelling outside the atmosphere at a great height. True there could be isolated disarrangements in the co-ordination of movement and in the blood-circulation. What is most interesting is the possibility of studying the effects of virginal cosmic radiation on the animal's organism, as this state cannot be fully reproduced in laboratories. It would be expedient to make such studies of test-animals, which stay at high altitudes for a long time and it would be desirable to bring them back subsequently to Earth for all-round investigation. The equipment providing the necessary conditions for the maintenance of the animal's life abroad must have to be subjected to a gruelling verification. It is only after a series of such experiments that it would be possible to have human flight into cosmic space.

Anyhow a successful solution has been found for such a problem as ensuring for a long time, total hermiticity of containers with instruments and the chamber with the test-animal in a deep vacuum and the frequent periodic changes of temperature. While the radio-transmitters on board the two sputniks were in operation, the satellite repeatedly passed through meteorite showers. But no damage whatsoever was registered. Valuable data have been gained in observing the Doppier effect and also in the study of the functioning of radio-equipment at high attitudes in conditions of probable influence of outside radiation.

Scientists are now suggesting that the best technical way of research in cosmic space would be to have a sputnik as a permanent interplanetary station which would be adapted to human life. Solar energy it is visualised could help the members of the interplanetary station to grow plants and vegetables for food. By making the interplanatery station to rotate on its axis, we could artificially produce a state of gravity that would give conditions similar to that on Earth. Communications with Earth could be maintained by special rockets to reach the Moon and the nearest planets and then come-back.

Rocketary techniques now available has made it easy to reach the Moon even if we send off a rocket from the Earth. But as techniques improve it would be possible for us to establish a permanent cosmic station in the Moon. It is supposed that the Moon will ensure conditions of life resembling that on Earth. A surmise for the future is that the Moon will become the main intermediate station on the road from Earth into the depths of the universe. We are not to wait long to greet the dawn of the day when manned space-ships will go into distant planets carrying immigrants from here and let us for the present wish, such explorers can make their permanent abodes there. In the wake of these, the day (October 4, 1957) the first artificial Earth satellite was launched, will go down in history as one of its greatest mile stones, a milestone marking the era of cosmic flights and of man's invasion of outer-space.

The Teacher of the Present Day

(SILVA FRANCIS, IYYANISSERIL, B. A., ST. ALOYSIUS' H. S. QUILON)

B. T. Student.

If is a sad fate, if I may be permitted to say so, that the rank and file of the teaching profession have been flooded with all and sundry ranging the full length of the measuring rod, from the very top to the very bottom with those who teach exceedingly well and those who can't teach at all, with the consequence that the standard of education and the efficiency of our pupils have gone irretrievably down. It is futile to attempt here to enumerate the various forces that contributed to this down-fall. And yet, it won't be out of place just to glance over these as one hears the hue and cry about the need of redeeming the standards from public platforms and in newspaper articles.

When education dawned from the mansions of the privileged few, on the cottages of the common populace, there arose the system of class teaching as we have it today, and the need for an army of teachers, to meet this too-sudden-an-expansion of education-a national emergency-many had to be recruited to the teaching ranks, irrespective of their likes and dislikes, their capacities and attitudes, so much so that, while many took a keen interest in their new vocation, conducted experiments, improved upon and evolved new and scientific methods, thousands of them remained therein just for earning a hand to-mouth existence, as misfits-square pegs in round holes. This happened in England (cf. The compulsory Elementary education Act, 1870) and is happening in India-in many states including our small Kerala State-owing to the universal, free and compulsory education till the age of fourteen as envisaged in our Constitution.

When I refer to a hand to-mouth existence it reminds me of an array of unpleasant experiences which the poor teachers had to face in the past. Beginning with four or five rupees a month in the private schools and eight or ten rupees in the government schools, the teacher consciously swallowed the bitter pills of hunger and pain and shame and suffering and treaded on to a premature grave-without even an open murmur. The status of the teacher was at a low premium. Only those who had some special liking for the profession (of course there were not many such), and who had no other go, stuck to their post, while the more ambitious, the more intelligent and the more energetic ones sought better prospects else where. As years rolled by, the yoke of the teacher became heavier and heavier; naturally there set in a reaction-consciously or unconsciously-of shirking of or slacking in duties. The profession earned the name "the noblest of professions and the sorriest

of trades." This was the saddest part of the process, for it was the pupils who stood to lose. Not only their powers, energies, capacities, urges and drives were left uncared for, but also were stifled. Teaching degenerated from a "happy partnership of the teacher and the taught" to mere lecturing with the attitude of "take-if-you-mind". The nation endured a great loss. The youths of the country far from being self-disciplined, courageous, honest and self-reliant became a sort of parasites, always leaning on somebody else. They began to cram bits of information from here and there and to a certain extent developed an attitude of stooping to any means to gain their own ends; in short, the character and personality of the students were not properly developed. The disintegration of the personality of the educators naturally had its effects on the educands leading to chaotic conditions. We see everywhere in India this sad and frightful condition and it is a matter of great and serious concern how this is going to affect the national life in the coming decades. The present student population is lacking in the essential minimum standard of efficiency we expect to find in them. Above all, the harm done to the moral sense and the indifference shown in the development of personality are indeed deplorable.

Many other factors also go to contribute to this deterioration. To mention a few-the insistence on a minimum percentage of pass based on the "all important system of examinations" the employment of dull and defective methods of teaching, the over emphasis on formal instruction, the slavish tendency to dictate notes and to spoon-feed the pupils, the gulf of difference between school life and the actual life outside the school, the unwise policy of political leaders of dragging the immature children into political agitations, the rampant malpractices among students, guardians and even examiners, the improper and unhygienic accommodation and equipment, the extreme poverty and ignorance of the parents, the unwieldy number of pupils in each class, the inadequacy and in some cases the utter absence of cordial relationship between parents and teachers, the indifference of teachers themselves, the inconsistency of the policy of the governments-all these and many more work severally and jointly to produce the present unsatisfactory state of affairs in the country. It is a slow but steady degeneration. Of all these the main cause at work is undoubtedly the insincerity of the teachers themselves Whatever genuine and noble and promising plans may be envisaged by the authorities and other educationists concerned, it is the teacher who is to implement them. Without his cooperation and earnest work no scheme will succeed; but with his full support, even the most defective plans may turn out to be useful and effective. Here I do not forget the noble and unselfish few amongst teachers who really love their pupils and devote their whole selves to the care and well-being of the young charges entrusted to them, and thus earn the eternal gratitude of the nation; my heart goes out in humble reverence and heartfelt gratitude for such masters.

This brings us to the consideration of the qualities a teacher should

have. However we may try to elaborate on this topic, it will remain an unfinished treatise, for a "teacher affects eternity". "No teacher ever fully knows the heights of his success or the depths of his failure; no, not even his students can tell him exactly". We all know at least vaguely what all qualities a teacher should have, what responsibilities he has to shoulder and what duties he has to perform. But are we really aware of what a teacher is! I have my own doubts. And those who think that they are adepts in this matter, those who rest on their laurels, may conveniently skip over these pages; but considering the importance and the urgency of the problem, and having in mind those who would like to have a brotherly helping hand, I cannot but dwell awhile on the topic.

The teacher is a missionary of Truth; that is my view of a teacher. In fact Truth and Beauty and goodness are the manifestations, the various aspects of the Supreme Being. As Keats had put it, "Beauty is Truth and Truth, Beauty" Truth Beauty and goodness are the three absolute virtues worth-seeking and realising through education. Is any teacher ever expected to impart even an atom of falsehood to those simple, innocent, bright-eyed, active angels before him? He can never encourage falsehood directly or inderectly; nor can he be indifferent to, or reconcile with, or consent to it in any form or degree. He has to watch the young ones under him constantly. The torch of truth that he hands on to them with the fervour of a missionary, goes on burning in ever-widening circles, radiating its lustre and luminence, dispelling the darkness of error and superstition and evil customs, and of thousands of other undesirable practices. The teacher is to be the messenger of truth, of goodness, and of peace, harmony and happiness. To be this he must be, first and foremost, good honest and just, with a lofty moral sense, a wide knowledge of human life and deep sympathy for others, especially, for the wayward ones. A teacher who has no moral sense can never train his pupils in morality as there might be great disparity between his words and actions. Children are cleverer and quicker to notice defects than merits. A person cannot give what he does not have; he can't do what he does not know to do. The teacher's sincerity of purpose, his integrity of character and his earnest endeavours will fetch the confidence and love of the pupils he is set to educate. He will have no problem of discipline then.

Are we teachers having this sublime notion about our profession and earnestly striving to adhere to it? A good many of us, to be frank, miserably fail in our ideals. Frail as we are, we may stumble and fall, but we have to rise up and strive strenuously with full faith in humanity and aspire to the higher realms hopefully. The teacher's job is not the builder's who counts the value of his work as he places every brick, in terms of rupees and naye paise. Nor is it like that of the poet who thinks of the return he can have for every line he composes. Woe to the teacher who counts his work in terms of the financial return he may have! It is better for him, for the children, for the society and for the nation at large that such a person enters

not this "Sanctum Sanctorum"– the holy temple of knowledge. It is with the deepest of reverence and the most scrupulous care, with humility and purity, with love and kindness that the teacher should tread the threshold of the temple, to be a slow, steady, unselfish and willing victim on the altar of service. Every good that we enjoy will be the result of someone's self–sacrifice and love, and truly a teacher's is such a one.

And in a very real sense the teacher is the nation–builder. If the true strength of a nation is its people the teacher who decides the type of the nation's strength that is to be tomorrow, is really the nation builder. Do we want to have democracy, monarchy or despotism? Do we want to have an army of scoundrels, an array of moral wrecks, or flippant and frivolous brutes, self-seeking and shallow, unsteady and unrealiable, dishonest and indisciplined? Or, do we want able and honest, steady and strong, self-disciplined and unselfish, intelligent and industrious, responsible and reliable citizens who are morally, mentally, physically and socially fit, who will not shirk off duties, but on the other hand, will shed even the last drop of their life–blood if need be to uphold the cause of the nation? Well, mostly it is the teacher who decides it. He is the coping stone of the arch of the nation, the aorta through which flows the stream of life–the "elan vital" repairing, nourishing and enriching the bulk of the nation.

All great men of the world were great teachers. Socrates, Plato, Aristotle, Buddha, Bacon, Comenius, Montaigne, Locke, Rousseau, Pestalozzi, Froebel, Tolstoy, Tagore, Gandhiji–all these were masters, who set evils right, exhorted and guided the people to noble ideals and progress, to peace and joy. The influence of a teacher good or bad, once exerted, goes on endlessly affecting the lives of many. It is he who transforms men into angels or debases them into demons. Hence every Dick and Harry can't be real teachers. The bright–eyed, tender-bodied young ones before him with all their senses open and alert, may turn out to be Shakespeares or Newtons, or sink into insignificance as "mute inglorious Miltons", unknown "unwept, unhonoured and unsung", or still worse, turn out to be Murdstones and Uria Heaps, Iagos and Claudiuses. It is the teacher who decides this. So great and so sublime is the status of a teacher that any discourse on it, cannot be exhaustive.

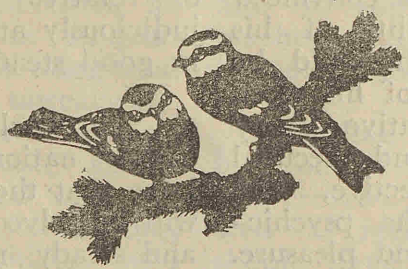
I shall now briefly state the functions of the teacher. "Teaching is a creative and productive job as well as recreative." The teacher should have a correct philosophy of life, be conversant with the various aims of education and be fairly familiar with the new and scientific methods evolved in the field of education. The teacher should have the pedagogical talent–ability to reach the mind and heart of each individual child. He should help the child to acquire habits and skills, information and knowledge, and appreciation and attitudes. His methods based on sound psychological principles should be simple varied and interesting, affording plenty of opportunities for activities, gracefully leading on to self–guidance and better living. The creative power of the child should

be given facility to develop and the young artist should feel the love, joy and pride of fine workmanship and service. The teacher should be very particular to see that the creative instincts are not stifled or given a free rein, but are channelised into worth-while directions. The teacher's job is productive too. Bagley calls it a "craft" of transforming raw materials into useful products. The heredity and the environment of the child are the raw materials; and by their action and inter-action the innate tendencies, urges, and drives of the child are given expression to. These crude materials are to be polished and polished until the unsocial ones can be kept at bay, or better, be conditioned to other useful purposes, and the useful ones are encouraged fully. The teacher is to be convinced of the worth and nobility of his work, then only will the child be convinced of the worth of his work The teacher's job is recreative. Every piece of work, planned and executed will be useful and effective, and will in its turn bring the psychic-income, i. e, satisfaction and pleasure. The advancement of science and the employment of modern scientific techniques give man more leisure, and it is the teacher's job to educate the young how to use their leisure profitably. Education is as much for the better use of leisure as for acquiring skills and knowledge. The teacher who encourages some useful hobby combines pleasure with profit and is working in line with the natural tendencies of the child; secures personal contact and is able to concentrate upon the"emotional education"as well. As the teacher raises the quality of his teaching, indirectly he advances civilisation.

The other requisites of a good teacher are the depth and abundance of his knowledge, constructive discipline, his magnetic personality, quick perception of eye and ear, gentle but authoritative voice, freshness of mind, great power of narration and description, cheerful and happy temper, cheerful demeanour, and the novelty and effectiveness of his methods. As real education aims at efficient social adjustment by creating attitudes and habits rather than acquiring knowledge, the teacher must train the child to face problems with a scientific attitude to grasp the problem, analyse it, find out possible solutions drawing freely from the accumulated experience of the race and finally solve it. It is the teacher's duty to awaken in the pupils a sense of relative values and to select judiciously and this will stand him in good stead after school life.

To conclude, in the new set-up of our nation, we have reasons to hope that the problems of education will be solved satisfactorily, in a slow and steady manner, according to a well thought-out plan. This may take a long time. But till then the teachers can't wait or slacken; for every slip, negligence or indifference will have to be paid dearly by the nation at large. So the teachers should work on steadily with conscience, courage, courtesy and enthusiasm, and with a firm faith in the goodness of God. A teacher should prepare his lessons thoroughly, employ most suitable methods and available aids; make the students' participation in the lesson the prominent feature, individually and in groups; suggest and guide them paying attention to individual needs and abilities and

thus train them to become useful citizens. Personal contact with every child is of utmost importance. Let each one develop in his own way without prejudice to the welfare of the community. Above all, the teacher should keep himself abreast of the times, his spirit of humitity affording him ample room for improvement, and without sacrificing the fiundamentals of life he can make all possible adjustments to meet the changing situations–then he would not become 'rutted' or 'rusty'. Then he can with satisfaction and joy of heart exclaim with Nelson "Thank God! I have done my duty".



