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CHRISTIAN EDUCATION

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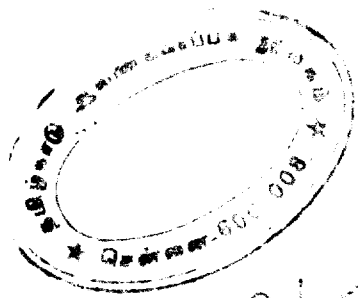
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74
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THE BASKET MAKER

Christian Education

An Experience with a New Project in Moga School

The Basket Maker

BY MASTER NASIR-UD-DIN.

What articles are being made in this picture?
Are such articles made in your city or village?
If not what basketry is done there?
Of what are these baskets being made?
What other materials are used by basket-makers besides cane?
From where are these materials obtained?
Make a list of all the things which basket-makers make.
Go and watch a basket-maker work and ask him how he prepares his material.
How are baskets decorated?
Make a list of all the uses which are made of baskets.
How much does a basket-maker earn in a day?
Have you ever made a basket?
If so what difficulties did you have to overcome?

(Editor's Note: This article was written by the teacher of the VI Year from the notes of his diary. The project described has not been completed, but is still going on. No attempt has been made to correlate in an artificial manner, *all* of the subject-matter studied in the VI Year, with this project. Yet actually it has supplied the motive for learning a considerable portion of the required subject-matter, and it has served to vitalize the class in a remarkable way. The reader may well reflect upon the far-reaching connections of this teaching with such goals of our work as raising the level of village life, development of the village church through service and stewardship, etc.

The article, originally in Urdu, is here only slightly condensed. It seemed worth while to give additional space in order to show more clearly the technique of the teacher. It is in such apparently small matters as allowing time for ample discussion by the pupils, expecting the pupils to make all decisions themselves, allowing the pupils to make mistakes and learn from them, etc., that the success of such a project was due. It should be said that the Principal in supervising purposely refrained from guiding the development of this project.

Dr. Douglas Forman's *Medical Instructions to House-Fathers* was not published early enough to be an aid to this teacher. But he had certain advantages. He had himself started to train as a compounder before taking up the profession of teaching; and he had advice and help from that good friend of our school, R. B. Dr. Mathra Das.)

For a long time, I have felt that, although pupils in the schools are taught a good deal about hygiene, they do not take care of their own health as they should. A person who does not have perfect health is handicapped. He is of little use. He can not care for his own needs, then how can his life be useful to others?



Last year in our school, many of the pupils were ill. There was suffering and much time was wasted. When I thought seriously of these things I reflected that pupils need a practical working knowledge of hygiene, and should not study it merely for the sake of passing examinations. They need to form health habits. And since our pupils are all from the villages, and when they leave school, will take up work in the villages, they must be prepared for useful service. So I thought of the possibility of beginning a *hospital project* in my class. I kept this purpose in mind when I began my work this year. And I thank God that a measure of success has been attained. Now I shall tell how our work began and how it is being carried on.

Through the kindness of the Editor of *The Village Teachers' Journal*, Moga, permission has been granted to print this article which also appears in the March number of that Journal.

EDITOR.

HOW THE PROJECT BEGAN.

When our school opened after the vacation, and the pupils entered my class (VI Year) I enquired as usual after their welfare. I asked especially which of them had been ill during the vacation. Several pupils told us that they had fever, some reported that they had received small hurts while working and one said that he had cut his foot with a digging tool, and one said that his eyes had given him much trouble. Then I asked what remedies they had used. In this way they learned that proper medicines are not used in the villages, and there is reason to fear that most of the remedies aggravate the diseases. I enquired about various common methods of treating sickness, as magic, sacrifice, the use of charms, etc. Then I explained, giving many examples, the harm of such methods. There was at hand right on our compound, a striking example. The two little daughters of the bhustie who brings water for the compound had lost their sight because they had not used proper medicines. The pupils made a personal investigation of this matter. After that we read about the dangers from carelessness in different diseases.

Then we discussed magic, etc., and the boys looked up the following Bible references: Ex. 22: 18; Lev. 19: 26, 31; Deut. 18: 10, 11; Lev. 20: 27; I Chron. 10: 13; II Chron. 33: 6; I Sam. 28: 7; 15: 22, 23; Is. 8: 19; 19: 2; II Kings, 17: 17;

21: 6; Mal. 3: 5; Acts 13: 6.* From this study they saw clearly that there is no use in magic, and charms, and God is displeased with those who use them.

Then the boys began to feel a desire to know the proper way of treating diseases. They said they wanted to learn about the right remedies in order that when there was no hospital near they might help themselves and other village people. Then I asked them how we could obtain correct information. They suggested hospitals and various doctors' books. Then a full discussion followed in which it was brought out that all the pupils could not enter hospitals for training in medicine. Yet they desired some practical knowledge for every day use. For that reason they requested me to teach them about these things in the class.

I then brought out by an illustration that in order to begin this work we must see and study a hospital. When anyone wants to learn carpenter's work he must take tools and wood and learn from using them. If he is only told that the wood is shaped with the chisel, is smoothed off with the plane and is cut with the saw, then he will never master the trade of carpentry. The whole class decided that they would make in class a hospital on the plan of the Moga Hospital.

It was necessary to make a plan of the Moga Hospital. For this reason every member of the class wrote a request to the headmaster sahib for permission to visit the hospital. When all the petitions were written they examined each other's work and the paper that was thought best of all was chosen. Then one pupil suggested that they needed to ask permission also of the doctor sahib. In the same way another request was written to Rai Bahadur Dr. Mathra Das. Both petitions were given to the headmaster who said he would ask the doctor and tell them when they could go. When permission was received the entire class visited the hospital. First they all together inspected the most important things. Then they thought it would take too

* A Bible dictionary and other reference books should have been used by pupils and teachers. Especially the distinction should have been made between the meaning of sacrifice in these passages and in others, as Matt. 5: 24. The story of Balam would also be interesting to study in this connection.

much time to see all the buildings in this way and so it would be better to divide the class for the inspection work. When they had all finished, they assembled and came back to school.

The next day all gave reports in the class of their observations. For instance, Gujjar Mal said that the length of the front side of the hospital was 57 karms; the same length Udho Ram called 59 karms, and Suchcha Singh said 58. After a good deal of discussion they asked me to settle the difference. I told the three to find the sum of their measurements. Then I said if you divide this distance into three parts how much will each part be? When they have found this answer they worked out the other lengths and widths in the same manner by averaging the differing measurements. Then the rule in the arithmetic was brought to their attention and so they learned how to find averages.

It seemed necessary before building the hospital to make a sketch of it. Each pupil made a plan in his note-book. A discussion followed as to what material we should use for building the hospital, whether bricks or mud. After talking it over fully it was decided that we would not actually build a hospital, but would set aside in our class room space for a dispensary and a dressing room.

GATHERING THE EQUIPMENT.

Since the furnishings and supplies were borrowed in various ways and from different persons, it was necessary to keep a record of them. For this reason the pupils chose a secretary from among themselves, and he was given a note-book to keep the list of all supplies, the account of the income of the collection box and the expenditures. When everything was assembled we turned our class room into a dispensary and dressing room. The school medicines which were usually kept in the hostel for pupils were secured by request and were placed in our dispensary. When the work began it was found necessary to make a register and forms like a real hospital. The pupils then appointed two boys to go to the Moga Hospital to see the register and forms used there. The pupils brought back several forms in English. They then made a register of patients and other papers according to the model of the Moga Hospital.

Next came a discussion about the time of opening and closing the hospital. It was decided that the first school period should be set aside for this work, and in the evening too a little time would be given. Then they had to write to announce the news of the hospital to sick folks. They wrote a proclamation to the effect that, for the sake of the comfort of the people of the Mission compound, a dispensary had been opened in the room of the VI Class, where at certain times medicines could be obtained. We stated that we would ourselves give medicines for slight ailments, and if other sick people would go once to the hospital in the city for medicine and then give us their prescription slips we would get the medicine from the hospital for them, and dispense it from our own hospital. In this way sick people would have the trouble of going only once to the city hospital. This proclamation was written co-operatively by the class and affixed to various places in the compound. So our hospital work began. To date, that is, from June 1925 to February 1926, over 2,250 patients have come to our dispensary.

HOW THE PROJECT HAS BEEN CARRIED ON.

When the hospital was ready we had a conversation about carrying on the work. The pupils divided themselves into four parties. One party saw the patients, entered their names in the register and gave them slips. One pupil of this party went to the hostel to give medicine to the boarding pupils who were sick. A second party did the work of giving out medicine and applying it. The third and fourth parties filled out the forms, did bandages and were responsible for making up medicines. Every day the work of these parties was changed. When the patients came, prayer was offered with them for God's help and then the work was begun.

When the hospital had been going on for some time the pupils realised that certain important medicines were being very quickly used up. Because they could not be obtained in quantity from the city hospital the class thought that some money should be collected and necessary medicines brought from the bazaar. After sufficient discussion it was decided that, as this necessity would be a permanent one, a collection box ought to be

made and hung up in our hospital, in order that not only we but others also who came to get medicines or to see the work could drop in something if they wished. This plan pleased all and was carried out. The hope of the pupils was fulfilled and the work went on without hindrance.