CITIZENSHIP

G. BHASKARAN PILLAI, B. A. & R. B. V.
B. T. Student.

All that glitters is not gold and all those who claim to be true citizens are not really so. Hence the word citizenship has to be explained before any thing regarding its need is put in black and white.

A Citizen is one who exercises his powers both mental and physical for the benefit of his own self, that of his own society, his own country and lastly, the world at large. Such a one is the active potential living person of the world, whose life is an asset to the entire human race.

An ideal citizen is always free from vices. Sympathy, co-operation, serviceableness, self-sacrifice and an active participation in all the attempts for the common good are the virtues that an ideal citizen should possess.

He will never be a puppet in the hands of others. He will have a correct philosophy of life. Black will be black to him and white will never fade away when he looks at it. The cry of the nation will echo in his ears; but never the cry of any party that stands for power and prestige. His bones seldom bend before bundles of currency, nor does his ideal fluctuate by being elevated to the summit of worldly pleasures. No false stories or baseless notions would over-rule him. He would never jump out with hasty conclusions and commit blunders so as to repent later on. Briefly he is an embodiment of all virtues especially social.

Now when we consider the duties of a citizen, we are apt to confess that the duties of a true citizen are really beyond estimation. But we can conclude by saying that he is the moulder of a better world and also a light and a guide to the present world. Even the hatred of race and colour will vanish in his presence. He will remodel the attitude of the whole world and pave the way for common brotherhood and mutual understanding and broad sympathy.

It is for such an ideal citizen that the world craves, and so it is the duty of every man and woman to sow in themselves and others, the seeds of these virtues as early as possible so that an ideal world society might become a reality. But care must be taken to see that the seeds germinate. We must prepare the soil in such a way as to ensure the proper germination of the seeds and also the natural growth of the young plants. This preparation must come through discipline. For, disciplined behaviour alone is the sign of an integrated personality. It is not something imposed from out-side. It has to come from with-in. It is the way how emotions are organised, passions are controlled, sympathy is cultivated and the way how our attitudes take colour from the ideal we have placed before ourselves.

A poem or a piece of art is beautiful because it is the result of

emotions that have been subjected to a certain order. Without that order the piece of art would cease to be art. What order is in art, is discipline in human life. A man's personality blossoms only throuh discipline. Where there is no discipline there is no freedom. It expresses itself in a reverential regard for human personality, in courtesy in everyday life, in a willingness to help the weak and the needy, in respecting the rights of others, and in the observance of the laws of the country. To sum up, the ultimate aim of discipline is the moral purpose in the political and social field. It is founded on a belief in the equality of man and also in his individual worth.

The concept of "Dharma" embodies this very same principle. The word Dharma is not confined within the limits of the Hindu religion. It is really a compendium of the sense of values ever present in us, guiding all our actions and controlling all our thoughts and determining all our relations. When an individual's thoughts and actions, every gesture and word are infused with the spirit of moral purpose, he walks in the path of Dharma. It is the only force which can co-ordinate and weld into a harmonious whole the energies which lie in our instincts, passions, emotions, reason and intellect.

Now our mother land India expects all young men and women, well grounded in citizenship, to show their individuality in the common upbringing with a view to the welfare of our country-men.

We, as teachers, have to mould ourselves and those within our reach in such a way as to realise this purpose It is an admitted fact that examples are better than precepts; so we shall go on acting and behaving in this new perspective and this will gradually bring in all the others. The out-put of the selfless service alone is the fee that we pay to training in citizenship.

Jai Hind



Guidance in the Process of Learning

(M. J. JOSEPH MAVILACHERRY)

B. T. Student.

The importance of education in the growth and development of a nation cannot be overemphasized. Many evils that we find to-day in our country are due to the defective system of education which still lingers in our country as the last vestige of the British domination. However, independent India is determined to remove these evils by the reorientation and reorganisation of our educational system. What great importance the national government of ours attach to this reorganisation of education has been clearly demonstrated as early as 1948, only one year after the national government came into power, by the appointment of a University Commission. They envisaged some far-reaching changes in secondary education. It called for a particularly new pattern of secondary education. In the light of the recomendations of the commission it was found necessary to go through the whole question of secondary education and the Secondary Education Commission was appointed. The commission has given a new light, a new approach, so far as secondary education is concerned. Basic Education which is but a slightly modified form of the famous Wardha Scheme, has been accepted by the country as the national system of primary education. Thus we find that the entire structure of all the three stages– primary, secondary and Uuiversity– of education have to be reorganised and reorientated, to be moulded in a new pattern to serve the best interests of the country and to suit the genius of the nation.

Good education provides the opportunity for pupils to realise what their talents are and in what manner and to what extent they can best develop these so as to achieve proper adjustment in home, school and society. Lack of facilities necessary for the full development of pupils had led to a great deal of wastage of the country's human resources. One of the chief defects in our existing system of education is that there is great wastage of efforts and talents because pupils in High Schools are not selected or guided to courses suited to their abitities and aptitudes. Until recent times it was often left to chance and hence the state and the individual suffered much. Dr. D. D. Innes says that it is impossible to estimate the amount of the waste of money spent on children in schools which follows from industrial misfits and from entry into that which is below the children's ability or which is unsuitable. It is to counteract this tendency that systems of educational and vocational guidance have been devised.

Every child requires individualised assistance in selecting his vocation. The fundamental principle of guidance is that each and every individual has a purpose and a place in the world. Therefore it becomes the duty of the guide to help the child to discover his place and achieve his purpose. He may help a teacher to get a better understanding of the child's problems and thereby lead him to effect changes in the class-room situation. The whole enterprise which seeks to individualise education is termed "guidance".

Guidance is not different from education. The function of guidance is to facilitate the achievement of the general aims of education. Guidance is an emphasis in education. It is meant to organise the pupil's school environment, to assist him in adjusting his relations with other persons in home, school, business, social and recreational activities. Guidance includes discovering pupils' needs and helping them in the adjustment.

The Secondary Education Commission in the following words pointed out the need for well-organised programme of guidance in our schools: "Educational and vocational guidance is not regarded as a mechanical process whereby the advisers and teachers sort out boys and girls as a grading machine sorts out apples. Guidance involves the difficult art of helping boys and girls to plan their own future wisely in the full light of all factors that can be mastered about themselves and about the world in which they are to live and work. Naturally, therefore, it is not the work of a few specialists but rather a service in which the entire school staff must co-operate under the guidance of some person with special knowledge and skill in the particular field. Guidance in this sense is not confined to vocational field only. It covers the whole of youth problems and should be provided with appropriate form at all stages of understanding parents, teachers, headmaster and guidance officers".

If it is to function well guidance must be based on some sound principles and reliable data. The selection will have to be done firstly at the stage when their general education opens the way to a specific one and secondly when they leave the latter stage and take up some form of vocational or occupational training. Normally these transitions occur at the age of twelve and at the school-leaving age; that is to say, at the ages of transfer to the secondary school and the professional course.

Usually, selection is made by means of the ordinary type of examination. But this does not take into account the different faculties of pupils such as their interests, aptitudes and intelligence. Hence standardised tests have been adopted in certain schools and they help to test quickness and accuracy. However, it is admitted that the child's personality, health, family back-ground, educability, record of school achievements, etc., should form the basis of the selection and the subsequent direction. Gill Burt states: "In the interest of the nation as well as of the child, the paramount need is to discover which are the ablest pupils, no matter to what school or social class they may belong, and generally to guide each child according to the relative degree of his ability and give

him the best education which his ability permits".

Pupils could be helped individually or in groups. Individual guidance is more useful and as far as possible the pupil should be studied before he is advised. Group guidance is used in orienting pupils to new school situations and in discovering common problems presenting basic information. Authoritarian attitude of the parents, lack of understanding of the needs of pupils by the parents, differential treatment, poor economic conditions, emotional insecurity, lack of academic ability, physical handicaps, disparity in age, lack of appreciation by parents, sensitiveness and shyness–all these contribute towards making the task of the guide more complex. Hence he can employ the records of pupil's progress, interest, attitude, notes about school attendance, health, home circumstances, special abilities and assessment of temperamental qualities on a five–point scale, to get a complete picture of the child against the family background. Besides interviewing the pupil, the opinion of the parents must be sought. Parent–teacher associations and teacher's visits are also of great help to the teacher who is in charge of the pupils of that age category where guidance is deemd necessary.

If this method of guidance is applied in our schools, they would no longer be single–track institutions. They should offer a diversity of educational programme calculated to meet the varying aptitudes and interests. Therefore the existing schools should be converted into multi–purpose institutions with diversified courses. Arrangements may be made for each school to offer more than one course.



The Problem of Individual Differences

P. M. JOHN, N. S. S. HIGH SCHOOL, ANICKADU)

B. T. Student.

Various definitions have been given for education by Educationists from Socrates to John Dewey. According to Socrates the aim of education is 'to dispel error and to discover truth'; according to Dewey it is for social efficiency. But all are concurrent at one point that education should aim at enabling the individual to make successful adjustments to the everchanging environments, and through him bring about the progress of society. So it is evident that all teaching primarily aims at the individual.

Until modern times it was easy to keep to this principle because only a selected few, the children of the rich alone, went in for formal education, the masses being left to themselves to be educated by the slip-shod manner of imitation and trial and error. The modern ways of life, that came into existence as a result of the various political and economic changes, broke away with the past. These changes necessitated mass education which in turn culminated in the unavoidable condition of teaching large numbers at once. So individuals having somewhat similar abilities were assembled together to be taught as members of a group, technically called 'class'. The result was that the master began to teach an imaginary 'average boy' who did not exist anywhere. But many of the potential factors, which we shall enumerate later, affecting learning, are considerably different between one individual and another. So teaching, if we want it to be effective, should provide for the individual differences of the members concerned.

Children are said to be like salt, sugar, flour and chalk powder; that is, there is much similarity in appearance, but they are different in nature. These differences, from an educational point of view, are many and are very important. We shall consider some of them.

First of all, we shall take the physical differences that are the most visible and amenable to easy measurement. Members of a class are widely varied in their physical capacities, to undertake physical exertion, to stand the onset of fatigue, to develop muscular skill and to retain muscular skill once developed. Physical abilities are of great importance for two fold reasons. 'A sound mind in a sound body' is the first reason, thereby showing the dependence of the mental qualities on the body. Secondly, a good part of the training envisaged in education is the development of various skills that ultimately depend on physical fitness. So educators

have to take into account the physical differences of children, in framing the curriculum and in educating them.

Temperamental differences are observable even from the very first day of life. It is possible to distinguish the placid babies from the lively ones. What is temperament? "It is a very convenient term to use when we wish to refer to all those mental qualities other than the purely intellectual, but it is obviously a term that is used loosely and one that, in the present state of knowledge, it is difficult to define" (Hughes and Hughes). Many attempts have been make to classify temperaments. The usual plan is to describe two opposite types such as stable-minded and unstable-minded, explosive and obstructed, impulsive and deliberate, extravert and introvert. Either quality of these varies in degree. Between the extremes the remainder can be graded according to their degree in that quality. The last category seems to require special mention. The extravert child is talkative, cheerful, self-assured and in a sense aggressive. He looks for approval and demands attention whereas the introvert waits until he and his achievements are noticed. The extravert is ready to assert his superiority when the other will be content merely to maintain his independence. The characteristic temperament prevails in all activities. It can be easily noticed in spontaneous play.

Temperaments being deeply rooted in our mental make-up, it is impossible, even if it were desirable, to mould all children in any particular way. What a teacher can do is to enable the child to develop in his own way for his individualistic purposes and at the same time develop in him a spirit of toleration and co-operation with the other type in the social aspects of his life. No thorough study has yet been conducted in regard to temperament in the class-room. However, valuable work is in progress on scientific basis.

Intellectual differences are not observable at birth or early in childhood. It can be realised fairly only when the learning process has progressed to some extent. There are students who can easily grasp a new idea or understand a new argument. Out of these some forget very soon and others remember for a longer time. This difference is seen among the slow-witted also who learn very slowly.

Intellectual differences are measured by specially devised tests called 'Intelligence Tests'. Intelligence, like many other things, is measured by the results produced. The pioneer in this line was the French psychologist, Alfread Binet. He, as a result of a series of observations and experiments, established a standard for each age-group. The relation between the intellectual capacity of an individual and the standard for his age has been technically called 'Intelligence Quotient' generally taking 100 as the norm. For example, if a child of 5 can perform successfully the intelligence tests prescribed for children of 4, then his I. Q. is $^4/_5 \times 100$, that is 80. It has been observed that I. Q. varies from below 50 to above 150 and rarely even to 190. About 96% of the population fall between 85 and 130. Over and above this general factor there are special aptitudes varying in degree in different individuals; for example, a child of a particular I. Q. may be good at music but poor in muscular skill and another child of

same I. Q. may be just the opposite. This makes the problem all the more confounded.

The influence of heredity on the above factors, namely physical, temperamental and intellectual differences, is a matter of controversy. Physical qualities, however, can be said to be more influenced by heredity than temperamental and intellectual. Environment can be exert a considerable influence in patching up these differences to facilitate the smooth running of a society. But the educator, to achieve this aim, should always keep in view these differences.

Next, we shall consider another difference which is purely natural, I mean the sexes. On the intellectual side, it has been discovered by psychologists that the differences are immaterial. But boys and girls differ considerably in the rates of development and maturity. They seem, as Burt says in his 'Mental and Scholastic Tests', to play "a sort of statistical leap-frog, now one up, now the other, through out their whole school course". The greatest differences are in respect of such physical characteristics as height, weight, strength and capacity to stand strain and fatigue. From the angle of the educator, the more important differences are in temperament, special attitudes and interests. The non-aggressive emotions, tenderness, submissiveness and fear are more pronounced in girls while the aggressive emotions, domination, assertiveness and anger are more pronounced in boys. These differences seem to be the greatest in the adolescent stage. That is one reason why the opponents of co-education advocate separate schools for the sexes in the adolescent stage.

Home and social environments have much to decide the attainments of children at school. The children of educated and socially well-placed parents are naturally at an advantage in a general class. Such children might have already learnt many things which other children may have to work hard to attain. The previous experience will give them greater confidence and they will get a richer knowledge from each experience than the children of less educated parents.

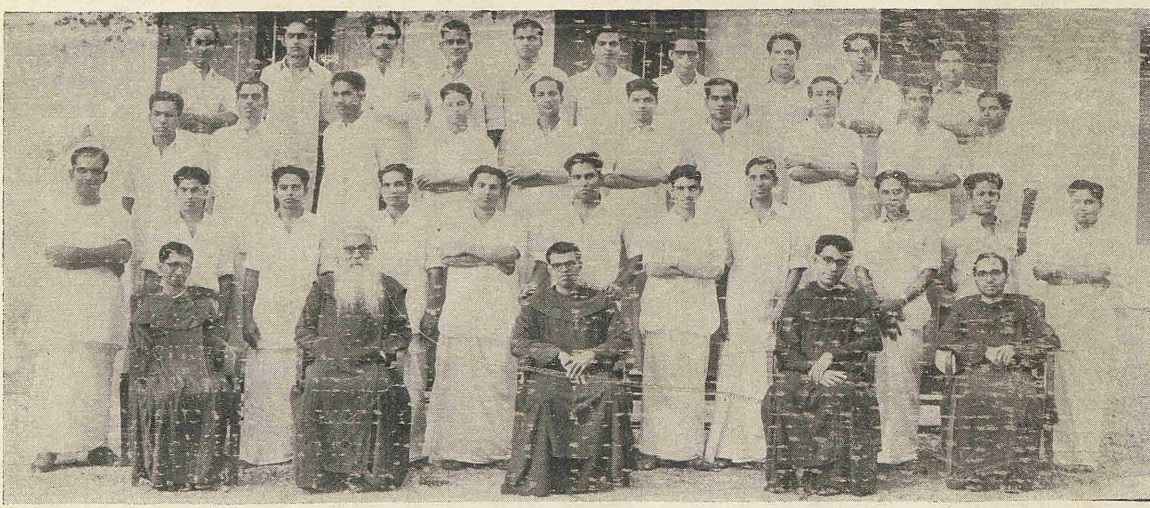
The next factor that attracts our attention is what is called ‚difficult children'. In one sense every child is a difficult child. Every class will have, at least, a few children who cause special anxiety to the teacher. They can be roughly of three types, slow in acquiring knowledge, awkward in developing skill or prone to antisocial behaviour—the backward, the clumsy and the troublesome. These types are not, however, mutually exclusive.

These difficulties are, to a great extent, caused in pre-school days. They are generally the results of frustrations and repressions of instinctive urges. The emotional tensions in childhood make children 'difficult' in later years. Bad methods of teaching and unsympathetic attitudes of teachers are also causes of some of our difficult children. In this the teacher's duty is two fold. He has to adapt his methods to naturally backward children and he should be on the alert not to produce difficult children out of his carelessness or ignorance.

The problem of backwardness requires special mention. We consider certain children as backward when they are poor at book-learning. We



Laying the foundation stone of the College.



Hostel students.

unfortunately take book-learning as the only road to culture, and without considering what a child can learn we decide what he ought to learn. If a child is poor at book-learning, which is manipulating ideas, it does not mean that he is a good-for-nothing fellow. Such children are often very clever in developing skills relating to concrete things and activities, which they can easily manipulate, at times, even better than the forward child. It simply means that such children should be allowed to learn things from real situations. The Project Method offers the most promising avenue for them.

A word about the gifted children will not be out of place here. In the sense that we cannot make the best out the gifted child in an ordinary class, the gifted child also is a problem child. In an ordinary class of forty or fifty pupils there will be at least one or two who are intellectually starved and frustrated by the class procedure. They are kept back along with the mediocre for no fault of their own. They have to keep pace marking time. It is not an exaggeration to say that there are children, of course very few, who can master within one year the whole portion prescribed for the three years of the High school course. Though only a very small minority, they are of signal importance from a national point of view. They are the nation's leaders, administrators, engineers, doctors, artists and men of eminence in any field.

In my humble opinion it is the responsibility of the state to provide for such children. At a suitable stage say just before the commencement of the High School course they should be separated from others. A few schools should be run entirely for such children so that they may not be starved as under the present condition. It is evident that the whole expenditure of the school, including board, should be borne by the state.

A main feature of the 'Modern Developments in Educational Practice' is the provision for these individual differences. The schemes of group work in the Project Method and other activity methods are conducive to cater to the varying abilities of individuals. It is high time that we should see to it that by the class system neither the backward child should be discouraged nor the gifted child should be frustrated. The advancement of both should go hand in hand because therein we have the two legs on which humanity has to make progress.

In putting these principles into practice the necessary qualities of the teacher such as patience tact and sympathy, his deep erudition, his technical skill and, above all, his wholeheartedness and earnestness in the work are the determining factors. It is, of course, a great strain on the teacher. He has to feel his responsibility as nation builder in the wider sense. Herein lies the salvation of our teeming millions.



INTEREST IN MATHEMATICS

V. Varghese B. Sc., Vakathanam.

"A good start in a school subject by a skilful and enthusiastic teacher often disposes the child to like it for the rest of his life; contrariwise, an unsympathetic teacher with warped views of child-life often creates a distaste for the subject and even for the schooling as a whole."

From this we can understand that the inerest or skill produced in a subject is mainly due to the approach to the subject in the beginning. If a teacher is skilful enough to make the child understand and appreciate the value of the particular subject in his after-life, he will surely take pleasure in mastering the subject.

Mathematics, it is said, often frightens pupils. Even grown-up people consider that mathematics is a mysterious subject understandable only to those who profess to be mathematicians and it has nothing to do with the common people.' This opinion has it origin in bad teaching and bad syllabus.

Mathematics, if reasonably considered, is a simple subject which has the greatest of sequence in thought. A pupil who has been made to understand this property of mathematics cannot err in his manipulations if he is conscious enough in his operations.

So the success of a subject depends mainly on the teacher and his method. In teaching mathematics the teacher must be careful not to introduce the rigour of mathematics at a time when the pupils are immature to follow it.

He must as far as possible try to correlate mathematics with other subjects. The teacher must always be careful to make the pupils understand that mathematics is a necessary subject in their life, without the knowledge of which they cannot progress in other subjects or even lead a successful life.

If a pupil is interested in games, a skilful teacher can make use of that taste to make him learn much of Mathematics without the knowledge of his being taught Mathematics. From an atheltic report, a pupil who is interested in sports and games, may be asked to calculate the strength of the school, the average age of pupils who participated in games, the percentage of the atheletics, the time taken for each item, the average merit, and so on. Many other calculations the pupil may advantageously do because of his interest in games rather than in Mathematics. This may further help him to understand the principles of Mathematics better and he learns the subject without the knowledge that he is being taught.

The study of fractions is as a rule uninteresting and heavy to the children; but if problems involving

fractions are given and they get interested by feeling the need for their solution, then they take pleasure in learning even complicated fractions. Thus to teach fractions a teacher can advantageously put the child a question of finding the cost of a piece of cloth, 2¾ yds long, for his shirt if one yard of cloth costs Rs. 1⅞. The child may then feel the necessity for doing the calculations and he does it with pleasure.

Similarly in teaching L. C. M. the teacher can advantageously put him a puzzle, "If I take 2, 3 and 5 mangoes at a time from a basket containing a certain number of mangoes, one is always left in the basket. Find the number in the basket?" The child may naturally find an interest in solving it because his curiosity is stimulated. He may be eager to play the same trick upon his friends who may not be knowing it. So here the interest is roused and thus the teacher can advantageously teach that topic.

Another way of creating interest in the children to do problems in Mathematics is to make them understand the methods of checking up the result easily. We know there are two kinds of interests in doing a mathematical problem. First the manipulative interest or the interest in doing it and, secondly, tho joy or satisfaction of finding the result correct. When the child checks and finds the result to be correct he naturally feels a kind of pride which may prompt him to attempt a few more problems.

For this the teacher must occasionally teach the children, the ways of checking up the results.

He can either go through the whole process once again, which may not be advantageous or helpful at all times or he can check the result of the problem by setting up another problem with some of the data of the first problem and the result obtained. If the unknown in that question is found to be the one left out in the already given data, he can be conclusive that the answer got is correct.

Division can be tested by multiplying the devisor by the quotient obtained and seeing the product to be equal to the dividend.

eg: $16\overline{)64}\,(\,4$

$\underline{64}$

0

$64 = 4 \times 16$

Multiplication can be checked up by finding the sum of digits of the product to be equal to the sum of the digits of the product obtained by multiplying the sum of the digits of the multiplicand and that of the digits of the multiplicator as in the following example.

eg: $16 \times 16 = 256$



Finding the sum of digits,

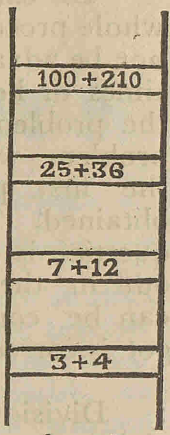
$16 \times 16 \rightarrow 7 \times 7 = 49 \rightarrow 13 \rightarrow \underline{\underline{4}}$

$= 256 \rightarrow 13 \rightarrow \underline{\underline{4}}$

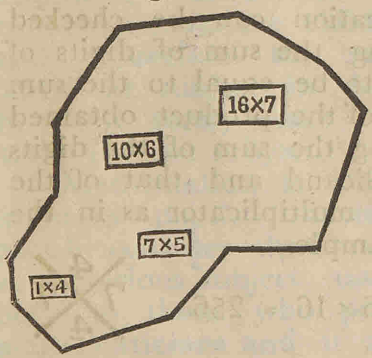
Thus the teachr can teach many methods of checking up the correctness of the result.

Another way of producing interest in the subject is to give mathematical games, some examples of which are given below.

eg: 1) **Climbing the ladder.** Draw a ladder on the board and write on the steps of the ladder the numbers to be added as shown in the figure. Those who do without mistake the various sums are supposed to climb the ladder step by step while those who make mistakes are supposed to be lame at that step. They may work out the sums with the feeling that they are only playing at the games. This method can be employed to drill the students in all the fundamental operations of Mathematics.



2) Another is by the method of crossing the marsh. Draw a figure of a marshy place on the board and draw small rectangles as shown to indicate the steps to cross the marsh and proceed as before. The pupils may be motivated to do the problem interestingly by this method.



Another kind of mathematical game is the sand bag. Draw a diagram as shown in the figure, on the floor. A few yards away from it draw a line. The pupils may stand behind this line and throw a sand bag aimed at the central square marked 9. Each pupil in turn may be given two throws, and the sum of the two numbers hit, may be taken as his score. This may unconsciously help the pupil to practise addition.

1	2	6
3	9	5
8	7	4

Another method of creating interest in Mathematics is to show the pupils the mathematical curiosities.

eg: 1) $1 \times 1 = 1$
$11 \times 11 = 121$
$111 \times 111 = 12321$
$1111 \times 1111 = 1234321$
$11111 \times 11111 = 123454321$ etc.

2) $9 \times 9 + 7 = 88$
$98 \times 9 + 6 = 888$
$987 \times 9 + 5 = 8888$
$9876 \times 9 + 4 = 88888$
$98765 \times 9 + 3 = 888888$ etc.

3) $1 \times 9 + 2 = 11$
$12 \times 9 + 3 = 111$
$123 \times 9 + 4 = 1111$
$1234 \times 9 + 5 = 11111$
$12345 \times 9 + 6 = 111111$ etc.

Thus by introducing occasional curiosities, riddle problems, conundrums, etc., by provoking their instinct of curiosity and by correlating mathematics with life and other subjects the interest in Mathematics can be created and made to substain throughout life.

"MAKE HISTORY LIVE"

P. T. VARUGHESE

B. T. Student.

When his wife offered to read-to him in his last illness, Sir Robert Walpole exclaimed "Yes nothing but history". Ziller chose history as the central subject and built around it a course of studies. Needless to say, the views are conflicting. Each has his own interpretation of history and judges it on the basis of that interpretation.

It is only recently that the importance of history has been recognized in the curriculum. Very few teachers realised its value as expressed by such eminent authorities as Lionardo D' Arrezo, Commenius, Locke, Pestalozzi, Froebel and Dr. Arnold. Lionardo D' Arrezo placed history first among studies, for he believed that it is not to be neglected on any account by one who aspires to true civilization. One of Her Majesty's Inspectors of schools is of opinion that "the history of the nation is for the boy more important, perhaps, than a quasi-scientific knowledge of the properties of matter and the life-history of a cockroach."

Even though the opinions of many of the modern educationists throw much light upon the importance of history, to many pupils history appeals least. The answers of history questions of many candidates are filled with fantastic and ludicrous blunders; perhaps they serve to provide entertainment for weary examiners. It is a problem that really vexes many a history teacher. But, it is a regrettable fact that it is due to the wrong outlook and objective of the teacher himself.

History is a live subject and not a mere snccession of dates. It is a record of human endeavour showing how people lived and behaved towards the state and towards their near and dear ones and how they enforced their rights against might. Froude says, "History is a voice forever sounding across the centuries the laws of right and wrong. Opinions alter, manners change, creeds arise and fall, but the moral law is written on the tablets of eternity."

How can we make history? The teacher of history should arouse the interest of the pupils in this 'dull' subject. He himself must be keenly interested in the subject and keep himself up to date in his reading. But many of the history teachers are square pegs in round holes. In some schools science teachers are entrusted with the task of teaching history. In too many schools junior teachers are in charge of the subject. Some teachers, though well-qualified, get 'rusty' because they give up reading their subject as they become permanently settled in the profession.

Such teachers naturally treat history in a light-hearted manner. That should not be. The history teacher should believe in the practical use and cultural value of history. He should always enter the class after thorough preparation of the subject-matter. As far as possible he should present historical facts in theic causal relations. The teacher's duty is to relate historical facts to social movements and world events, and find enough time for the discussion of current affairs.

With so much in general let me state some ways and means for a realistic approach to history, to make history live.

The younger generation in our Secondary schools take a very keen interest in the day-to-day political news. 'The Current Events Period' is very popular. We can exploit this interest in polities to make our history teaching more significant. Prof. Seely says, "History is the root of politics and politics is the fruit of history".

Social and political problems of course need careful presentation through concrete instances. While teaching about the caste system in the ancient Hindu period we should not stop with its origin, but briefly narrate its later growth. When dealing with the Muslim period we should not simply describe the fanaticism of an Allaudin Kilgi or an Aurangzeb, but show how the Hindu-Muslim problem has its seeds in the past. We should also present the other side of the picture. Under Akbar's rule Hindus and Muslims lived as brothers, there by showing that the communal problem is far from being insoluble. The absence of national feeling on the part of Indians such as Rajputs and Marathas can be explained by the presence of national feeling in the English people during the time of the Spanish Armada.

Whenever possible the device of comparison should be used. Reformation in Europe can be compared to Buddhist reaction or to the work of reformers like Raja Ram Mohun Roy, Dayananda Sararwathy etc,. The feudal system of Medieval Europe may well be compared to the Saranjami system of the Marathas. The comparative study of Akbar and Elizabeth, Pitt theyounger and Madhava Rao I will gain added interest.