Our hospital became famous in the school. Then I had a chance to give a magic lantern lecture to the whole school on physiology. On the material of this lecture my class took an examination and did some other reading besides. Then Miss M. Allen, the Mission doctor in Ferozepore heard about the hospital project in Moga and she very kindly sent to our hospital several charts and magazines which have been very useful to the pupils. Up to the present the boys have been very much interested and enthusiastic and the results of the teaching have been manifest in their lives.

ATTITUDES ACQUIRED THROUGH THIS PROJECT.

(As shown by the behaviour of the public outside as well as inside the classroom).

1. *Reading for information.*—One day the Principal was present when the pupils sat down for their evening meal. He noticed that all the boys had begun to eat their food except one who stood apart from the rest absorbed in a book. The Sahib approached him to see what the story was which could make a boy forget his dinner. He found it was a booklet about First Aid. There is some enthusiasm among the pupils for useful reading and they are eager to learn all they can about their project.

2. *Self-sacrifice.*—In the month of August a circus came to Moga. The school arranged for all the pupils to see the show. When the time came to go it was found necessary for some boys to stay behind to protect the compound. When this necessity was presented to all the pupils, the VI Class immediately offered to stay. But because some of them were small seven pupils of this class and three from the rest of the school stayed as watchmen.* This shows the spirit of self-sacrifice and love which is at work in them.

* These boys were allowed to go the next day to the circus.

3. *Giving.*—In the beginning of December there was conversation in the class about preparation for Christmas. After sufficient discussion the class decided to make for babies in the Ferozepore hospital some toys, and clothings. And they wanted also to make paper chains for the decoration of the school hall. After this they decided that they would buy with their own money the material for making the gifts for the Ferozepore babies. They took up a collection and bought several small pieces of cloth from which they made six tiny kurtas and they also made some rattles and scrap-books. They got from the school the coloured paper from which they made chains. As the Christmas holidays drew near, I noticed that almost all the pupils in my class were making various things to take home as gifts. Some of them had prepared, or had made in the bazaar, for their little brothers and sisters, clothing, toys, hats, etc., and almost all had made coloured paper decorations and chains for the decoration of their own homes. Four pupils who were going to the same village prepared to tell stories to the village people. Almost every boy took some medicine home with him; for instance, quinine, zinc lotion, cough mixture, spleen mixture, tincture iodine etc. The spirit of love, service and giving was working in the pupils. Then I had them read the following references from the Bible, from which they received joy and strength. Acts: 20: 35; 1 Cor. 16: 2; 2 Cor. 8: 7; Mal. 3: 10, 11.

The day before vacation we talked about how to send things to Ferozepore. Several pupils who were going to Kasur offered to deliver the articles on their way and this plan pleased all. Dr. Allen sent a letter of thanks to the VI Class as follows:

FEROZEPORE,
December 26th, 1925.

To the Members of the VI Class.

It was indeed a surprise when one of the Moga students stopped at the Hospital the other day and handed me a parcel for our children. It was a still greater surprise when I opened the parcel and saw the lovely gifts you had made, the toys, the scrap-books and the kurtas.

I am sorry you could not see the children Christmas day. They were delighted and would write themselves a letter of

thanks and appreciation if that were possible. We now have six orphan children. Two are in Jagraon school, but are here for Christmas. The other four are little things. Then we have three widows with little children who shared in the gifts.

I am sure the making of them had added to your Christmas joy, and helped you to learn one of the great lessons of life that it is more blessed to give than to receive. The world does not believe this but when Jesus Christ is born in us what a difference it makes! Then we know the joy of service. May you grow in this knowledge and may the coming year be one full of the joy which comes from serving others.

Many thanks for the presents. May God bless you and the Moga school.

Yours in His service,

M. ALLEN.

4. *Stewardship*.—The spirit of giving was so strong that when an opportunity came for offering or alms they gave generously according to II Cor. 8:7 and God gave, according to Mal. 3:7 great material and spiritual blessings. In our school this year the pupils earn money of their own by means of garden and trade work and day labour and pay a part of their school expenses. In these ways our class has by the goodness of God learned to give.

5. *Thrift*.—The pupils borrowed from me a table for the dressing room. After a while I needed it. So I told them that they should return it in a few days. They enquired in the bazar how much a table of that sort would cost and found it would be Rs. 3-8-0. Then they enquired how much wood it would take to make it. They measured the table and made out the specifications for the lumber required. Then they worked out the price of the wood and found the table would cost Rs. 1-8-0. After careful consideration they decided to ask Rs. 1-8-0 from the school and make the table themselves. They settled that the table was to remain the property of the school. In due order they asked the Principal for Rs. 1-8-0, which was granted and the table was made right in the class-room. If the seed of industry and thrift had not been sown in these pupils some one else would have made the table and it would have cost Rs. 3-8-0.

SUBJECT-MATTER TAUGHT BY MEANS OF THE PROJECT.

(According to the requirements of the Government Code for Class VI).

Practical work.—Measuring and making a plan of Moga hospital—gathering equipment and arranging it in the class-room—making a list of medicines—pasting labels on the bottles—preparing the registers and forms—running the hospital daily—making various charts and plans—collecting advertisements of medicines and pictures about sickness and health—recording the project in individual note-books—making a table, toys, kurtas, bandages, jharans, etc.,—nursing pupils in the hostel—measuring and weighing each other—taking temperature and recording them on the charts—observing the houses on the compound, as to whether the laws of health are obeyed or not.

Oral Composition.—All matters were talked over, and daily difficulties thoughtfully discussed.

Reading.—About the Moga hospital—anatomy and physiology—various diseases—nursing the sick—the equipment of a hospital—how to make up simple medicines—the laws for preserving health. The following books and magazines: *Guide to Moga; Life, Light and Cleanliness; The Treasure Chest; Guide for Teachers*, etc. Besides this, the first part of the Urdu Course, which is prescribed for this class. In some lessons, oral instruction was given, and rest were read silently.

Writing.—In this project, several requests and letters had to be written—books and medicines had to be ordered—labels of medicines had to be written—forms and register kept and charts written up—and every bit of new knowledge was written in their note-books.

Arithmetic.—Rule of averages, from measurements of the hospital, also from taking the weekly and monthly count of patients—percentage, from finding out how many patients were suffering from various diseases, and what places and provinces they came from—practical problems from making various things—the unitary method and practice in problems of price, money, etc., from the prices of medicines and cloth for bandages, cleaning cloths, etc.,—problems in measurement.

Geometry.—Measuring the hospital and making a plan of it—measuring letters—measurement of angles—square measure—knowledge of various forms, triangles, squares, etc., parallels, from making the table, and from cutting the paper for letters.

Geography.—Where the people in Moga hospital come from and how they come—trade with the different provinces of India, Afghanistan, Baluchistan and various countries—the situation of Moga—they made a map of the continent of Asia and showed Moga on it—the relations of various provinces and countries, where different medicines come from—a little knowledge of Europe and America—main parts of India, and their location on the map—trade routes—climate and products of various parts of India.

History.—The history of Moga hospital. By finding out the religions and stations of different patients they learned something of the origins of different religions and who their founders were. What was the method of curing disease in our country in olden times and when did this method begin? What king first favoured English medicine?

Hygiene.—It is not necessary to speak at length about this as all the work of the hospital comes under this head. Briefly it may be said that they learned about different kinds of diseases and the means of curing them, the reasons for the spread of diseases in the villages and their prevention. They learned to rely on the laws of health themselves and to teach them to others.

Bible.—How our Lord healed the sick, and by what methods—what persons the apostles restored to health—the pupils felt the need of prayer and they decided they would pray with the patients before they gave medicines—abstinence from bad customs as sacrifice, magic, etc.—giving one's life in service—reading about Paul's life.

Morals.—Love, service, industry, helpfulness, self-sacrifice, hope, faith, in fact every good habit can be encouraged in the pupils by this project.

(Besides these subjects there are some others which might grow out of this project, for instance, different branches of science.)

Chemistry.—Finding out how different kinds of medicines are made, simple and compound medicines, why certain medicines dissolve in water, and some do not, etc.

Physics.—Measurement and weighing of medicines—reading temperatures.

Botany.—Learning about different kind of medicines that come from different kinds of trees.

Drawing.—This can be taught according to the age of the class. Different things that are used in the hospital may be drawn.

Handwork.—Carpentry, iron work, sewing, etc.

Play.—Drill. Different methods of lifting a patient. Preparing different kinds of dramas.

Our project is still going on, and the class is still much interested in it. I believe they will learn many more useful things from it. My prayer is that God may bring quickly the day when not only in the village but in the city schools also, the project method will be used. Then thinking power and a desire and enthusiasm for knowledge will grow in the pupils, and new things will come to pass in our India.

* A Course on Health and Physical Education

REV. F. R. FELT, M.D., JUBBULPORE.

CHAPTER IX AIR

INTRODUCTION

We know that the blood carries food materials from the digestive system to the tissues of the body and in returning brings back from those tissues waste products. It also carries Oxygen from the lungs to the tissues and organs. The waste matter of the body is quite largely disposed of through the lungs. These, then, are where this worn out and refuse material is thrown off into the air and Oxygen taken up from it.

I. COMPOSITION OF THE AIR

The atmosphere is a mixture of gases which does not change much in proportions. The average composition is,—

Nitrogen ...	...	...	79.00
Oxygen ...	...	...	20.96
Carbonic Acid gas ...	...	...	.04

Watery vapour, varies with humidity and temperature.

Ammonia, a trace.

Ozone, a trace, and variable.

Nitrogen has no definite properties as a part of the air, it serves to dilute the Oxygen. This is the important element and the one necessary for the existence of all animal life and also for all kinds of combustion or oxidation. The proportion of Oxygen in the air varies a little in different places, the country having more of it than the cities. Ozone is a condensed and very active form of Oxygen which is found in pure air.

Carbon Dioxide, or Carbonic Acid Gas is given off from the lungs of men and animals in respiration. The green leaves of trees and plants are able to absorb this gas and keep the carbon and setting free the Oxygen in the atmosphere. This maintains the correct proportion of the two gases and accounts for the fact that there is always more Oxygen in forests than elsewhere.

* Note.—By courtesy of the author, selected chapters of this valuable Course are to be printed in this magazine. The entire Course is being published under the auspices of the Epworth League, and will be available from the Central Office, Jubbulpore.—Editor.

The amount of water vapour varies with the season and with the temperature. Ammonia is greatest in amount during the hot weather. When the monsoon comes it is washed out of the air and is found in solution in the rainwater.

II. IMPURITIES OF AIR

Natural air like natural water is never pure; it is being constantly polluted, several substances continually passing into it. These may be classified as follows:

1. Products of respiration.
2. Products of decomposition.
3. Products of Combustion.
4. Impurities from factories.
5. Impurities from suspended matters.

1. PRODUCTS OF RESPIRATION

During respiration the lungs take in about 4 per cent of the Oxygen of the air and give back to it about the same amount of Carbon Dioxide. The lungs of an adult will give off about one-half cubic foot of the gas per hour, and cattle and horses about three times that amount. Expired air is also saturated with water vapour but the amount varies according to the humidity of the air and the amount of work being done by the individual. It is stated that about ten ounces of water as an average are given off by the lungs of an adult in twenty-four hours.

The expired air contains a small amount of organic matter, waste products of the body which have been sent out through the lungs. This is nitrogenous, quickly putrifies and is what helps to make the foul smell in a crowded room. It promotes the growth of microbes. The foul air often produces headache and nausea. We have said that impure air is one of the Predisposing Causes of disease and its bad effects are seen in loss of appetite, loss of strength, etc., and a lowered vitality which means a diminished resistance to the attacks of disease germs especially the Tubercle Bacilli.

2. PRODUCTS OF DECOMPOSITION

Decomposing organic matter gives off gases of various kinds, all more or less poisonous in their nature. Decaying vegetable matter produces large quantities of Carbon Dioxide. Sulphuretted Hydrogen, the gas which gives the characteristic odour to rotten eggs may occur in marshes and excavations and decaying refuse heaps. Decaying

excreta of men and animals result in foul-smelling gases and often Ammonia. These impurities are rapidly diluted by the wind and so rendered harmless, but the breathing of Sulphuretted Hydrogen probably produces more ill results than is generally believed. An atmosphere containing one part in 70,000 becomes dangerous to human life, while one containing one or two parts per 1,000 is fatal in a few minutes. The breathing of air polluted by these gases results in headache, giddiness, sometimes nausea, and a general feeling of depression. In crowded localities the imperfect removal of refuse and excreta affects the health of the whole community in the way of increased sickness and in a slow recovery from sickness.

3. PRODUCTS OF COMBUSTION

When wood, coal, oil, etc., are burned a number of substances are given off into the air. The largest quantity will be of soot and Carbon Dioxide, with lesser amounts of Carbon Monoxide, Sulphur Dioxide, Hydrogen Disulphide, Acid, etc., etc. The Oxygen of the air is decreased in amount. Most of these gases are irritating to the lungs and some are poisonous. When charcoal is burned two gases are found, Carbon Dioxide which is comparatively harmless and which we use in aerated waters, and Carbon monoxide, a deadly poison. It is this latter which not infrequently causes death when the charcoal is burned in a closed room: smaller amounts of it in the atmosphere cause headache, giddiness, and nausea. The same effects will be caused when the gas is generated by the engine of a motor car running in a small closed garage. Many of the large towns of the West have rules for the regulation of what is called the "smoke nuisance."

Experts have declared that about 6 per cent of the soft coal ordinarily burned in dwelling houses in England escapes unconsumed into the air as soot.

According to figures supplied by the Coal Mines Department to the Departmental Committee of the Ministry of Health, which inquired into the smoke evil, forty and one-half million tons of coal are burned annually in Great Britain for domestic purposes. On this basis, the loss amounts to 2,430,000 tons or more than half the total amount required to heat the London area for a year.

Nearly two and a half million tons of soot thrown off by domestic chimneys pollute the air during a like period.

4. IMPURITIES FROM FACTORIES

These are often offensive and many times dangerous if present in any quantity. Gases such as Chlorine, Bromine, vapours of Arsenic,

Lead, etc., are often present in the air around factories working with the substances. Those who work with Lead and Phosphorus are often poisoned. In cotton mills, about lime kilns, where stone cutting is done, in cement factories, etc., the atmosphere is constantly full of fine particles of these various materials which are carried into the lungs producing irritation and predisposition to disease.

5. IMPURITIES FROM SUSPENDED MATTER

Minute solid particles of matter are found everywhere in the air and are usually much more widely diffused and dangerous than gases. The air of the mountains and sea are comparatively free from them. This suspended matter may be either (a) Inorganic, or (b) Organic in nature.

(a) The inorganic or mineral matters are chiefly dust raised by the wind or thrown up by volcanoes, carbon from smoke, particles of metals, lime, cement, etc., from factories. Dust is known to have been carried for hundreds of miles and one writer states that the dust thrown up by the great Volcano of Krakatoa in 1883 was diffused through the entire atmosphere of the earth.

(b) Organic.—This may be either dead or living. The former will consist of bits of charcoal, fragments of insects, bits of hay and straw, of cotton or other vegetable fibers, dried excreta, sputum, etc.,

The living matter will include bacteria, pollen grains, fungus spores, etc. The bacteria will vary in number and species according to the amount of dampness, presence of various kinds of decaying matter, seasonal conditions, etc. Most of them are kinds which do not cause disease but the dust of excreta and sputum will probably contain those causing infection, and as these are carried about by the wind disease is often spread. Pollen grains are one of the causes of Hay Fever and may be found at certain seasons of the year. The rapid occurrence of fermentation and putrefaction due to the bacteria in organic substances, when these are exposed to the air, and the growth of moulds on such substances are evidences of the constant presence of these organisms in the air.

III. DISEASES CAUSED BY IMPURE AIR

Impure air may cause disease in either of two ways: (a) Indirectly. Impure air is one of the predisposing causes of disease, so anything which pollutes the atmosphere will contribute to this result; overcrowding is one way in which foul air is generated. The bad effects of this are headache, giddiness, nausea, fainting, etc. If people constantly live in such a polluted atmosphere, health soon suffers with

such results as loss of strength, loss of energy and clearness of mind. The person becomes anaemic from deficient Oxygen, etc., and all this means a lowered vitality of body and he is less able to withstand the attacks of disease germs. He contracts acute disease much more easily than the individual who lives in the midst of pure air.

The general atmosphere may also be polluted to such an extent that it is harmful. The disagreeable smells from sewers, latrines, decomposing organic matter, tanning skins, etc., will have a depressing effect on those having to breathe it. Sore throat, nausea, vomiting, loss of appetite, etc., may be caused, also Ammonia gas and Carbon Monoxide may produce symptoms of poisoning. Carbonic Dioxide in the air near lime kilns in old wells, and holds of ships is often sufficient to be poisonous and has caused death. In such work as coal mining, grinding of steel, stone cutting, etc., the effects of the dust upon the lungs is so irritating that it predisposes to attacks of Tuberculosis. Workers in brass, copper, grinders of paint, makers of printing type and matches suffer more or less from poisonous symptoms due to the articles with which they work.

(b) Directly, by carrying the germs of disease. Some of these may be carried quite long distances, while others seem to be dangerous from only short distances from persons having the disease. Influenza, Pneumonia, Scarlet Fever, Small-pox, Measles, Whooping Cough, Mumps, and to a certain extent Tuberculosis are among the diseases spread through the medium of the air. The ability of these germs to fasten upon fresh subjects is increased whenever impure air and other causes lowering vitality exist.

IV. AMOUNT OF AIR SPACE NECESSARY

Normal air contains about .04 per cent of Carbon Dioxide and fresh air should be supplied in such quantities that the Carbon Dioxide in the room is never more than .06 per cent. The difference, .02 per cent is called maximum amount of respiratory impurity permissible in a well-ventilated room.

In order that the impurities may not rise above this maximum about 3,000 cubic feet are required per hour for the average individual. A man doing hard work will require more than this because he is throwing off more waste matter from his lungs. Sick persons require more fresh air than the healthy and 4,000 cubic feet should be supplied to them. In order to insure this amount not less than 100 square feet of floor space is the ideal for each patient. For the average person in health 40 square feet should be regarded as the smallest floor space allowable. How very few of the houses we know approach at all these requirements.

V. PURIFICATION OF AIR

Pure air for breathing is of the utmost importance. The problem of securing it must be considered by every one, and it is more acute and difficult in the crowded cities than in the country.