The source method is also very useful for creating and maintaining interest. According to this method the child is not to hear history from his teacher, nor is he to learn from his text book, but he has to discover it by himself from the original sources. Original sources are the real basis of history. Historians have constructed history with the help of the same. Verbal descriptions in the text-books can give only vague ideas about the objects of the past which the children have never seen. But if the old arms, instruments, objects of daily use, coins, and pieces of pottery are actually shown to the children, they will give real ideas, produce the required atmosphere and make the lesson interesting and lively. A collection of a score of relevant sources should be ready with the teacher. But there is one difficulty in the way. The real sources are not available to all the schools. Big schools can supply cyclostyled copies of such source booklets. The particular source for study should be put up in the class room during the previous week and the pupils should be instructed to note the facts in a special

section of their notebook. This will savae time and facilitate the method.

The history teacher should make use of all possible practical devices to arouse interest in the subject. The preparation of historical maps, pictures, models, illustrations of battles, time lines, time charts, graphs, and flash cards help to make history interesting and practical. The preparation of a historical atlas may be tried in schools in the senior classes. Tell one of the pupils of a senior history class to prepare, in collaboration with the teacher, a history atlas of Indian history to include maps showing the extent of territories of the various rulers, their photographs, illustrations of battle sites, routes of armies, pictures of historical buildings, artistic works, coins, etc. The teacher also takes five representatives of his class as assistants and asks the remaining pupils to be on the lookout for the relevant materials for the proposed atlas. The atlas should be divided into periods such as Aryan, Buddhist, Post-Buddhist, Hindu, Muslim, pre-Mogul, Mogul and British Periods. Let the pupils be asked to look through the pages of the Illustrated weekly (Bombay), Illustrated London News, Times Literary Supplement, The National Geographical Magazine, Treasure Chest, etc. Once a week the teacher should meet his assistants and sort the materials collected during the week and paste them in the atlas at proper places. About once a fortnight the atlas should be made available for observation and study. The search for the materials for the atlas encourages the pupils to make good use of their leisure.

Audio-Visual aids make the lessons of history vivid and full of life. History deals with the dead past. We cannot represent the past efficiently without the help of visual aids. We must present something concrete to give real ideas of the past. The following audio-visual aids are the most important in the teaching of history.

We have already seen that original sources are the real objects. But in their absence we have to depend upon models and pictures. Models represent the objects quite faithfully. Still there may be difference in size. But such discrepancies can be explained verbally. The teacher should encourage the pupils to make their own models. Next come pictures. Pictures should show some action as children are attracted more by such pictures. A picture of prince Sidhardha taking leave of his beloved wife and child will better attract children than a picture of the contemplating Buddha. The pupils should be encouraged to prepare picture albums. The use of maps give real basis to the facts of history. Every lesson of Indian history should be taught with the help of a historical map of India. Every history room should have a small museum which should contain original sources, models, pictures, paintings, etc. Pupils should be encouraged to collect things with their own efforts. Epidiascope, film strips, magic lanterns, cinema and radio, are all aids which give life to the dead matter of history.

Correlation with other subjects makes the lessons of history meaningful. The drama of history has been played on the stage of the globe. As such, the story of the drama can best be understood with reference to the stage. Literature creates the appropriate atmosphere. History, written

scientifically, will be a skeleton of bones. It is the literature that gives flesh and blood to the skeleton. 'A Tale of Two Cities' is not historic; but it points to a better and more effective picture of Europe at the time of the French Revolution than any great book of history. Learning by doing is the most effective method of learning. Here lies the importance of hand work in the teaching of history. Pupils should be asked to draw diagrams and simple pictures. Let them colour outline pictures of historical persons and events. Civics includes an account of the growth and development of the present system of the government of a country. To study the present we need the light of the past. The linking up of the two will enliven the past and ennoble the present.

Dramatisation is a very valuable device. When pupils act the parts of Buddha, Henry VIII, Elizabeth, Mary Tudor, Rana Pratap, Sivaji and Ranjit Singh, they feel that these great personalities were real and living individuals. Bravery, truth, self-sacrifice, and treachery are such conceptions which cannot become concrete, unless they are acted upon the stage. There is a different type of dramatic shows known as 'puppet shows'. The difference is that in these shows puppets work instead of individuals. Such shows have nearly the same advantages as actual dramas. But they can be conducted by experts only. Dramatlsation satisfies children's instincts of curiosity and creativeness and fosters their inagination.

Excursions have an indispensable part in the teaching of history. The past has left on the stage of the globe some marks in the shape of remains, and ruins. The ruins of Harappa and Mohenjodaro, the art works of Ellora and Ajanta, the old buildings o Delhi and Agra, all speak of the glory of India in the past. If pupils visit those places they will surely feel that history is a live subject and love it more than any other subject.

To conclude, all the devices discussed above have no meaning if the teacher of history has not all the qualities and qualifications expected of him. A competent teachar of history can very easily make the subject interesting and living with his own efforts and capalilities. Let the motto of every history teacher be, "Make history live".



The Insect World A Review

P. J. Joseph B. Sc., Nedumkunnam
B. T. Student.

"A Naturalist might conclude that God takes an exhuberant joy in creating insects, for our earth so tecms with the complex little creatures that no one knows how many different kinds there are" The 'insecta' are a well-defined group of insects and it may be said that they take the place among 'Invertebrates' which the birds occupy among 'craniata'. Almost all of them have mastered the air.

Nearly 750000 species have been classified. About 4000 new varieties are found every year. Entomologists predict that when all the insects have been discovered the final tally may be in the millions. There is no other single phylum that is so rich in species and the enormous numbers in which each species is found will be apparent to any one, who has seen a colony of ants, termites or bees or suffered from the devastating effects of an army of locusts or witnessed the number of moths and other flies sacrificing their lives in the flame.

Basically, all insects have certain things in common; without any exception all of them possess three pairs of legs and three segments for the body; head, thorax and abdomen. The head bears antennae, mandibles and two pairs of mascillae; while the thorax bears the three pairs of legs. The abdomen has no appendages.

An insect has no bones. It wears its skeleton externally, hence no room for expansion; but growing insects periodically moult. Its legs are tubular sections of its skin-skeleton-plate-armour with muscles, soft-tissues and nerves. This mechanism makes it for its size, the strongest supporting device possible. In a recent experiment an entomologist gradually piled tiny weights on a scarab beetle, and he was able to get his little porter to move around, under a load of 850 times its own weight, while an average man cannot lift more than two-thirds of his weight.

The insects' blood is colourless and it is not confined by any system of veins as ours. There is a single median artery (heart) running along the whole length of the body; the blood surges and seeps through the whole body. The blood is forced to the far tips of the thread-fine extremities, by little auxillary hearts to or 'pumping stations' strengthened by powerful muscles. A cockroach has one in its head to pump blood through its long feelers.

An insect has no nostrils or lungs. Along the sides of the body there are symmetrical rows of tiny perforations; each of these is an air-duct. The air enters into a series of segmentally-arranged tracheal tubes (air ducts) connected together by longitudinally placed ones; so that the whole forms a net-work. Thus the whole insect is ventilated by a flow of air. The inhalation and exhalation of air is brought about by the beating of its wings. When the

wing muscles contract all the air is forced out from the system, when they relax fresh–air rushes into the ducts.

Almost all insects can fly as birds do. A dragon fly carries its heavy body on wings thinner than fine paper and can hit 40 miles an hour. A mosquito can beat its wings 300 times a second and the midge's wings beat more than 1000 times a second.

Though insects look 'fragile' strength is a deceptive factor. Dr. F. E. Lutz of the American Museum of Natural History sealed bees and butterflies in a tube, then pumped out the air to make a vacuum. Even the insects' body–moisture was sucked out of them. His 'fragile' little prisoners survived unharmed even when the tube was broken and normal pressure was restored. The toughest elephant would have died instantly.

Insects have only rudimentary brains. They have got ocelli on the top of their heads, great compound eyes on the sides and a kind of all over 'invisible eye' or light sense. With its eyes completely covered a light–loving bug moves unerringly toward brightness and a dark–loving one seeks the shadows with its compound eyes. The insect sees a world of extraordinary composite vignettes. Several ingenious technicians have succeeded in taking photographs through an insect's eye. The world thus revealed is a landscape of finely–patterned mosaic, each tiny piece of it caught by one facet of the eye. If they are fitted together we get a picture something like a stained glass window. The eye of a dragon fly contains about 25000 such facets.

Insects have two kinds of ears, delicate hairs sensitive to sound waves or tympanic membrane like our own ear–drums. Crickets have their ears on their knees, cicadas, in their abdomen, and water beetles, on their chests. Katydids have supersonic hearing power; they can hear 45000 vibrations per second while man can hear only about 2000 "Entomologists believe the whole outdoors may be ringing with an insect chorus of mating calls and interchanged messages when we think there is only silence". (Alan Dove)

The capacities to taste and smell have reached its zenith in inscets. Butter–flies and bees can taste, not only with their mouths but with their feet. It is a miracle that they can detect out microscopically slight edible materials. The extreme limit at which human taste can detect sweetness is in a solution of one part of sugar to about 200 parts of water; some moths and butterflies can detect the presence of sugar when it is one part in 300000.

There are insects which have taken diversified forms and shapes. Some of them are so tiny that they live on the tongues of horseflies; there are others whose lives on earth are so short that they have neither mouths nor stomachs and never eat at all.

It is reported that some insects take wonderful migratory flights. Painted lady butterflies tagged for scientific identification have been found to make a gigantic journey from North Africa to Iceland. Monarch butterflies make migratory flights from Canada to Florida and back again.

"To know something of the wonders of insects is to contemplate a little of the miracle of life" Alan Dove.

Geography- its place in the school curriculum.

BY IPE SAMUEL THOMAS, B. A.,
B. T. Student.

No school subject has changed more fundamentally within recent years than has Geography. Till the closing years of the last century school geography contained some miscellaneous collection of general knowledge of many parts of the world, and the poor pupils had to learn all these things by heart. But this is not the aim of 'Modern Geography'. It is therefore of primary importance to realize the different view-point which is necessary in teaching the subject at the present day.

What is the difference between the old and the new Geography? The old Geography started from the effects and sometimes worked back to the causes the modern geography starts from the causes and gradually works to the effects. In the older text-books Geography is defined as 'a description of the world and its inhabitants'. Modern Geography considers earth as 'the home of man.'

It has been said that in modern times the earth has become smaller and the world has become larger. With the rapid increase in the means of transportation and communication, the remote parts of the earth have come nearer to us than in olden days. The earth is to us smaller than it appeared to the ancients. But the use made of the earth at present is greater far than in the past, and the increased means of subsistence is supporting a population many times greater. Our material progress depends largely upon the relations we establish with our environment. So we can best define geography as 'a study of the interaction between man and his environment.'

One of the main functions of geography should be to help the child to know something about the world in which he lives. It leads to an enrichment of the experience of the child. It provides the basic information for the further study of other subjects like History, Natural Science, Languages etc. Geography serves to make the daily newspaper interesting and the places mentioned in the news acquire a meaning. It makes common place things enjoyable as the child discovers the possibilities of his own local environment.

Though geography is scientific in treatment its objective is humanistic. Geography is to be regarded as one of the humanity subjects and its ultimate aim is to train the students in intelligent citizenship. The desire to serve one's fellow men will show most naturally out of a love for them and the teacher of geography should try to make his pupils intelligently interested in the land on which they live. A knowledge of the detailed geography of one's

country, its highlands and low lands and its rivers and the beautiful scenery in the various parts of the land, its towns and cities, an accurate knowledge of the people and languages, is sure to make one feel proud of one's country and intensely patriotic. In children interest in their country is to be created not simply through the medium of books but as far as possible by first hand observation and experience. By such means we can set them on the way to an understanding of the true meaning of citizenship.

The greatest value of geography lies in arousing in the individual a feeling of good citizenship not only in relation to the home district and the country, but also to the world at large. Within the past few decades the nations of the world have been thrown together as never before. The interdependence of countries on one another is so great that events in Europe or America have their repercussions on Asia and other countries of the world. Geography helps us move in the right directions because it helps us to know our limitations and the limitations of other people.

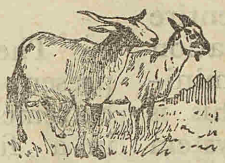
The study of geography helps young people to find out that men and nations are indeed 'members of one another'. It also helps to get rid of frustration, aggression and guilt feelings which if unresolved provide the raw material for attitudes of antagonism between peoples. Through the study of geography the schools really have an opportunity to contribute to world peace.

Some time ago there appeared in the press an account of an explorer in South America who in company with a faithful band of savages of the Upper Amazon attempted a forced march through the jungle. During the first two days they made rapid progress, but on the third day when the party was due to start he found all the natives sitting on their haunches looking very solemn and making no preparation to leave. On being questioned, their chief explained that they were "waiting for their souls to catch up with their bodies." We are in much the same plight today. In a physical sense the world has shrunk to the size of a single country. Thanks to the radio, the most inaccessible parts of Asia and Africa are within earshot of Washington, London and Moscow. The jetplane now does the journey from London to Tokyo and back in a little over three days. And so physically we are already neighbours in "one world" but our minds have not caught up with our bodies. Mentally we are still far apart, still in a world of continents and countries and races and religions. But what part can geography play here? In this ever-changing world geography can do much to harmonise the intellectual and cultural progress of man. It can develop in our pupils the ideal of practising tolerance and living together with one another as good neighbours.

Geography develops the faculty of imagination reasoning in the child. According to Fairgrieve "The function of geography is to train future citizens to imagine accurately the conditions of the great world stage and so to help them to think sanely about political and social problems in the world around". In a democratic country like India the teaching of geography in schools is very

essential. Every man should think out political problems for himself and not blindly follow the demagogues who shout the loudest.

Man's struggle with his environment yesterday and to-day, man's use and misuse of his powers and resources, his development, the essential unity of civilization, these are the main themes of the study of geography. This study makes the pupil not only a good citizen of his own country but also of the world at large. It develops the faculty of imagination and reasoning in the child and it harmonises the intellectual and cultural progress of man. So the teaching of geography with these aims in view has a value not merely in school but as a preparation for the realities of life as well.



"The Position of English in India"

K. Pothen Ninan

B. T. Student.

The present educational system is our sad heritage from our late imperialist masters. By the strangest of ironies men who had come for the lurce of trade remained to be the rulers of the land. It was devised under the guidance of the arrogant Statesman-Lord Macaulay. He believed that a shelf full of western books was worth more than the accumulated wisdom of the entire orient. His main aim of education was to train clerks for the administrative machinery. In brief, this is the background of the present system of Education in our country

Nothing could be more monstrous than instructing our pupils in a language other than their mother tongue. By adopting a foreign language as the medium of instruction, we are abandoning the medium in which things would come most naturally and easily to the Indian pupils. For the purpose of instructing in the foreign language we are forcing them to learn an artificial medium. Unfortunately, the Indian pupils cannot have any command over that medium and they have to cram everything. This is really a wearisome waste of the youthful material of our nation.

So English today occupies an unnatural place in our educational system. As things are at present, the student at the end of an arduous and extensive scholastic career has neither a command of the foreign language thrust on him, nor of his own mother-tongue. The result is that he never comes to have any effective medium for self-expression, and there is no personality where there is no self-expression.

There is however a danger at present in our swinging to the other extreme of altogether rejecting English in a fit of patriotic fervour and completely routing it out of our educational system. A good government in the shortest possible time should enforce the regional language of each area as the medium of instruction. This would give the regional language a pride of place. But it would certainly not do away with English altogether but would continue to encourage the study of English in case of those who learn it voluntarily and profitably. The study of a second language especially a language like English is one of the best methods of expanding one's mental horizon. More over, it adds to our power of assimilation, it makes as learn new ways of thinking as the scope of each language is essentially different.

With the attainment of Independence the pride of place will go to Hindi. Along with Hindi will be taught the regional language. As English is a beautiful language, as it enshrines one of the glorious literatures of the world, as it is a lingua-franca of the world; and a language of science and technology, it should be retained as a subject of study, but should not be used as the medium of instruction. But English should be given its legitimate place in the school Curriculum as a second language. The teaching of English should be a means to an end and not an end in itself. It should be taught for its practical utility, for language's sake and not for the sake of literature. In short, we have been so long and so intimately bound up with English that giving it up abruptly would paralyse our activities considerably in many practical and intellectual spheres.



The Principles of Educating the Spirit in Man

K. K. GEORGE, (B. T. Student)

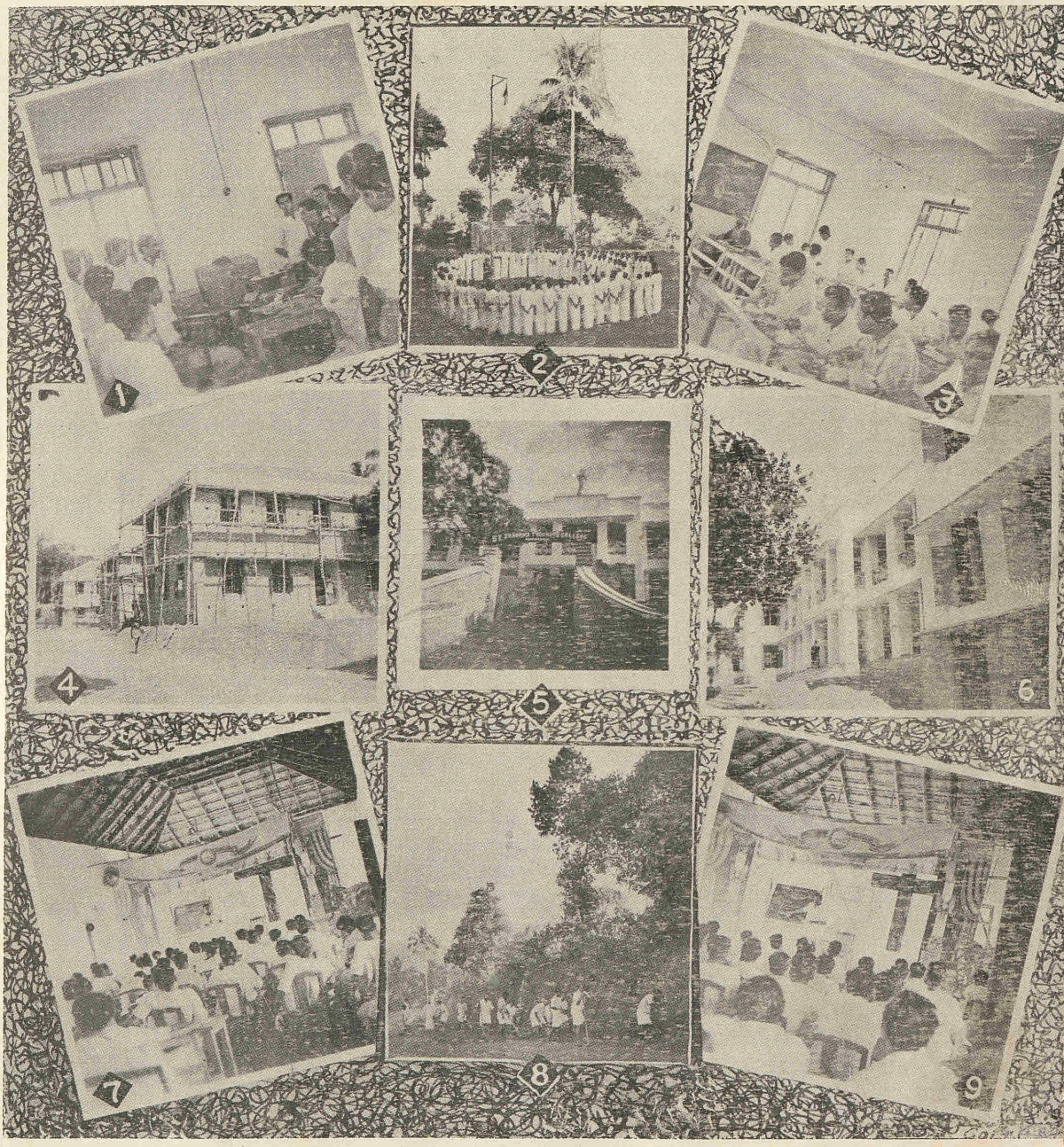
The spirit whose education we undertake is not a mysterious and inaccessible entity within us, but is simply and clearly the whole consciousness in its relation to God. Too frequently religious education has been regarded as a thing apart, as a kind of education distinct from all others. This view of religious education originates from the belief that religion is something foreign that has to be grafted to the unreligious nature of man, and ultimately this leads to the very negation of the existence of God. Since the span of this article is circumscribed to the principles in imparting religious education the answer to the above view may be superfluous. We proceed with the understanding that religious education is an integral part of educating the growing personality.

There are certain principles which guide us in the justification of the conception that religious education brings man in his integrity into right relationship with God, his creator.

Truth is the ideal of the intellect, it is the object of science, and the quickening of the sense of truth is the very aim of intellectual education. "All truth is God's truth." In man, in nature, the truth is the thought of God. Any the least shred of truth found anywhere, is sacred and has a divinity about it. So intellectual education ought to bring man to God as the source of truth. Religious education appropriates intellectual education as its inedispensable agent in bringing the intellect of man to God.

All beauty is really a manifestation of the perfection of God. One who contemplates the beautiful or sublime scenes of nature, cannot but feel that the course of nature is the art of God. The soul gifted with a passion for the perfect and with a capacity for its expression entertains visions of the eternal. Beauty is the highest object of the emotional experience of man and the very aim of aesthetic education is the development of the human sense of beauty. But if all beauty is God's beauty the aim of aesthetic education is religious. The teacher who treats beauty as a divine communication is a religious teacher and the aesthetic education he is achieving is one of the elements of religious education.

The very end of moral education is to quicken the sense of goodness in man to give him both an intellectual discernment of what is right and a responsive disposition to pursue whatsoever is right and good and shares the goodness of God. To recognize in any man a good character is to recognize something of divine in him. To will the good is to identify man's will with God's will. Therefore a religious education which seeks to bring man into a conscious relationship with God, must include within itself moral education as one of its essential elements.



Citizenship Camp activities, No. 1, 2, 3, 7, 8, 9.
College Hostel under construction, No. 4.
Front view of the College, No. 5.
Another view of the College, No. 6.

What is the nature of religious education? The great abiding aim of religious education is the moral development of the religious nature. Man is by nature as truly religious as he is intellectual or emotional, or volitional or social. Religion is not artificial graft into human nature, it is the natural blossoming of human nature. Our problem is to quicken in children birth with right of religion ie. to see that they are not swept away from God. The religious nature inborn in a child needs only to grow and the growth that is natural is very gradual during the years preceding adolescence. Here Dr. Haslett's view is noteworthy. "The ideal method for the child is to grow and develop through proper environment and instruction and training into a religious experience."

The correct order in educating religiously is first the action and feeling, and then the idea and thought. The child is primarily a doer, not a thinker; he abides by the religion of the concrete not the abstract. A child can do right and so feel rightly before he can think rightly. It is through obedience to the commands of God and feeling our dependence upon Him, that children finally come to think rightly about God. Definite practical, righteous action will pave the way towards that end. Our trouble at this point is that in religious education as in all types of education we have begun with the children on the intellectual, abstract, passive side of life rather than on the practical, concrete and active side. In emphasising right thoughts about God we have neglected the practical attainment of it through actions of charity, truthfulness, sympathy and the like. What the teacher is able to get his pupils to do in their actual day-to-day life is more important than any theory of right conduct.

Only when parents and teachers with religious natures share a common life with children of undeveloped religious nature can there be the quickening and growth of religious life. If the adult with whom the children associate are not religious, children cannot become religious. The interpretation of religious life must come from a religious life. "Every teacher therefore must be an incarnation to his pupils, as when a missionary faces a primitive people without words for the ideas of his gospel, he must be his gospel." Any one of his pupils may say of him,

"All familiar things he touched,
All common words he spoke,
became to me
Like forms and signs of a
divine world."

As intellectual education develops the sense of truth, as aesthetic education develops the sense of beauty, as moral education develops the sense of goodness, so religious education develops the sense of God." Religious education is the enlargement of man's experience of God. It includes correct teaching about God, cultivating right feelings towards God and securing right conduct as in the Presence of God.

THE NEW EDUCATION

(Jacob Mathew, Illipparampil)
B. T. Student

The pattern of the future schools of India has been visualised and steps are being taken to reorganise them into new forms. Our education is criticised as being too bookish, mechanical and stereotyped. The full development of personality is rather impossible in the present system of education for the simple reason that it has little relation with the life of the community, and proper steps are not taken to inculcate in students the basic qualities of descipline, co-operation and leadership. In short, our system of education has failed in its fundamental aims and it is the duty of every Indian to see that our schools are reorganised in the best manner suited to our needs.

What shall be the guiding principles upon which our schools should be re-organised? We shall discuss here some of the fundamental principles upon which schools should be run in order that the basic aims of education are realised.

Education is meant for the full-fledged development of the personality of the child. By the development of personality we mean the development of body, mind and spirit. The body develops by healthy habits of mind and health-giving food. The mind develops through knowledge, and the spirit by the development of sincere feelings. It is the duty of the school to see that these various aspects of the pupils are developed to the fullest extent possible.

Truth of thought, feeling and character is the key-note in the development of personality. Cultivation of a desire for truth shall be the aim of a progressive school. Appreciation of goodness and beauty and a desire for practical expression of truth and beauty shall be inculcated in students. Opportunities must be given to create something beautiful or something good. This stimulates the creative abilities of pupils and opens up a vast field of activity. Goodness, truth and beauty have different forms. Each pupil may select particular aspects of them according to his or her own aptitudes. The school has only to guide them.

Schools must train pupils to appreciate ideals. This will produce a strong discontent of the present evils and they will exert their energies for reforming society. All pupils need not be forced to take up the same ideal. The ideals accepted by pupils should have a vital connection with community-life. This is possible only when education is connected with actual life.

Social consciousness must be developed in every pupil. He must feel himself as a member of the social group. Prof. Nunn says "The stress the New Education lays everywhere upon the encouragement of

social sensibilities and corporate activity is justified only because these sensibilities and activities are necessary to the higher life of the individual".

Our present education has little connection with the life of the community. The pupils find it difficult to adjust themselves to the community after leaving the school. The school shall be an idealised epitome of the social life, reflecting within it all the elements of worthful major activities that make up the work of society. The duty of the school is to prepare pupils for a changing and dynamic environment. If not a regid formalism and the ghosts of the past will dominate over the realities of the present.

The subjects taught should have a vital connection with every-day life. Literature must be an epitome of the hopes and sufferings, achievements and failures of the mass at large. Science, Mathematics, History, etc., should have a live connection with actual life. The school must shake off its isolation and relate itself organically with all the worthy aspects of community life. In short, schools should convert themselves into miniature communities where the child learns through actual life.

The schools can do yeomen service to the community if their relation is established. They can improve community life in its various aspects. The schools must become community-centres where people come to discuss problems and co-operate with the schools in their manifold activities. They must be the centres from which radiates light and learning, movements and reforms. The teachers naturally become the leaders of the community groups.

The development of individuality must be made possible through our schools. Without the development of individuality the distinctive gifts of children die of inattention and disuse. Uniformity of methods, rigidity of curriculum and a narrow out-look tend to suppress individuality. Children are herded into a bookish and passive school environment. There is little provision for constructive activities, manual or mental. The schools become veritable 'prison houses, whose shades begin to close upon the growing boys' as the years roll on. Choice of subjects is rarely allowed according to individual aptitudes. Adolescence sets in with its undeniable craving for reality, for definite concrete work and its growing interests for art, literature, poetry, social services and other impulses which can inspire generous thoughts and emotions. But the school goes on unconcernedly with its deadly monotony of academic work with the result that the development of personality is arrested.

For unhampered development of personality opportunities to think, feel, act and express, must be provided. By freedom it is not license that is meant. Freedom without restraint is not true freedom, nor does it help one to develop a full and harmonious personality. It is responsible freedom that is meant. Freedom is to be used not only in the field of teaching and study, but also in school government and discipline.

Freedom is necessary in the school to realise its own aims and ideals. It is necessary for developing the energy of spirit and mind. Freedom develops initiative, courage of mind vitality of soul, sensitiveness of feeling-in short, an atmosphere in which all expressive and creative virtues of

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personality may grow and blossom. Poet Iqbal says:

"Fettered and cramped life is a
little sluggish rivulet;
Free it becomes the boundless
ocean".

Freedom is necessary to develop citizens who will be of real value to the country. Freedom is vital in developing a creative mind. Freedom is necessary for the teacher too to give full play to the creative forces of life. Prof. Nunn says "Indeed the most cautious observer if he could pass from a class of children recently released from the bondage of the older method to see one that has learned to use new freedom and could compare the noisy restlessness and aimless disorder of the former, with the calm and happy self-guided industry of the latter would find it hard to remain a sceptic".

Another important task of the school is the creation of a scientific spirit in children-a spirit of enquiry and unwillingness to accept things which cannot be proved or justified.