1. NATURAL PROCESSES.

There are certain natural processes by which the atmosphere is becoming constantly purified, as : —

- (a) The Action of Wind
- (b) Diffusion of Gases
- (c) Action of Plants
- (d) Rain and Dew
- (e) Gravitation
- (f) Action of Sunlight

(a) *The Action of Wind.*—Wind is air in motion ; it has the effect of mixing the gases and impurities in it, thus diluting them and rendering them less dangerous. The wind is caused by unequal heating of the air. When the air in any region becomes warm it becomes lighter and rises. Cold air rushes in below to take its place, and this is the wind. Its currents sweep impurities out of the streets, renew the air in houses and carry away gases that are generating in rubbish heaps. A strong wind has often stopped an epidemic by sweeping away the germ-laden air and replacing it with fresh air.

(b) *The Diffusion of Gases.*—We know that two gases put together in a jar will slowly mingle together—diffusion—until a uniform mixture has resulted. In this way Carbon Dioxide, Ammonia, etc., in air become diffused through the atmosphere and are so diluted that they are robbed of their power to do harm.

(c) *Action of Plants.*—Plants absorb Carbon Dioxide from the air and return Oxygen to it. Men and animals take Oxygen into their lungs and give back to it Carbon Dioxide. This gas is also produced by the burning of lamps, gas jets, and fires, yet it never accumulates in the free air to the danger of life. In the provisions of Nature that which is so harmful to animal life is necessary for plant life, so every plant and tree about us are doing their part in protecting us from the harmful waste products of our own bodies.

(d) *Rain and Dew.*—These are mechanical in their action, absorbing more or less of the gases of the atmosphere.

(e) *Gravitation.*—In still air dust settles to the ground, and this action of Gravitation being constantly exerted is helping to keep the atmosphere clear of its solid particles.

(f) *Action of Sunlight*.—The rays of the sun have the power of killing a number of bacteria and other germs, moulds, etc. Clothing and bedding are always fresher after having been exposed to the sun for a time.

Some of these processes are more active in the country than in the towns, and in the latter especially.

2. ADDITIONAL MEANS ARE VERY NECESSARY.

These will include removal of all refuse and excreta; the watering of roads to prevent dust blowing about; arrangements for abating the "smoke nuisance" through improved furnaces or methods of firing for specially constructed chimneys; in metal manufactories substituting wet grinding for the old and dangerous method of dry grinding; using disinfectants, etc.

The Bengal Smoke Nuisance Commission in their recent report considered among their problems that of "low-lying smoke discharged at ground level, which is more destructive than factory smoke, and which collectively in the suburbs, particularly in cold weather evenings, enshrouds localities for several hours in a low-lying suffocating smoke pall, even on holidays when the mills are stopped".

One of the proposed methods for checking this was the replacement of solid fuel fires by gas or other smokeless appliances. A number of mills are using paddy husks for fuel instead of coal. From all means used they estimate that in some areas there has been about an eighty per cent decrease in the smoke as compared with the previous year.

3. VENTILATION.

This is the purification of air in houses by removing impurities through the means of fresh air brought in from outside. The sense of smell will usually be a pretty safe guide to the purity of the air in a house. In ventilation there should be proper inlets for the fresh air and outlets for the escape of the foul air. These must be of sufficient number to accomplish the purpose. The doors and windows of an ordinary house are usually sufficient for ventilating purposes if properly used. Outlets should be as high as possible, for heated air tends to rise. A simple opening along the ridge for the outlet is a good arrangement, the doors and windows then become the inlets. The ordinary tiling of the roof will afford a fairly good outlet provided the doors and windows are properly used.

Those who live in huts which permit the free passage of air at all times enjoy better health than those who occupy more solid and poorly ventilated houses. The practice of closing all openings in the

walls of houses together with the pernicious habit of sleeping with the head covered by the bed clothing is responsible for much ill-health and tendency to Tuberculosis in India. It is important in a house to provide openings for the escape of smoke and foul air from coal and wood fires. The danger from the former has been mentioned. Cattle, goats and horses require more fresh air than do people and suffer in health when deprived of it.

VENTILATION MAY BE

(a) Natural; that is by means of the naturally acting forces and without any special methods. These will be,

- (1) the force of the wind, (2) the expansion of air by heat, and
- (3) the diffusion of gases.

The wind is the most effective of these and the one most largely depended upon in India. In the simple methods that have been referred to above the doors and windows are fairly ample for the purposes of ventilation when there is a breeze blowing. The diffusion of gases goes on very slowly and should not be depended on alone to effect the ventilation of a room.

(b) Artificial; this is effected by mechanical methods aimed at removing the foul air or introducing fresh air. There are several means of doing this, perhaps the most common is the punkah. This swinging fan is more effective than the electric one as a means of ventilation. Each swing acts like the stroke of a piston and forces some of the foul air out and at the same time fresh air is encouraged to rush in behind. If a "kuskus" or similar mat be used the fresh air is cooled as it enters and a double purpose served.

The suction action of the wind can be utilized by the use of a shaft or tube running upward from the room. As the wind blows over the mouth of the tube it sucks out the foul air permitting fresh to enter below. The method obviously is effective only when there is a good wind.

In China where the streets are narrow and the houses high and ventilation by natural means very difficult, large wind sails of matting or cloth are erected on the roof with the funnel-shaped mouths turned towards the wind. Open shafts run down through the several floors and fresh air is carried down to the lower rooms in the same way that fresh air is carried to the lower parts of a ship at sea. The method is well worth a trial in India where streets are narrow and natural ventilation difficult.

* The Teacher and His Aim

MATT. B. CAMERON, M. SC., D. LITT., LUCKNOW UNIVERSITY.

WHEN any one has to do a piece of work it is always useful to sit down and do a little thinking about it, to make up his mind just what it is he is trying to do. It is not enough just to try to imitate what you see others doing in their teaching or try to remember how you yourself were taught when you were a little boy like those in front of you. You may get some guidance in either of these ways or in both of them, but such guidance will not help you very much. Memories are very fallible, and they are most apt to fail just when you need their guidance most, and imitation is likely to be a very clumsy affair when you do not understand the why or the wherefore of the practices you seek to imitate. The only safe thing is, as I say, to do a little thinking for yourself as to what you propose to do when you are put in charge of a class, when you are appointed their teacher.

It seems a useless sort of question to ask, because everybody knows that the aim of a teacher is to teach; but very often, and especially here, what everybody knows *generally* is what nobody knows properly. Everybody knows generally that the aim of the teacher is to teach, but I doubt very much if everybody knows what exactly is implied in this business of teaching. You may say, "How can there be any doubt about it?" There are certain books prescribed to be learned by the pupils during the term, there are also prescribed certain measured doses of knowledge which have to be conveyed somehow into the heads of these little boys in front of you, and your aim, as their teacher, is to do this as well as possible, so that when the Inspector comes along he will find the work all done or when the term examination arrives with its questions, as many of the boys as possible may be able to answer the questions and get good marks. They will secure promotion and you will get a reputation as a successful teacher.

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"IMPERIAL GALLONS OF FACTS."

All this sounds very clear and simple. The aim of the teacher is to impart knowledge, to take the facts he knows or can collect out of books and pack them into the empty minds before him. Dickens in one of his novels has used his lively imagination to illustrate this view of the work of the teacher as it appears to a hard-headed business man—the member of the Managing Committee of a school who is determined to run the school on business lines.

"Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts; nothing else will be of any service to them. This is the principle upon which I bring up my own children."

"The speaker and the school master and the person present, all backed a little and swept with their eyes, the inclined plane of little vessels then and there arranged in order, ready to have imperial gallons of Facts poured into them till they were full to the brim."

This is the picture of the school-room at the beginning of Dickens' novel "Hard Times" and in the next chapter we have the picture of the School master's child himself, filled to overflowing with a marvellous collection of heterogenous facts, all packed into him by the patent manufacturing process which has turned him out with some one hundred and forty others all made upon the same principles 'like so many pianoforte legs' turned out by a machine. We see him going to work on his preparatory lesson to his scholars "not unlike Morgiana in the Forty Thieves; looking into all the vessels ranged before him, one after another, to see what they contained," and thinking of the time when he shall fill each little vessel brimful from his boiling store.

This way of looking at the matter and of stating the teacher's aim seems simple and practical—until you come to try it. The little jars or bottles won't stand still in order to be filled. They move and wobble and tumble about so much that there is no getting the stream of facts poured steadily into them. The

they are *not empty*. Too often they seem so full of other facts you don't want that there is no room for the fact you do want to be there. Some of them seem to have mouths wide enough to receive readily anything offered while others seem to have very narrow mouths, so that only the most feeble trickle of new knowledge can get in. Some of them seem to be full of holes and hopelessly leaky so that the facts run out as fast as they are poured in. In one way or another you fail to get the knowledge imparted and your labours become a constant irritation and despair.

WRITTEN EXAMINATIONS INADEQUATE.

As a matter of fact this idea of knowledge as a body of facts existing outside, which has to be poured or conveyed somehow into minds more or less empty that passively receive it, is hopelessly wrong. That it is so common is due largely to the fact that our usual means of estimating the teacher's work and the boy's progress—the written examination—seems to suggest it and to suggest nothing else. But nobody who knows much about the matter has any great confidence in the value of written examination as a test of success on the part of the teacher or of progress on the part of the scholar. The written examination holds its place merely because nobody has been able to devise a more practicable, more convenient, more reliable test. It does tell something no doubt, but that something is not so very important after all and it is as nothing in comparison with what remains to be told of the amount and character of the teacher's work or of the boys' progress.

Those who know most about written examinations trust them least, but as long as they hold so prominent a part in the educational programme, so long will the common fallacy prevail that the teacher's aim is merely to impart knowledge to the empty minds sent to him to receive it.

To get away altogether from this mistaken view, the first and most important fact to recognise is that minds, like bodies, are alive and can only make use of and grow by means of what they can actually digest or assimilate. By eating food you become bigger and stronger but if you eat the kind of food your stomach cannot digest and turn into something the living body

can use—if you eat faster than you can digest or if you eat more than you can digest you are in for trouble. All this is as true of the mind as it is of the body so that for each of the minds put under your care it is most of all important to choose the right sort of food, to give it just as it is needed and when it is needed and to see that you do not give more than can be properly used.

THE TEACHER AN IMPROVER UPON NATURE.

A remarkable change is required in the teacher's aim. The emphasis has to be shifted altogether. It is no longer knowledge that holds the central place in our attention, but the growing mind of the pupil. We shall no longer say, "The teacher's aim is to impart knowledge" but "the teacher's aim is to help a mind to grow." We shall no longer think of the teacher as a collector of knowledge and a pourer of it into jars or bottles more or less empty, but we shall think of him as a kind of gardener or *mali*. The *mali* makes it his business to study the needs of the plants under his care so that he may know the kind of soil they need, the right amount of watering or tillage required, the measure of light or shade which suits their nature best. It is by thinking of these things and attending to them that he gets the plants to grow, not only to full possible health and strength but to a measure of beauty or fragrance or flavour even greater than Nature herself can grant. He is not only a co-worker with, but an improver upon Nature, and I know of no better way of describing the aim of the good teacher than by saying that he tries to be the co-worker with, and an improver upon, Nature. After all this way of looking at the matter fits the facts of the case.

In a paper by Dr. Hartog, Vice-Chancellor of Dacca University, I found quoted a rather curious definition of education. "Education is what remains after you have forgotten all that you have learned." It seems rather a comforting saying when we think of the many things we used to know but now no longer remember, but the chief point about it is that it makes us realise that we have got to look for the profit of our learning not so much in the number of facts remembered as in the difference in ourselves which the process of learning these facts has brought about. The definition in fact confirms with all the force of a

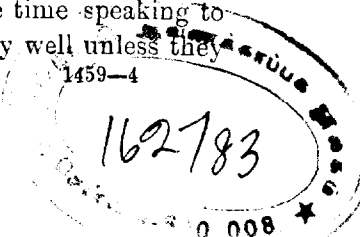
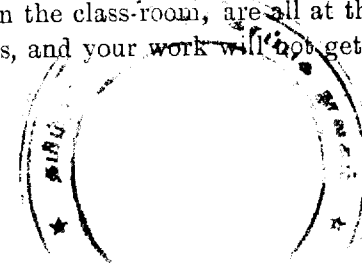
paradox just the very truth I have been trying to insist upon, that the knowledge you have to impart is really a kind of food—a food for the mind—and the process of learning is not unlike the process of digestion. Like all food the knowledge gets transformed or may disappear when it has done its work but the good of it remains in the growth and development which it has stimulated and to a great extent effected. I say, to a great extent, for after all food would not be of much use unless there was a living body with health and strength to take it in and digest it. This is where Dickens' Mr. Gradgrind made his biggest mistake in his view of the teacher's aim. . . .

PRE-SCHOOL MENTAL DEVELOPMENT.

The teacher who writes down the names of the children on his roll for the first time is not really getting his pupils at the *beginning* of their mental growth. That took place long ago when they were still in their mother's arms and the teacher must recognise the fact that each of his new boys has already attained no inconsiderable amount of growth. How much? That is a problem of the utmost practical importance and the first problem the teacher has to solve. He has some how or other to get his processes fitted into processes that are already going on and to do so it is essential that he should find out just how far these previous processes have reached. And so his first business with the new pupil is an exploration, conducted wisely, quietly and tactfully, into what the pupil can do and what he cannot, what kind of treatment is best suited to his particular nature and needs. You will see at once, then, how it is that the good teacher must be a lover of children. Only in the sunshine of love will the child nature freely expand and show itself as it is. He must also be a skilled observer of children and for this, all the knowledge he can acquire both of their bodies and minds is serviceable. Every course of teacher's training includes studies in applied physiology and psychology. Let us think again of the *mali* whose task we have said is in many ways similar to that of the teacher. How tenderly he handles his young plants! If he is keen on making a success of his job, how industriously he tries to learn all about his plants and their distinctive natures!

THE PERSONALITY OF THE TEACHER.

Yet if we are comparing growing minds with plants, we have to remember that they are 'sensitive' plants in a richer sense than any of those we find in the plant world. Through *all* the gateways of sense the growing minds are at all times taking in the material by which they grow. When you are set before them as their teacher you should remember that you are teaching them by what you *are* just as much as by what you *tell* them, if not more. What you *tell* them enters in by one gateway of sense, the ear, but what you *are* (and this includes not only your character and person but also your methods and means, in which you embody yourself and your purpose) makes its way through many gateways of sense and does so more continuously than your words can flow. I remember once in the Teachers' Training College at Allahabad seeing the students act a farce which was supposed to represent a school in some quiet town or village when the Inspector was *not* in the neighbourhood. The teacher lolled in a chair chewing *pan*, his coat unbuttoned, and his feet upon the table in front of him while he drowsily advised his pupils, "to see" the map on the wall behind him. It was a geography lesson but most of the boys were busy with other kinds of amusement and it was only when the bustle and din got so great as to disturb the master's repose that he rose to reproach them angrily for being so lazy and stupid. Then he would drone a few words out of the book in a tired voice and tell them to be sure to remember carefully what he was teaching them. This was, no doubt, a caricature but, like most caricatures, it has a sufficient resemblance to the real thing to illustrate my point, namely, that the teacher who wishes to make his boys intellectually busy, orderly, gentle, in fact anything at all, must not simply *tell* them to be so by the words of his mouth but must reinforce the lesson by being himself intellectually busy, orderly, gentle, and everything else that he wishes them to be. Remember that perhaps the least part of the instruction you give goes through the mouth by way of speech—your face, your gestures, your tone of voice, your clothes, your methods in the class-room, are all at the same time speaking to your pupils, and your work will not get on very well unless they



are all saying the same sort of thing. When I became a teacher I was not long in discovering that if things did not go well in the class-room, the golden rule was to ask "What has been the matter with *me*" and in nine cases out of ten, I could always trace at least some of the wants of success to some defect in myself or my teaching that day. You perhaps remember Goldsmith's lines in the 'Deserted Village' where he talks of the school-boys who, knowing their teacher, could read the day's disasters in his morning face. That was true of one head master I had when I was a boy. When his hair was brushed up with unusual vigour so that its bristling reinforced the glare in his eye we knew we were in for a stormy day. Now I can see that his irritability on a morning after he had had a bad night or had had some trouble with his liver, communicated itself to us through his appearance, his tones, his jerky movements. They caused in us a nervousness and fear that made us make more mistakes than usual and made us more than ordinarily restless.

THE CLASS-ROOM.

Nor is it only by your personality that you are training these growing minds in your class. All the time they are in the class-room, the boys are (unknown, most likely, even to themselves, but none the less surely) receiving impressions from what they see around them in the class-room. It does make a difference to them, and all the more difference the younger the children are, whether the class-room is clean or dirty, whether it is bright and cheerful, or dull and gloomy, whether it is orderly or disorderly. I am not sure that this is attended to as it ought to be in Indian schools, but certainly in Britain and America the fact is duly recognised and is very carefully attended to. Brightness and cheerfulness are the chief notes in the well-lighted class-rooms of their schools—with sufficient windows placed just where they should be—the walls clean and adorned with well-kept pictures—the desks in good repair, well-ordered and well-dusted. During the last thirty years there has been a wonderful improvement in these school class rooms, and the result of this and of other improvements in method is that the "school boy with shining morning face, creeping unwillingly to

school" is no longer to be seen. Instead we can see the children hurrying along with eager cheerfulness to their day's activities in the school room. I remember once going into a Lucknow School (it was many years ago and the school shall be nameless) where in one of the rooms there was a portrait of a founder and active benefactor of the school on the wall. This was, as it should be, to keep always before the eyes of the scholars the picture of one whose life and work were well worthy of all reverence and imitation. But alas, the portrait was obscured with dust and covered over with cobwebs and so the practical lesson taught the children, so far from being one of reverence, was one of neglect and carelessness and forgetfulness of all the portrait was there for. What I am trying to impress upon you is that you do not do all your teaching by the voice. In spite of you and without perhaps your knowing it or meaning it, you are all the time teaching by your tones, your gestures, your dress, your manners, the order you maintain, your methods of work and your school rooms. Let us think of our friend the *mali* again, whose aim is like ours, only he works with plants and we work with growing minds. He does not only water and manure the soil, but he weeds, he loosens the earth, he props up, he prunes, he shelters from too much rain or wind, he cuts away wandering shoots and by watchful touches he causes the plant to do its very best in the way of growth. The difference between the good *mali* and the bad one is just in the degree in which the former attends to *all* the many conditions of successful growth. It is not otherwise with the teacher.

OTHER INFLUENCES.