Again, our examinations and methods of teaching are working contrary to this vital aspect of education. Our examinations entirely ignore the skill in working up a subject by reasoning for oneself. It must not be the number of facts, but the way in which the pupils have arrived at them that counts. Spoonfeeding is the greatest disservice possible to our country. Fullest freedom of experiment and fullest opportunity for finding out things for oneself with the least aid, alone can develop scientific spirit in pupils. At present we do the thing for the child.

The modern school in order to achieve its noble aims has to be provided with active and creative environment- an environment that is rich and active and joyous with opportunities for play, social co-operation, and creative and constructive activities. Prof. Nunn says "The school must be thought of primarily not a place of learning where certain knowledge is learnt but as a place where the young are disciplined in certain forms of activity, namely those that are of the greatest and most permanant value in the wider world" To Prof. Dewey school is a specialised environment where certain quality of life and certain types of activities and occupations are provided with the object of securing children's development along desirable lines.

The child cannot take in abstract thoughts and reasoning. He can understand them only when related with actual life-situations. He will never put his heart into any piece of school work unless he can see its purpose from his own point of view. 'Knowledge for knowledg's sake is the motto of the narrow-minded self-centred scholar who has lost sight of the great universe by gazing constantly as it were, at a small crystal. Similarly art for the sake of art is the decadent artist's creed'.

The modern education lays emphasis on new methods of teaching, taking this principle in view. The play way, the project method, the Kindergarten, the Montessori method, the Basic Education-all lay emphasis on the activity of pupils. It is high time to introduce these methods in our schools, however costly they might be.

The school is to be considered also as a creative environment. Creativity

in education is not a new method. It is the spirit of approach to work in which we express ourselves joyously, freely and spontaneously. Freedom and joy are the distinguishing marks of creative activity. Creative activity need not bring forth any artistic product of great merit. It has a releasing influence on our personality and foster habits. Bergson says "The ultimate reason of human life is creation which in distinction from that of the artist or man of science can be pushed at all moments and all men alike".

Creative activities in our schools should include intellectual, social practical and artistic. They give scope to the creative expression of all that is unique in every pupil. The activities should be carried out on the students' own initiative, resourcefulness and capacity for co-operative and disciplined work under democratic leadership. The activities to be selected in each school depends upon the circumstances of the particular school. It may be manual work or crafts, school societies and clubs, school magazine, school exhibition or social service activities.

We have discussed the principles that should guide the schools of the future for a full development of the personality of the child. But how to implement those principles in actual school organisation and management is the question. We were never lacking in ideas. Good programmes of procedure were prepared on paper; but they seldom found place in actual practice.

Under any authoritarian regime the basis of relationship is fear of one sort or another. True personality cannot develop in such an atmosphere The administrators, inspecting officers, and committees of management play the 'big boss' over the headmasters and the headmasters in turn take it out of their teachers and the teachers ultimately revenge themselves on the children. The children, since they cannot hit back, develop ugly complexes which create problems in schools and home. When the children grow up they create problems for society as a whole, for they try to perpetuate, whenever they can, this sorry authoritarian tradition to which they have been subjected to in their childhood and youth. Thus it remains a vicious circle.

The replacement of authoritarian tradition by humanised and democratic administration is the only remedy to convert our schools into genuine educational centres. Educational officers should convene frequent conferences of teachers and place before them the actual situations and discuss the problems freely. The urgency of reforming the whole outlook should be told. They must visualise, the need for revolutionising the present conception and practices, and the creation of a new spirit in the whole field of education. Then only can we expect hearty co-operation from the teachers for any effective change in the pattern of our present schools.

"Our country, harassed by many obstinate and heart-rending problems, and our world, obsessed with misery and war and destruction and the menace of the atom-bomb, have no protection against these dangers and no hope against the onslaught of the forces of evil, except what we can do through education, in its widest sense-through our feeble but sincere efforts, with our weak but unwavering hands-to restore the world

to sanity and reason and the joy of creative peaceful work. This battle has to be fought in every home and every school, and within the heart and soul of every growing child and youth. It has to be fought against the Devil who sits at the counter buying human souls with dirty but unlimited coins-coins of fear and greed, and prejudice and the lust for power and the love of pleasure. We must strive to make these coins appear worthless in the eyes of our children and youth so that when they grow up they will be able to distinguish between gold and tinsel so that when the testing time comes their values will be right. They will have learnt to prefer co-operative effort to self-seeking competition, the joy of creative work to possessive happiness, the quality of charity to domination, the virtue of tolerance to fanaticism".



Present day Science Teaching in Secondary Schools– A Glance

P. V. Ittikuriath B. A., Ankamaly

B. T. Student.

We are living in an atomic age. We have now conquered the earth, sea and air. We have seen how destructive the Hydrogen and the Atom Bombs are and also how atomic energy can be used for the welfare and progress of mankind. The Russians and the Americans have succeeded in inventing earth satellites which are made to revolve round the earth. How wonderful and marvellous these inventions are! We are running with a terrific speed in scientific achievements. No doubt within a short period our scientists may set foot on other planets. But, who knows, the inhabitants of those planets, if any, may be more scientifically developed than we are!

All of us have heard about the wonderful achievements of the scientific world, like the television, the radio, the atom-bomb, etc. These are the results of very many years of experiments and hard labour by our eminent scientists. Thanks be to God who has blessed the life-long endeavours of these noble souls with crowning achievements. Though the Heavenly Father has given men these powers of nature for the benefit and welfare of mankind, the people are abusing these by using them for the destruction of mankind. Man may invent hereafter a more devilish instrument which is powerful enough to destroy the whole world within a few seconds, who knows!

Since we are living in a cent percent scientific world there are few people now-a-days who are not convinced of the wisdom of the inclusion of science in the school curriculum. Practically every school, whether secondary or primary, attempts to give its pupils some instruction in science. The instruction may be ineffective or it may be very meagre, but the wish to provide the instruction exists.

What has brought about this change? Various reasons for it can be adduced, most of which have a certain amount of truth in them. Science is taught because of its great utilitarian value or bread and butter value It gives the pupil a general knowledge which will form a basis for enabling him to choose a vocation like medicine or engineering. Others emphasize the disciplinary value of science. It gives the pupils a systematic training in careful and accurate observation and an experience in correct thinking and reasoning. The cultural value of science is not unimportant. Science is equally a record of human achievements and endeavours. How man attacked the

various problems of life and how he succeeded in solving them, are learnt along with the study of science. It should give them an intelligent understanding of the progress of human society and make them work for the benefit of humanity, thereby contributing their own share of the progress of mankind. Science has played a very important part in the advancement of civilization. In our life the applications of science are so numerous that some knowledge of these should give more interest in and better appreciation of life.

Thus we know that science has won a permanent position in the curriculum of our schools. Let us now consider the question of what is actually being done in the way of science teaching. A certain amount of science instruction is given in our primary schools and in an increasing amount in our secondary schools. But when we examine the courses of instruction given and know what work is being done and the nature of the teaching in the different institutions, we are forced to conclude that all is not well with our science teaching.

Let us examine some of the reasons why our pupils are not benefited by the present-day teaching in schools. Most of our primary teachers are not at all fit for teaching science subjects in the upper primary classes. They know little about general science. They make these subjects difficult to the pupils, because they think that science is a subject which can be mastered only by intelligent pupils. In the schools in Ceylon very few pupils offer science subjects as their optionals since they appear to them as a bugbear.

With a few incomplete and hazy notions they come up to the high school class where they are taught by untrained and inexperienced teachers. They do not know the correct methods of teaching and how every science topic can be related to life situations and made interesting to the pupils. Some teachers, though they are experienced and have got proper training in the teaching of science subjects, take very little pains in the matter of teaching. They think in terms of money, and consider teaching as a side-business

Most of the schools are not having well-equipped laboratories. In order to get grant from the government the school authorities buy some cheap and useless apparatus to show to the inspecting officers. Sometimes the officers are influenced by the so-called cultured men of society to ignore the utter miserable condition of the laboratory. Thus by hook or crook they would get permission to conduct a High School without even a laboratory. In some schools when the inspection day comes some sciencc apparatus are brought from the neighbouring schools to satisfy the inspector and the science apparatus leave the school as soon as the inspector leaves it.

Inadequacy of demonstrative work by the teacher and practical work by the pupils have resulted in vague and hazy notions about scientific facts. Science teaching is more visual and tactile than aural. Pupils might have heard about pumps, thermometers, Kipp's apparatus and the like, but neither have they seen them nor handled them. In the schools in Ceylon every pupil has to do practical work in every topic in science, make a record of their experiments and submit the books for scrutiny.

A well-equipped laboratory is at their disposal.

At present pupils learn something about physics, a bit of chemistry and a piece of natural science, but do not know how to connect these ideas with their everyday life. Teachers do not give proper guidance or directions. Pupils are taught about the construction and marking of the highest and lowest points of a thermometer, but are not taught the practical side of it. Our pupils do not know even how to take the temperature of a patient. In electricity we are teaching 'reduction factor', 'measurement of current' and many other difficult topics, but sufficient knowledge is not given to the pupils about the things useful in life, such as wiring a house, plating things, mending a fuse, etc. No use of multiplying examples. Our pupils have a poor knowledge about the practical aspects of things. There is no connection between the things taught in the class and the things outside.

Pupils are having a false idea that they are studying these only to get a pass in the examinations. Too much stress on the passing of examinations is another cause of the miserable position of science teaching in our schools. Pupils usually cram the details of experiments and definitions without knowing their significance and vomit them in the examination paper. Nothing is left in them after the examination.

Our class-rooms are crowded with 50 or 55 pupils in each class. How can a teacher effectively attend to the individual needs and supervise each and everyone of the pupils and clear his doubts? It is practically impossible.

Now let us examine how we can improve the teaching of science in our schools. There are so many ways and means. First of all the teacher's attitude towards teaching science should change. Teachers must take delight in teaching the subject. Proper training should be given to teachers through summer classes and refresher courses arranged by the education department under each District Educational officer. All science teachers should attend these classes where discussions, lectures and demonstrations about the modern methods of science teaching should be the main items. Besides, teachers should be given a chance of handling and experimenting with the modern appliances like the radio, the cinema, the telephone, etc., Some teachers may not have even seen these apparatus.

Teachers must feel their responsibility. They are the nation-builders and the parents have entrusted their children to their care. So unless they do their duty well they are not at all co-operating in the building of a good and powerful nation.

The government have to help the school authorities in equipping the laboratory by giving grants so that every pupil will get a chance of doing practical work and thus get a thorough knowledge about the topics he studies. It is consoling to see that the Central Government have realised the need of improving laboratories, and have formulated a scheme for bringing it about.

The number of pupils in each class must be limited to 25 or 30, and arrangements should be made so that all pupils do practical work and are encouraged to make simple home-made apparatus.

The teacher should try to keep up the interest of the pupils by doing experiments. Often pupils are disappointed and their hopes of learning something of the wonder and mystery of science are blighted. The exercises in measuring the lengths of lines, straight and curved, in inches and centimetres, in finding the relation of the circumference of a circle to its diameter and the like, should be transferred to the mathematics lesson. The teacher should, on every suitable occasion, introduce an experiment which will arrest attention by its striking results. Pupils may be induced to try to repeat such experiments at home or elsewhere and in this way the treatment may develop science study as a hobby and as a useful and pleasant recreation in their leisure, not only while at school but also in later life. The teacher should show that experiments can be performed with home-made apparatus assembled with tin cans, tumblers and odd pieces of materials collected at random. Several distinguished men of science- for example Lord Kelvin, Edison and Faraday- were keenly interested in performing experiments while quite young, with their own apparatus.

Teachers must try to connect every topic in science with life-situations and should try to give his pupils a wide field of knowledge and experience. In the teaching of the principle of Archimedes some teachers are satisfied with showing experiments and teaching the truth of the statement which the pupils memorise. But really the lesson is not finished until he has discussed with his pupils the many and varied illustrations and applications such as ships, and the meaning of the plimsoll line, flouting clocks, the salvaging of sunken vessels, the diving bell, sumarines, the use of balloons and air ships.

A science library should be an essential part of the equipment of every school. It is a pity that science books have not found a place in school libraries in abundance. A science library is a useful aid in the teaching of science. Teachers can build up small libraries of simple books of general scientific interest written in popular style. Boys eagerly read these books during their leisure time and acquire a wide knowledge of general scientific facts and learn much of the triumphs of scientific achievements in the past and the present times. This will foster a reading habit in them and even after they leave the school they will try to get books from the public libraries and read them.

The display of pictures and illustrations of scientific interest is another way of making the pupils interested in the subject. Appropriate illustrations from our daily newspapers should be collected, discussed, preserved for some time and the best of them added to the general collection. Portraits of famous scientists with brief notes on their lives and achievements are always a source of inspiration and their early efforts and final success seldom fail to stimulate and encourage even young pupils. A certain amount of the historical development of the subject will prove profitable to older pupils.

Visits to places of scientific interest by the class under the guidance of the teacher is another means of improving our science teaching. The places visited will depend upon

the subject studied. For physics and chemistry it will be appropriate if the visits are made to places of industry and scientific interest where the pupils may have an opportunity to see the industrial applications of certain scientific principles and processes. Places like gas works, electric generating stations, soap works, fire-stations, glass works, coal mines, etc, never fail to interest children. For nature study it is good to take children to public parks and botanical gardens.

Small scientific debating societies are formed and run by pupils under the guidance of the science masters. Short lectures, and simple demonstrations followed by discussions are the main activities of these societies. A question-box many be placed in the class–room in which pupils drop written questions. Every week discussions can be conducted on the questions.

Pupils are induced to make models and pieces of scientific apparatus. Working models of motors and dynamos, simple electric and magnetic devices, telephones and wireless receiving sets can be made or assembled even in an ordinary work–shop attached to a science laboratory.

Thus science teaching is quite essential since we are living in a scientific world. But science teaching in our schools is deplorable and it only creates a distaste towards science subjects in the pupils rather than a life–long interest in them. When they leave the school they carry only some vague ideas about scientific principles and processes. So it is highly essential that the methods of science teaching should be improved in order to create interest in the pupils so that the coming generations will march hand in hand with the other civilized nations of the world.



Self-Government in School

ANTONY, MANALY

India is a sovereign democratic republic. She has earned a reputation in international field and she is now in the front row of the nations of the world. Her material progress within the country stands on a par with her international prestige. Still there is much chaos in the country owing to parochial tendencies. This shows the low level of patriotism and discipline among the citizens of this country, which has been proverbial from time immemorial. A nation's strength is not her wealth or scientific advancement or possession of arms but her citizens–men noted for their integrity, patriotism and discipline, who will stand the test of time. Briton won the great war not with fighting alone but with the mental calibre of her citizens who stood for their mother country in times of peril and devastation.