Yet we must not forget that neither *mali* nor teacher has it all to himself in the work of stimulating and guiding the growth. There is that in the seed of the plant or in the child's mind which will unfold itself after a specific pattern if only it is allowed to live. Nature is fairly strong. Then there are many other influences which are at work teaching the child besides the teacher in the school. The child, even when he is not thinking about it, gets food for his mental growth in his family life, the

life of the village or town in which he dwells, his daily experiences, in all, in fact, that is comprised in the Civilisation which he inherits. These influences are at work all the time on the child's mind. They go on teaching whether the school is open or closed,—their teaching has no holidays. There is perhaps some comfort in this thought when there is so much poor teaching about, that after all the bad teacher does not produce all the harm he might, for owing to these other influences the child somehow grows up not too unlike the men of his generation. But it is a poor comfort after all and cannot make us forget for more than a moment the tragedy of the contrast between what *is* and what *might have been* and also the tragedy of the man who proposes to do a certain piece of work and lamentably fails in it; for in the teacher's work as in all other work the aim is not simply to accept what is provided by Nature but to *improve* upon it.

THE DISTINCTIVE HUMAN FUNCTION.

This is, above all, the distinctive human function—to remake Nature in accordance with human purposes. This is one of the most profound truths in that mystery of mysteries—the relation of mind to matter—but it admits of easy illustration. The benches you sit on are not natural products. Nature does not grow benches. It grows trees with their wood but man comes and cuts down the trees and hews their wood into shapes that suit him. Nature does not grow books. What a long chapter of man's remaking of nature is represented by a book! Family life, civic life, political life all represent achievements of the minds of men working upon the conditions of the animal life they inherit from Nature. All that Nature does provide is the raw material. We have to prove our manhood by what we make of it. Nature provides for the teacher these young minds sent to him to be educated and she provides also these varied influences which we mention as working ceaselessly upon them. The teacher has to take account of all this material provided, he has to study it to see what can be done with it, accepting here, rejecting there, and everywhere modifying and adapting till he can produce what he aims at—a mind grown to its full capacity—and surely of all

things in the world in which man can effect improvement the greatest and most momentous is the mind of man. Out of it all other improvements have to come. It is the teacher's privilege to be especially designated for this high task. The more one comes to know of that great mystery, the mind of man, the more one realises the difficulties and the enormous responsibilities of the teacher's calling.

WHO IS SUFFICIENT FOR THESE THINGS?

It is a sure mark of ignorance to take the teacher's aim lightly and to enter the class room with little thought of the kind of work to be done in teaching your boys and with little preparation for it. If anybody handed over his watch for you to mend when perhaps you had never seen the inside of a watch and had no idea of the intricate and delicate machinery which makes it go, I think you would hesitate before you ventured to meddle with its works. The art of teaching is really more difficult than the art of watch-making in proportion as the mind of a boy is a much more complicated and delicate mechanism than any watch. There is little hope of success in this high and difficult art without much preparation for it, much trained experience and much careful and anxious thought. . . . Though you are no longer in school or college classes, continue to be students, to be eagerly on the look-out for fresh knowledge and better powers of thinking and of expressing your thoughts. The man who gives up trying to learn may as well give up at once trying to teach.

The India Methodist Theological College, Jubbulpur

HISTORICAL SKETCH.

THIS College is the outcome of a demand inherent in a growing Church—a demand for the highest type of ministerial leadership.

A survey of the membership of the Annual Conferences in India a few years since, revealed the fact that only one Indian member held a college degree and that very few had completed the High School courses. One of the reasons adduced to account for this condition was the failure of the Church to provide for the theological training of college graduates and under-graduates.

A fundamental factor in the development of a self-supporting, self-propagating Church is an indigenous ministry qualified both intellectually and spiritually to lead the rapidly growing Church wisely and to inspire it to the highest achievements.

Regional Theological Seminaries for many years have been training preachers well qualified for the demands that have been made by the Church in its early stages of development and these institutions will continue to be fundamental to the best interests of the Church. The need of an institution to meet the greater demands and increasing opportunities of the rapidly expanding Church, was apparent and found expression in the opening of the English Department of the Bareilly Theological Seminary in 1918. Four years later, under the direction of the Executive Board of our Church in Southern Asia, the Trustees of the Bareilly Theological Seminary organized the English Department into a separate institution, with Rev. A. Lincoln Shute, D.D., as Principal. On the 21st March, 1923, a duly elected Board of Governors of the new institution met, adopted a Memorandum of Association and selected Jubbulpur as the permanent location of the India Methodist Theological College. The securing of splendid buildings located in a compound of five and a half acres, in a choice section of Jubbulpur, made it possible to open the next session in the new home of the institution.

SUCCESSFUL LEADERSHIP.

The ultimate success of every institution depends upon the personality and ability of the individuals who compose the administrative and instructional staff. In this respect the College has been singularly fortunate and already the impact of the scholarly and consecrated lives of the men and women who have devoted themselves to this work, is manifest in the spirit, attitude and high devotion to their calling displayed by many of the graduates who have returned to their communities to demonstrate in splendid service and deep devotion the ideals and visions received at Jubbulpur.

An idea of the extent to which the influence of this College has already spread will be gained from a consideration of the language areas to which the thirty graduates have returned for service:—

Urdu 8 ; Bengali 6 ; Kanarese 5 ; Santali 3 ; English 2 ; Telugu 1 ; Tamil 1 ; Gujarati 1 ; Punjabi 1 ; Hindi 1 ; Burmese 1.

The significance of the dissemination of this training is increased when it is remembered that if it were not for this central college where the instruction is imparted in English, many of the language areas would be without any adequate training. One of the most inspiring features of the recent graduating exercises was the fact that three Santali young men were awarded certificates and given appointments to strategic centres among their own people. These young men are among the very first of their nation to succeed in attaining to the equivalent of a college education, and should wield great influence throughout the regions where they go to represent Christ and to establish His Kingdom.

He must be slow of heart indeed who is not thrilled by the vision of the possibilities of this central power-house of the Church in India and Burma. Conceived in response to the insistent demands of a nation-wide Church ; based on the highest ideals of the Christian ministry ; blending the characteristics of sound scholarship and evangelistic fervour, and governed by sound educational and administrative principles, the India Methodist Theological College, under God's guidance and by His Grace, is destined to make an invaluable contribution to the work of establishing the Kingdom in Southern Asia.

The purposes and activities of the College are set forth by the Principal in the following statement:—

COURSES AND CONDITIONS OF ADMISSION.

“Two courses of study are offered; one a four years course for Matriculates, and the other a three years course for P. A. passed Undergraduates and Graduates. The studies in both courses are grouped under eleven departments. I. Old Testament; II. New Testament; III. Theology; IV. Comparative Religion; V. Philosophy; VI. History; VII. Pastoralia; VIII. Sociology and Economics; IX. Religious Education; X. Science and Literature; XI. Physical Education.

While Matriculation or its equivalent is the standard for admission, there is a provision that non-Matriculates up to one-third the number of Matriculates enrolled may be permitted to sit in classes and receive credits for work done, provided their educational background and knowledge of English is adjudged by the staff as sufficient to enable them to carry on satisfactorily the work of the institution and provided they are self-supporting or have stipends furnished through the Finance Committees of their Conferences.”

GENERAL AIMS.

“The purpose of this College is to provide for the intellectual and spiritual training of an indigenous Christian ministry, whether English or Indian, though it is to the latter that it makes its special appeal. The four years course is so arranged as to have for the student something of the cultural value of an Arts course and at the same time to give him that special knowledge and training which is essential to the Christian ministry. Emphasis is laid upon a background of general information, a thorough knowledge of the Scriptures themselves, and thorough and sympathetic understanding of the religions of the people to whom as ministers they are to carry their message. Emphasis is also laid on the study of Indian social and economic problems and of modern methods in religious education. Music and physical education are compulsory throughout the course.”

SPECIAL ACTIVITIES.

“All students are members of the Bharat Literary Society, which gives them experience and drill in essays, orations and parliamentary procedure. There is also a Young Ministers' Association, a voluntary organization to which most if not all the students belong, which affords special opportunity for preaching and the development of the devotional life and the deeper spiritual experiences.

One full period each class day is given, first, to worship and such exercises, as are usual to a chapel service, and also provides for exercises of a varied nature in which both the students and the Staff participate. Lectures on various topics and studies in current events are feature of this period.

Under the direction of the Department of Religious Education the students conduct at the college a Sunday School which is attended by the students and their families, the compound servants and others who may be reached in the vicinity. In addition to this there are weekly meetings carried on in the city and cantonment and in nearby villages.

The College has the beginning of an excellent library and is seeking to build up for each department a section of reference books up-to-date and sufficient for its needs.”

The present Staff consists of Rev. A. A. Parker, D.D., Principal; Rev. J. W. Lanham, B.A., S.T.B.; Rev. W. G. Griffiths, B. Sc., Registrar; Rev. M. S. Pitt, M.A., B. D., Litt. C.; Women's Department, Mrs. A. A. Parker and Mrs. W. G. Griffiths.

The Relation of Play to Character Building

(An Address at the Institute for House Masters and Matrons, held at Ahmedabad, January 15, 16, 1926)

REV. L. G. TEMPLIN, BARODA RESIDENCY.

ONE of the larger themes of the Institute is "Character Building." This may be considered to be in reality, preparing for the largest life possible to our boys and girls during their hostel life and looking forward to greater usefulness in later years. As has been shown in the earlier discussions the emphasis in this preparation should be on the development of right attitudes and principles. For this part of the discussion the question is, "Can play constitute any part in this development of character?"

It is well to remember that here we mean by 'play' not alone the games of childhood and youth, but the whole idea of recreation and the use of leisure time. 'Play' is a part of every normal child's life and is so universal as to indicate that it must be a part of God's plan for human development. It is the real life work of the child and "is the most serious type of occupation of which a child or youth is capable". In play no difficulty is insurmountable, no hardship too great to be overcome and the child is happy, interested in and contented with his surroundings.

Work, or the school's daily lesson may be done carelessly or in an indifferent manner, not so with play. The very fact that it is his "most serious type of occupation", indicates that the boy will give himself whole-heartedly to play. We can see a threefold result.—

- (1) Play arouses the child's keenest interest and holds his attention.
- (2) Play calls forth strenuous effort and labour, often the use of energy that otherwise would go into the formation of evil habits, and,
- (3) Play arouses alertness. The boy or girl cannot play and win while lazy, asleep, or indifferent to the demands of the game on his energy and alertness.

Since it is true that in leisure time the child follows the lines of his own desire, and turns to that which he wants to do, therefore, what a person does when free to do as he wishes is an indication of his character. Study the play interest of the child and learn what his attitudes are. His attitudes toward authority, toward his social environment, toward his responsibilities are revealed here. If this be true it follows also that it is important for those, who are charged with the task of training the child in the hostel, to know what their boys and girls are doing during their leisure time. It is in leisure time that boys and girls plan and do evil, and when they become interested in something that is good they will not so often get into the paths of evil.

But play must not be considered only for its negative function in keeping a child out of evil. It is a potential means for the development of positive moral values. That moral development is possible through play is coming to be more and more realized. What are these values?

(1) *Co-operation*.—This with its companion virtue selflessness, is one of the earliest lessons learned by the child as he joins a group at play. Let him be disloyal to his 'team' and he will soon see what social pressure is brought to bear on him, to a sense of the co-operative spirit, and if he fails to learn it he is soon dropped. He learns that he must live with others and that he can better do it by co-operation with them.

(2) *Honour*.—With proper supervision the desire to do the fair thing, to play the square game, may result from the lessons learned in leisure time. Not infrequently does one see a boy admit an infraction of the rules, and suffer loss therefrom rather than win knowing he had not played fairly. 'To do right is better than to win',—as this feeling grows in the leisure moments it will be carried over into life's every activity.

Closely associated with this lesson in honour, perhaps growing out of it, is the realization that winning is not the greatest end of play. When one has played fair and done one's best, losses and disappointments lose their sting. One learns how to take them as a part of the game, and be better for them.

(3) *Respect for the rules.*—Games must have rules, the hobby must follow some carefully laid out plan and those boys and girls who through the play of childhood learn to submit cheerfully to the necessary rules, will more easily see the need for law and will realize that every citizen can best serve his nation by respecting its laws, that every business can prosper better by an observance of economic laws and that life can be happier and more useful when it is lived in accordance to the law of God. With a courteous attitude toward the rules and laws of life will also grow a spirit of courtesy toward those in authority and courtesy becomes thus another of the virtues that may well be learned in play.

If play can have a share in putting these values into the character of our boys and girls, how necessary for us as house-masters and matrons to see that they give their leisure time to wholesome games and interests rather than use it in idleness and mischief. Our task is to arouse and direct interest and many are the pursuits to which we may turn their interest. We may direct them in the play ground games, team games, group games and contests. We may see that games are provided for the days when they are inside—chess, guessing games, Bible games, etc. We may go further and arouse interest in a hobby which may become a means of profit and pleasure,—collecting stamps, nature study, birds, stars, art, and a large variety of others. Three boys in the Baroda Hostel have developed real hobbies. One has a book with more than five-hundred stamps of his own collecting, another has a large collection of pictures, the result of the time he has spent with crayon and water colours, and the other turns at all leisure moments to the sewing machine and to-day is able to cut out and sew the clothes necessary for his own comfort and that of his fellow-students and incidentally finds an occasional anna thereby. All are better boys because of the keen interest in a worthwhile project for their leisure time.

Such is possible for all our boys and girls and will help them to a fuller life physically, mentally and morally, which after all means that the use of leisure time can help to ruin or build character.

Light on Books



PROBLEMS OF PRIMARY EDUCATION IN INDIA, A STUDY, S. C. Basu, M.A., District Inspector of Schools, Calcutta, Sen Brothers and Co., Calcutta. Pages 121. Re. One.

This valuable book is a disappointment, paradoxical as that statement may appear.

Mr. Basu has rendered a valuable service to all teachers and others, interested in Primary Education in India, by collating in a compact form almost everything that has been written on the subject, urban or rural, within the last decade. He has made a careful digest and compendium from over 20 different sources dealing with the subject. Particularly, the two last Quinquennial Reviews published by the Government of India have been made to yield tribute, for over 50 quotations from the Eighth Review and 14 from the previous issue are incorporated in this Digest. Nor does the author confine his attention to Government publications but also gives a very prominent publicity to the findings of the Missionary Commission on Village Education in India and to Dr. Fleming's by-product, when serving on that Commission, "Schools with a Message in India," between which he has fairly evenly divided the honours in the number of extractions. Next, in numerical contribution comes the findings of the Missionary Conference on Rural Education, Moga 1922 and the Conference held by Mr. W. J. McKee in India 1924.

Here then, in compact form, is the gist of recent educational and sociological opinion on Primary Education in India, with references to such experimental work carried on by Missions in their efforts to discover a solution for a situation, which is as baffling as it is challenging. Every educational and district

missionary ought to read this Digest, even though its contents will be very familiar; for it is a commendable undertaking to collect this fragmentary opinion in a handy and small book. For the recently arrived missionary, it will be particularly helpful. This indicates why the book has been described as valuable.

The momentous announcement of 1917 in respect to India's ultimate goal and standing in the British Empire, immediately necessitated a reform of the educational system of this country, along the lines of Compulsory education. The author of this book, apparently, has little faith in the sincerity or capacity of his countrymen and their representatives in the Legislatures to pay the price of Literacy, by the imposition of increased taxation; and seeks to infer that for the future there is not much hope, except in the perpetuation of the Voluntary system. This is altogether too pessimistic a view; and at this stage, it is very premature to conclude that compulsion will not become nationwide. Really, when recognising the inherent conservatism of India, one is agreeably surprised that in these early years so many Municipalities as well as Indian States are experimenting in the matter. India has shown her determination to achieve the goal of Nationhood and this fundamental ideal for the realisation of her ambition is inevitable.

Mr. Basu is sceptical as to the genuine desire of the villager to send his children to school; and quotes chapter and verse to prove, that the growth of school attendance is not proportionate to the supply of educational facilities. During the last reported Quinquennium, while an increase of 3,000 primary schools was accomplished it was accompanied by an increase of 5,000 pupils only. That is a discouraging revelation, but it is made more ominous by the author, who states in a subsequent chapter—which, by the way, we think might have followed Chapter II—that the growth of Literacy is not proportionate to the growth of school attendance.

This, in brief, is the situation which constitutes the major problem of Primary education in India, especially with reference to the Village, and for which so many educational people are seeking a solution. The only positive suggestion which we can discover as being Mr. Basu's independent judgment in the matter is his premise, that the expansion of Literacy depends upon the improvement of existing schools and in the increase of schools of

an improved type. This terse but trite remedy, "Quality rather than Quantity" is nothing original or new. But, would it not be equally true, whether the system was Compulsory or Voluntary?

The author makes no mention of schemes for Mass Education aiming at the removal of illiteracy among adults; and the bearing which such experiments may have in the way of removing the indifference and prejudice of the village parent to the school. This has been tried in other lands; and an interesting experiment has been carried out at Nagpur, by Mr. A. B. Mande, whose book "A Scheme of Mass Education," Mr. Basu does not seem to have included in his research.

To those who have not seen or read about the experimental work carried on by Missions, notably at Moga, Kalimpong, Dornakal, Faridpur, Bhimpore and Guntur, the detailed references found in the book will prove of interest. The author prefaces these references by stating the *pros and cons*, which invest these experiments with so much interest.

Here and there one feels that the author, by his method of stringing his quotations without reference to the context from which they have been taken, not only reveals his own uncertainty as to the solution for the problem, but is likely to add to the perplexity of those, who may be hoping to obtain some clear lead as to the right procedure in it. To illustrate, take the chapter on Educational Handwork. One quotation reads;—"Handwork should occupy a large part of the time but merely for the educative value, its training in manipulative skill and resourcefulness, not for its economic value". Further on, one reads, "Indeed whenever the economic motive will not frustrate the educational purpose, handwork should be so contrived as to enable the pupil to make an economic contribution to the family." Nowhere is the relation of handwork to ideas, habits and attitudes, as these affect health, social values and recreation referred to, though these play a considerable part in the hand work, or as it is becoming more frequently termed "Industrial Arts" in several of the schools to which reference is made. One wonders as well, whether no application of Intelligence Tests is being made in India to Vocational Training or in connection with the development of the community school idea.