Hence it is said that a democratic nation is what the people make it and depends on what they are. What they are in turn depends on the training which they have received in their younger days. A nation is fit to be democratic only when her people understand the real significance and importance of a good social order. But we are not yet up to that standard to qualify ourselves for a democracy as we do not have a democratic tradition and discipline. Also our people are not aware of their responsibilities in a democratic set–up of government. So it is the prime need of India to train her people for democracy and, if so, it must be done in the younger days and especially in their school–going years. Hence the schools in India have great responsibility in training the pupils to become true disciplined and patriotic citizens.

The modern trend in educational development is to prepare the child for its future life in society. Social effioiency has been taken as an end and education is a means for it. With this end in view ever so many extra curricular activities are introduced in schools.

Of all these modern developments the most important is the introduction of self-government in schools. This I think is adopted after making some individual experiments in certaih Indian schools. The Secondary Education Commission also has recommended the organisation of self–goverment in schools to maintain discipline and as a measure to promote the pupils' knowledge about their own duties and responsibilities in a democracy. A system of self–goverment will provide training in self–discipline. The pupils learn the necessity of rules and obey them, because they themselves frame the rules, that is to say, rules should arise out of social necessity to which habitual obedience may be rendered. So as a disciplinary method it is highly beneficial. "The present spirit of youth and the

changing social order render it imperative that boys and girls should be gradually inducted into social responsibility under wise supervision, so that when the period of formal education is over they will be able to enter the complex civic life of their day with ability, wisdom and courage, born of firsthand experience in the control of the social life of the school". That is why the Secondary Education commission recommended that "a greater responsibility should devolve upon the students themselves in the maintenance of discipline" in the school. Active citizenship training for leadership and fellowship is almost an inescapable part of working in an organized body. This educational aim rather than the mere efficiency or convenience has given rise to the concept of student self-government in schools.

Self-government in schools, has been defined as the maintenance of order and the regulation of matters of conduct in the school by elected representatives chosen from the student body by the students themselves. An experienced Headmaster has observed "Student self-government is a plan of school administration". Self-government in schools is an organisation to secure the good-will and co-operation of the pupils in the working of schools and to give good training to the pupils in democratic activities. as a preparation for their future life.

The aim of self-government in schools is to make the pupils good citizens of a democratic state by giving experiences in social life, co-operation, self-direction and in the choice of leaders. It is also intended to inculcate in them a sense of responsibility and of duty to foster their sentiments for law and order and also respect for authority and sociability. It helps them get trained in social conduct and makes them freely express their views and to find out and promote personal qualities and abilities. The real aim is to foster high ideals of democracy even from the younger days which would be with them though-out their life.

The introduction of self-government in school will promote the moral tone of the school and secure the co-operation of a major part of the pupils in the activities of the school. This enables the teacher to study the individual differences in each one's ability and aptitude. The pupils will feel that they are their own rulers and the misconduct of one of them will tell upon the reputation of all so that each one may be on the lookout for keeping the rules and regulations of the School. The punishment they receive for breaking rules inflicted by their own leaders will have a greater effect on them than the punishments inflicted by other authorities. They will learn the importance of discharging the duties entrusted to them to the best of their ability. This will enable them to learn the disastrous results on society when certain members are irresponsibile. They are encouraged to act up to the trust that is placed upon them. They may learn the consequences of electing inefficient candidates for responsible positions. This will help to develop good leadership. Thus we see that a system of self-government will make for the rapid progress of democracy in our country.

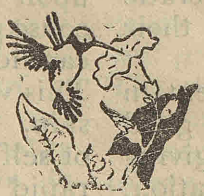
But a major problem is the organisation of self-government in schools. Each class may be divided

into a few squads. Each squad is entitled to have their representatives elected to the general council. It seems to be, as H. C. Mackown points out, "naturally the smaller the group represented, the more probability there is that its members will feel representation". The general council elects a leader and he forms a ministry of his own choice from the representatives. The council elects a secretary and a speaker and a court of justice. The members elected to the court of justice are to be impartial and firm-minded pupils. They have the right to inflict punishment upon those who violate the rules of conduct. Two or three members from the staff may be nominated by the Headmaster to the general council, but they must be careful that they should not exercise any undue interference or curtail the freedom of the council of members. The Headmaster is the president of the "school-state". He has the power to do anything and everything to keep up discipline and the tone of the school.

The councils may follow the parliamentary or municipal council system in their working. But in some of North Indian schools the self-government council members are divided according to the political parties of the national assembly. But it seems to be not advisable as it will cause party factions on a political level.

But the system is not without its defects. The over-emphasis on extra-curricular activities may cause decrease of interest in studies. Pupils' participation in school activities will dissipiate the energies of the pupils and affect their academic achievements". Party politics may be dragged in and the conducting of elections in schools create unhealthy rivalry among the pupils. The conservative teachers who used to be in the lime-light of power would find it difficult to adjust themselves to the changed state of affairs.

The successful working of the system depends upon the efficient supervision of the Headmaster and the hearty co-operation of the staff. But if worked out efficiently it will prove a great service to the country in training citizens for the future. It has proved a success in the west and we may hope that it will not fail in our country alone.



Yogasan and Education

Abraham Upputhara

B. T. Student.

Some of the readers may suspect the relevancy of this title itself. They really doubt whether there is any relation between Yogasan and Education; some others may even turn over this page in disgust for the next article. But I request them to wait to see whether the title is relevant or not, whether there is any relation between Yogasan and education.

Before we proceed to establish any relation between these two, let us see what Yogasan is. It is a form of physical exercise which can be practised by people of all ages, both by men and women. It is unique among the forms of physical exercises. In olden days sanyasins practised Yogasans. Hence there prevailed a false notion that this can be practised only by unmarried persons like sanyasins. With the prevalence of westeen thought this good old practice came to be neglected. But now many have begun to realise its value and they practise and try to popularise it.

Yogasan prevents and cures diseases. Though the population of our country is very great the health of its people is very deplorable. The majority are victems of one disease or other. Laklrs of people die due to various diseases. Our country is notorious for its death-rate. What is the reason for such a disastrous situation? Different people give different opinions. But the one important reason for the high death-rate is our artificial way of living. With the growth of science and the so-called civilisation many changes have taken place in our way of living. Ultimately these have caused the deterioration of the people of our nation.

The health of the body depends upon the health of the internal organs. Almost every disease has constipation as its root cause. This root cause cannot be eradicated with the help of patent medicines and tonics easily and economically. The real cure can be achieved only by giving proper exercise to the internal organs along with suitable diet. But ordinary physical exercises are helpful only to develop our superficial muscles. Only Yogasan can give proper exercise to the internal organs and keep the body healthy. Thus by the practice of Yogasan we can keep a healthy body without going to doctors or spending money on drugs.

Now let us turn to the question: is there any connection between health and education? The well known dictum, "a sound mind in a sound body" reminds us of the importance of health in the matter of education. Our nation wants a population

endowed with knowledge, health, vigour and tenacity of purpose to explore its natural resources. According to Spencer the aim of education is to "prepare for a complete living". A complete living can be achieved only by the developmeni of both body and mind. Thus Locke says that the aim of education is "the attainment of a sound mind in a sound body". Roussean says that "a weak body enfeebles the mind". Thus education aims at the development of body and mind The development and the power of the mind depend upon the body. So education requires a healthy body and Yogasan supplies health to the body.

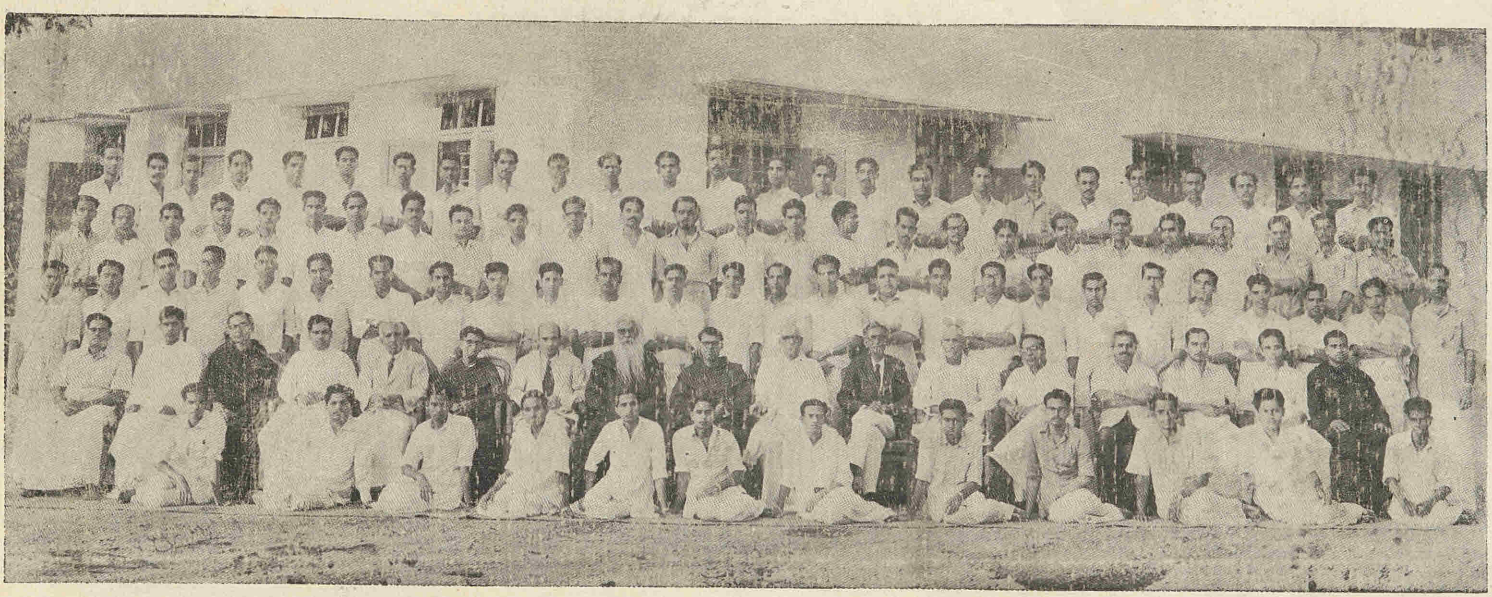
According to Swami Sivananda "it (Yogasan) aims at the harmonious development of the body, the mind and the soul". According to Pestalozzi" education aims at the harmonious development of all the powers". From these it is clear that Yogasan and education have similar aims. But we know that education lays more stress on the mimd while Yogasan aims more at the development of the body. Education aims at a sound mind in a sound body and Yogasan provides a sound body. Thus both education and Yogasan are inter-related.

Another benefit of Yogasan compared with education is that it is the best way to secure the habit of concentration of attention. The sanyasins by the practice of Yogasan were able to meditate on certain things by concentrating their whole attention on them for hours together. In education the aspect of concentration plays a great part In learning we have to concentrate our attention on that which we are learning.

Thus we have seen that Yogasan, prevents diseases and cures them and thus keeps the health of the body and is the best way to secure the habit of mental concentration. All these are essential requirements in education. So it is desirable to introduce Yogasan in all educational institutions.

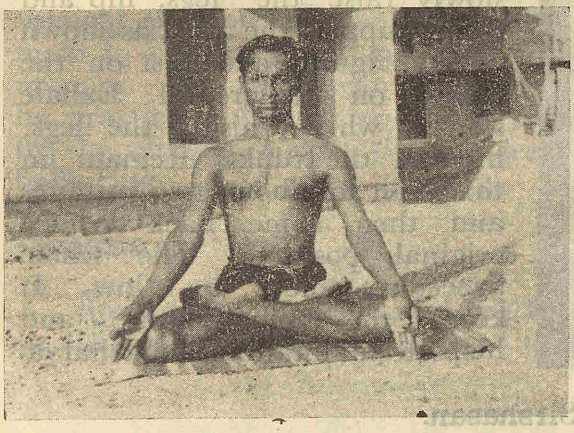
Young teachers can do much for the popularisation of Yogasan. Teachers are entrusted with immature bodies and minds. Their duty is to develop both body and mind. Naturally they develop the minds of the pupils by imparting knowledge in the class room. But the development of the body is neglected much now-a-days. The children of to day are the parents of tomorrow; so that if the present generation knows the practice of Yogasan which is conducive to health, the next too will be brought up under healthy conditions. So the teachers should as far as possible try to practise Yogasan and also teach it to the pupils. Make the pupils understand the importance of Yogasan and help them in its practice. During the physical education classes Yogasan can be taught as a special activity.

There is a wrong conception that Yogasan can be practised only by those who are gifted with a "pliable body". If it is attempted from the school age it is very easy. The grown-ups can learn most of the asans by constant and steady practice. All that we require for practising Yogasan is a determined mind. The best time to practise Yogasan is early in the morning after a bath. Evening time is also not objectionable. But it should be only at least three hours after we have had our last meal.



Staff and students.

Padmasan.



This is one among the most important of asans. The total number of asans is believed to be eighty-four crores. Of these only one thousand and six hundred are useful. Among these useful asans eighty-four are important and of these thirty-two are very important. Of these thirty-two, four are the most important and Padmasan is one among them. In this asan the back bone should remain erect. So this asan will help much to remove hunch-back. This asan gives health to the body and peace and comfort to the mind.

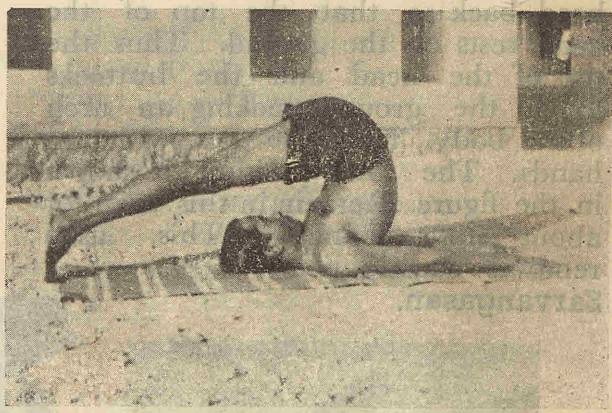
Spread a sheet on the ground and take your seat on it. Stretch both legs forward. Take hold of the right foot and place it on the left thigh, and then place the left foot on the right thigh. The knees should touch the ground. Then stretch your hands and place them on the knees as shown in the figure. Sit erect so that the head, the neck and the body are vertical to the ground. You can remain in this asan as long as you do not feel any great uneasiness. This is the best posture for pranayam.

Pranayam.

The practice of this asan makes the lungs healthy. Blood gets enough oxygen and blood circulation is quickened.

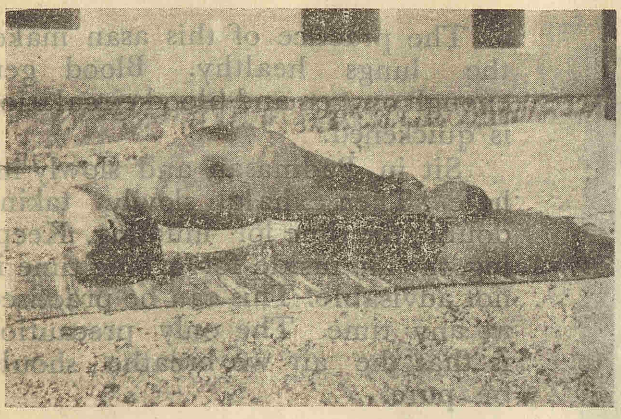
Sit in Padmasan and slowly inhale. Then exhale slowly taking double the time for inhaling. Keeping the air inside for a long time is not advisable. This can be practised at any time. The only precaution is that the air we breathe should be pure.

Halasan.



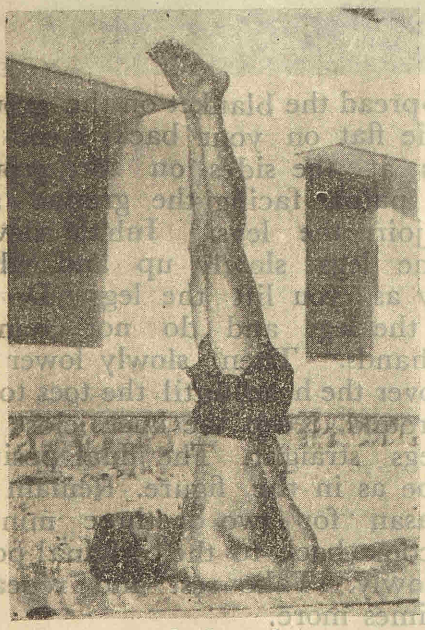
Spread the blanket on the ground and lie flat on your back. Keep the hands at the sides on the ground with palms facing the ground and then join the legs. Inhale slowly, lift the legs slowly up and exhale slowly as you lift the legs Do not bend the legs and do not remove the hands. Then slowly lower the legs over the head until the toes touch the ground. Keep the knees close and the legs straight. The final position will be as in the figure. Remain in this asan for two or three minutes and come back to the original position slowly. Take rest and repeat a few times more.

Matsyasan.



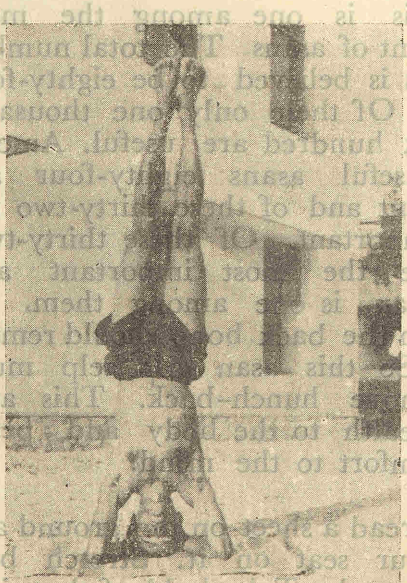
Sit on the blanket on Padmasan. Then lie flat on the back. Stretch the head back so that the top of the head rests on the ground. Thus the top of the head and the buttocks touch the ground making an arch of the body. Hold the toes with the hands. The final position is shown in the figure. Remain in this asan for about one minute. This asan removes constipation.

Sarvangasan.



This asan helps the proper working of the endocrine glands. Spread the blanket and lie flat on the back. Inhale slowly. Then slowly raise the legs, hip and trunk, support the back as shown in the figure and rest on the elbows on the ground. Exhale slowly while raising the legs, hip and the trunk. Remain in this asan for about two minutes and then come back to the original position. The whole procedure must be slow. It keeps the spine elastic and helps to maintain brahmacharya.

Sirshasan.



This asan is intended for general health, for all round development of the body and for maintaining brahmacharya. "This is a panacea, sovereign specific for all human ailments". Our prime minister Nehru is in the habit of practising this asan everyday.

Spread a blanket and make a finger-lock by inter-weaving the fingers. Place it on the blanket.

Keep the top of your head on the blanket between the finger-lock. Then raise the legs slowly till they become vertical as shown in the figure. Remain in this asan for two or three minutes. The period can be increased by practice. At first try this asan by the side of a wall till you learn balancing.

Savasan.

Spread the blanket and lie flat on the back. Keep the hands at the side. Relax the muscles and limbs. This asan helps immensely to refresh the mind and body after mental and physical strain.

In this article I have tried to give some idea about Yogasan and its importance in relation to education. I have also described the ways in which some of the asans should be done, with illustrations. If anybody who happens to read this realises the importance of Yogasan and tries to practise it, I shall consider myself amply rewarded.



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Sri T. C. Cherian M. A., L. T.,
Thachankary,
Changanacherry.

Sri D. Varghese M. A.,
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Changanacherry.

Sri Artist N. V. Varkey,
Pallimangalam,
Mannanam.

Clerk

Sri V. D. Joseph,
Vathalloor,
Thachappuzha, Ponkunnam.

STUDENTS

English and Mathematics.

1 T. Cherian Andrews, (782)
Thannical,
Puthupally, Kottayam.

2 K. S. Jacob, (783)
Kochupurakkal,
Anakkallu, Kanjirappally.

3 M. J. Joseph, (784)
Madathipparampil,
Thathampally, Alleppey.

4 M. J. Joseph, (785)
Mavilasseril,
Pulincunnoo.

5 V. P. Joseph, (786)
Valliathara,
Chemmanathukara,
Vaikom.

6 K. N. Narayanan Moothathu,
Kunnathu Illam, (787)
Kumaranalloor, Kottayam.

7 M. O. Ouseph, (788)
Mamparayil,
Arpookara, Mannanam.

8 C. T. Thomas, (789)
Kallarackal,
Kaithamattom,
Ponkunnam.

9 V. C. Varghese, (790)
Vadakkaekara,
Muttambalam,
Kottayam.

10 K. A. Yohannan, (791)
Konnackal,
Panachapally,
Kanjirappally.

English and Physical Science

11 N. A. Antony, (792)
Nedumgottil,
Kulasekarapuram,
Appanchira, Kaduthuruthy.

12 K. K. George, (793)
Koppuzhayil,
Sacred Heart Mount,
Kottayam.

13 Rev. Fr. George, (794)
Narikatt,
Vakakkad Church,
Erumapramattom.

English and Natural Science.

14 P. Abraham Zacharias, (795)
Vettikunnel,
Manarcadu,
Kottayam.

15 M. T. Chacko, (796)
Moongamackal,
Kalloorkulam.

16 M. L. Jacob, (797)
Methikalathil,
Edathua.

17 K. M. Joseph Kunju, (798)
Puthuparampil,
Kottangal, Manimala.

18 M. J. Kuriakose, (799)
Mattom,
Kezhuvankulam.

19 K. J. Michael, (800)
Kondakasserry,
Angady,
Changanacherry.

20 C. O. Philipose, (801)
Chorattu,
Kallara.

21 K. Pothen Ninan, (802)
Thazhettu,
Kuttapuzha,
Thiruvella.

22 G. Ramakrishnan Nair, (803)
Mattathithara,
Peroor,
Ettumanoor.

23 V. V. Varghese, (804)
Vallavanthara,
Padaharam,
Thakazhy.

24 N. Viswanatha Kurup, (805)
Nellickattu,
Kavalam,
Pulincunnoo.

English and History.

25 K. A. Abraham, (806)
Kadukanmackal,
Upputhara.

26 M. J. Antony, (807)
Myladyil,
Lakattoor,
Mattakkara.

27 K. O. Devasia, (808)
Karattillathu,
Varikaney,
Mundakayam.

28 P. L. Devassy, (809)
Padayatty,
Kanjoor,
Alwaye.

29 George Joseph V., (810)
Vadaparampil,
Kavalam.

30 M. K. George, (811)
Malickal,
Neendoor.

31 M. V. George, (812)
Madappallil,
Athirampuzha.

32 E. L. Ignatius, (813)
Elavathungal,
Muttikal,
Thoyakkavu,
Via Chowghat,
South Malabar.

33 Jacob Mathew I., (814)
Illipparampil,
Oonnukal,
Kothamangalam.

34 N. J. Jacob, (815)
C/o N. J. Joseph,
Supt.,
Kontholavally Estate,
Kalayanthani,
Thodupuzha.

35 T. J. James, (816)
Thekkeveettil,
Periampra,
Vazhithala,
Thodupuzha.

36 N. J. Job, (817)
Neriamparampil,
Thuruthy,
Changanacherry.

37 P. M. John, (818)
Puthuparampil,
Kanjirapara,
Kottayam.

38 C. V. Joseph, (819)
Chundathu,
Kaloor,
Thodupuzha.

39 K. J. Joseph, (820)
Kottapuram,
Palace View,
Changanacherry.

40 K. T. Joseph, (821)
Padingaremury,
Urulikunnam,
Poovarany.

41 M. J. Joseph, (822)
Marattukulam,
Mammoodu,
Changanacherry.

42 M. J. Joseph, (823)
Moongamackal,
Kalloorkulam.

43 Rev. Fr. Arnold T. O. C. D.,
St. Joseph's Monastery, (824)
Mannanam.

44 Joy J. Jacob, (825)
Elengical,
Alleppey.

45 P. V. Kuruvilla, (826)
Palathinkal,
Eroor,
Tripunithura.

46 C. L Luke, (827)
Chennattu,
Ettumanoor.

47 K. M. Michael, (828)
Kottackal,
Cathedral View,
Changanacherry.

48 K. V. Ouseph, (829)
Karottupullolil,
Thekkekara,
Poonjar.

49 P. P. Ouseph, (830)
Panthirayikandathil,
Vazhithala,
Thodupuzha.

50 K. L. Paul, (831)
Muttuchira,
Kaduthuruthy.

51 Ramachandra Menon M., (832)
Kothakazhathu Veedu,
Kaithavana,
Alleppey.

52 Silva Francis, (833)
Iyyanisseril,
Aravila,
Quilon.

53 K. S. Subramonia Iyer, (834)
Kanjirakkattu Madom,
Kidangoor.

54 T. O. Varkey, (835)
Thekkayil,
Cheruvandoor,
Ettumanoor.

55 P. T. Varghese, (836)
Purackal,
Veyapuram, Payipadu,
Harippadu.

English and Geography.

56 M. V. Antony, (837)
Manalil,
Muttar.

57 T. A. Antony, (838)
Tharappel,
Kizhaparayar,
Bharananganam.

58 G. Bhaskaran Pillai, (839)
Gomathee Sadan,
Kareepra,
Kuzhimathicadu,
Kundara.

59 P. S. Chacko, (840)
Poovathummoottil,
Vilakumadom,
Poovarany.

60 Rev. Fr. V. K. Chacko, (841)
Holy Cross Church,
Cherpunkal.

61 K. T. Chacko, (842)
Karimpumkaduppil,
Thottakadu.

62 V. M. George, (843)
Varithukalail,
Thalayolapparampu.

63 C. K. Ibrahimkutty, (844)
Chathenkottumaliel,
Kummanam.

64 Ipe Samuel Thomas, (845)
Grace House,
Modayil,
Mallappally.

65 Rev. Fr. Herman T. O. C. D.,
St. Joseph's Monastery, (846)
Mannanam.

66 P. O. Kurian, (847)
Poovathunkal,
Marangattupally,
Via Kuravilangad.

67 E. T. Lukose, (848)
Edavazhickal,
Kottayam.

68 T. T. Mani, (849)
Thoppil,
Manganam,
Kottayam.

69 V. A. Varghese, (850)
Malayil,
Panayakazhippu,
Kottayam.

70 V. M. Velayudhan Pillai, (851)
Vakaseril,
Kottayam.

71 J. J. William, (852)
Kaprayil,
Arpookara,
Mannanam.

Mathematics and Physical Science.

72 V. E. Abraham, (853)
Veliamkunnathu,
Thiruvanchoor,
Poovathummood,
Ettumanoor.

73 A. J. Chacko, (854)
Ayathipparampil,
Kurumpanadom,
Perumpanachy,
Changanacherry.

74 M. G. Chandrasekhara Panikar,
Thundathil, (855)
Thirunakara,
Kottayam.

75 M. C. George, (856)
Madapallimattam,
Kalloorkulam.

76 P. D. George, (857)
Puthenpurackal,
Athirampuzha.

77 George Varghese V., (858)
Vetticottu,
Meenadom,
Pampady.

78 P. V. Ittykuriathu, (859)
Parackal,
Angamaly.

79 M. J. Kuriakose. (860)
Mannooparampil,
Olasha,
Kottayam.

80 T. P. Narayanan Nair, (861)
Thatchara,
Sacred Heart Mount,
Kottayam.

81 K. Rajasekharan Nair, (862)
Marangattu,
Kodimatha,
Kottayam.

82 N. Sankara Pillai, (863)
Kayathil,
Kudamaloor,
Kottayam.

83 K. S. Sivaramakrishna Iyer, (864)
Kytharam East,
Parippu,
Olesha.

84 P. D. Varkey, (865)
Ponthempilly,
Chengal,
Kalady.

85 V. Varghese, (866)
Thakadiyel,
Champakara,
Karukachal.

86 V. K. Zacharias, (867)
Vilangupara,
Kayanna,
Via Perampra,
N. Malabar.

Mathematics and Geography.

87 P. Bhaskaran Pillai, (868)
Kanjavil,
Thekkecherry,
Perinad,
Quilon.

88 V. N. Sreedharan, (869)
Vengathu,
Neendoor.

Physical Science and Natural Science.

89 K. Elias Kurian, (870)
Pushpavilas,
Manarcad,
Kottayam.

90 K. J. Ipe, (871)
Kakkassery,
Mattom,
Via Kunnankulam,
Trichur.

91 Itty M. John, (872)
Marottiparampil,
Aymanam,
Kottayam.

92 T. V. Jacob, (873)
C/o T. C Varkey,
National Tyre & Rubber Co.,
India Ltd.,
Kottayam.

93 P. J. Joseph, (874)
Kokkavayalil,
Nedumkunnam,
Via Changanacherry.

94 N. K. Kuruvilla, (875)
Nalpathamkalam,
Veliyanadu,
Changanacherry.

95 K. T. Mathai, (876)
Kozhimannil,
Anickadu,
Mallapally West.

96 E. T. Mathew, (877)
Edathichira,
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97 Mathew George, (878)
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98 A. R. Purushothaman Kartha,
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Natural Science and Geography.

99 C. J. Varkey, (880)
Chelathadam,
Kothanalloor,
Manjoor.