Mr. Basu deals with the question of the *ruralisation* of the Village Primary School and quotes an educational commissioner

with the Government of India as saying; "It is a mistake to think that any steps to ruralise the curriculum will appeal to the rural parent." Is the rural parent any different from rural parents elsewhere in regard to this feature? In *The Journal of Rural Education* for November 1925, published in America, one reads of an interesting investigation by the School of Education, University of Washington, in which rural people reject the vocational efficiency, the richer rural life and the community service theories as fundamental in the purpose of a rural school and express their emphatic approval of the broadest possible theory—citizenship of society as a whole—as the fundamental, only worthwhile purpose of elementary education in the rural field. However much we may like to see the educated boy from the village retained by the village, let us not be blind to the fact that no effort along educational lines will keep that boy in the village, if village life is economically unprofitable.

The author has been a professor of Political Economy and his views on "The Economic difficulty as a hindrance to expansion of Literacy" get the better of his non-committal attitude elsewhere in his book. Here, at last, we get an original idea, wherein he says; "The fact is that the life of a community is an organic unity and its different aspects, economic, educational and religious, cannot be isolated from one another. While poverty is a cause of non-attendance, lack of education is a cause of poverty. Efforts to ameliorate the economic condition and to increase literacy should proceed simultaneously." With that opinion, very few will find fault. The disappointment one experiences in reading this otherwise valuable book lies in the fact, that while the author, painstakingly, arranges other people's ideas and calls it a "Study"; out of this mass of material, sometimes conflicting, he gives to his readers no constructive opinion. One lays the book down, thankful that the author has put this material together; but feeling, that the title is misleading since the "Study" has apparently led him to no suggestive conclusions which his position, as a District Inspector of Schools and his experience in that office, might have led us to expect.

C. B. H.



VILLAGE SCHOOLS IN INDIA: MASON OLCOTT, PH.D., Association Press, 5 Russell Street, Calcutta. (235 pages.)

Every one acquainted with the educational problems of India will probably concur with the opinion expressed by Dr. D. J. Fleming in his Foreword to this volume. "To discover the kind of education needed in the villages of India and to plan for the preparation of teachers who will take a worthy place in this vital work, is an educational task of the first magnitude." The author has brought to this task, devotion to a great ideal, knowledge gained by extensive personal investigation throughout India as well as in America, the Philippines and Japan and the resources of scholarship supplemented by specialized training.

The book is divided into three major enquiries, the first, "What Conditions Prevail in the Villages?" furnishes a comprehensive analysis of the factors that form the background for an intelligent study of the problems under investigation. A wealth of interesting and useful information is presented in well organized form under the chapter headings of "Economic backwardness and recent changes", "The health situation", and "Social conservatism and aspirations."

The second enquiry deals with the question, "How can Rural Education be Reformed and Extended?" An idea of the practical way in which this enquiry has been treated will be secured from the following Chapter headings and sub-divisions:

Administrative problems; A. Concise Retrospect. B. The Educational System and the Village School. C. Primary School Expansion and Consolidation. D. Buildings and Equipment. E. School Enrolment and Attendance. F. Retardation and Elimination of Pupils. G. Resources.

Problems of Curriculum and Instruction: A. Relation of School and Outside Activities. B. Courses Aiming at General Development. C. Courses Aiming at Particular Attainments. D. The Curriculum as a Whole. E. Methods of Instruction. F. Organization of the School.

The third enquiry is devoted to a consideration of the question "How can Village Teachers be Prepared and Developed?" This problem is thoroughly dealt with in chapters on: Operation of Training Schools. Courses for Professional Preparation. Development and Service of Teachers, and Place of Women Teachers.

Valuable statistical information relative to Recognized Educational Institutions in British India for 1923, and Tables of Comparisons of India with other countries, comprise Appendix I, while Appendix II consists of a splendid Bibliography covering the entire range of the subject investigated.

The author has dealt with the subject in a scientific and painstaking manner and as Dr. Fleming says, "All who are in any way interested in bettering Indian Village education will welcome this study, and must realize that a significant and stimulating contribution has here been made to India's greatest and hardest educational problem."

The book is well printed, contains about thirty splendid illustrations, and is undoubtedly the best book available on this subject. It should be in the possession of every missionary and all others who are interested in the cause to which it is devoted.

T. C. B.



A Creed for a Teacher

"I believe in man's divinity and its potency to advance the individual and society to higher planes of living."

"I believe in a humanized society in which the Christian conception of human relations shall be dominant; in which all individuals shall have equal opportunity to realize the latent capabilities with which they are endowed; in which childhood and youth shall be respected and cherished as society's most valuable asset; in which law shall rule above desire because it is for the common good; in which bigotry shall yield to tolerance and prejudice to the scientific temper."

"I believe in human personality actuated by good-will and sincerity of purpose. I believe in the subordination of personal freedom to the public welfare. I believe in intellectual honesty and openmindedness. I believe in work and play, in laughter and joy, in happiness and contentment. I believe in the enjoyment of beauty in whatsoever field it may be found. I believe in the sanctity of the body, in health, in clean living. I believe in the banishment of worry, in performing the tasks and accepting the gifts of each day as I go through life."

"I believe that the education of youth is the finest of the fine art and that my task as interpreter of life to youth is a great trust placed upon me. I believe in the aspirations and enthusiasms of youth. I believe in the power of example. I believe in co-operation with all humanizing agencies. I believe in patience and perseverance, and faith in the final outcome of education and life."

— P. K. PIEZ. Quoted in an Introduction to Teaching by N. S. Dearborn. (1925).

Field News

INSTITUTE FOR HOUSE MASTERS AND MATRONS IN GUJARAT

REV. I. S. LONG, ANKLESWAR.

Solomon was accustomed to say "There is nothing new under the sun." The Institute for matrons and house fathers was nevertheless something *new* and revealing to the Gujarati folks as for two days they met together at Ahmadabad, January 15, 16 of this year. The several missions of this area united in this program. Twenty-nine Indians and a dozen missionaries spent two full and interesting days together. Besides, quite a number of visitors were in attendance.

The first day's program had to do with Character Building. From the moment Rev. C. H. Conley began to speak of the Spiritual Basis of Character till at the close of the day Rev. Geo. Wilson spoke on Training in Evangelism and Character Building there was tense interest and no sleepy folks, I assure you.

Among other things the following sentences were heard:

Jesus Christ is the supreme need of every boy and girl.

The future Church depends more on the boys and girls than upon the grown-ups.

The house masters and matrons have a supreme opportunity to mould character and make the youth spiritual and obedient.

For the time being, house masters and matrons are in the place of parents to the boys and girls, hence should have very high thoughts of the importance of the work they are doing.

We should be real friends of the children in the hostels.

Play is normal and most important in character building.

The finest attitudes are developed naturally in play.

The mission school is worthwhile only if Christian character is being developed. The government school may do as well as we in mere mental discipline.

Associate the boys' and girls' reputation with your own in the management of the hostel.

The second day's program, hardly less interesting, had to do with Health, Discipline and Self-Help.

In the matter of Sanitation and Cleanliness little was left to be said, the Indians taking a leading part here.

House masters and matrons need to have the heart of a parent.

They need to love, to know how to sympathize, to know child nature.

Few rules are needed.

Division of work and responsibility was urged.

Let the children do the bazaaring.

Encourage the Scout idea.

Remember that the children imitate *you*.

The Self-Help idea was emphasized.

Any useful work provides purposeful activity. This ends in growth. Growth is education, is life.

The best character development comes from choosing for one's self, so give the children a chance daily to do as they wish.

In all work and service, the greatest gain is not the money made, but the character gained.

Time would fail to mention the many good things heard. One Indian well able to judge volunteered to say "I got a vision at Ahmadabad, and will be different henceforth". Several others who met me said, "Very fine. Enjoyed it much". Certainly the impression was made very deep that matrons and house masters have a job of wonderful possibilities, and that only folks with certain rare qualifications can fill the post well.

True, the program was short. Nevertheless, it was an eye-opener. It gave a peep into the great work we have before us. These special workers got at least a little insight into the possibilities of Work and Play. Responsibility and Co-operation, the meaning of Cleanliness, and the place those who for the time being in the place of Parents in the life of the child hold. Abundantly worthwhile those two days!

The Rev. C. B. Hill was the principal speaker. To him we owe special thanks. He showed Psychology by illustrations that we shall not forget.

For so generously opening their homes and hostels for our entertainment and for granting the beautiful Stevenson College Chapel for the Institute, we are all indebted to the Irish Mission of Ahmadabad.

SHORT TERM SCHOOLS FOR VILLAGE BOYS AND GIRLS

REV. JOHN E. WALLACE, A. P. MISSION, MAINPURI, U.P.

Short Term Schools for village Christian boys and girls are not a recent experiment in the American Presbyterian Mission, U. P. As far back as 1914, Dr. J. H. Lawrence, then of Kasganj, opened a school of this kind, and it is possible that others may have worked along this line even before that.

Not having personally conducted a Short Term School in a central station I have asked others to supply the material for this article and am indebted for help to Dr. J. H. Lawrence, Mainpuri, U. P., Miss L. Lee, Fatehgarh, Miss H. Lockrow, Kainganj, and Rev. G. B. Ogden, Kasganj, all of whom have had from three to seven years experience with such schools.

The village Christian community with which the Presbyterian Mission works is drawn largely from the sweeper caste. This community while totalling at least 30,000 is a very much scattered one, averaging only two or three families to a village, with large groups only here and there. The difficulties in educating these widely scattered small groups are such as to force us to scrutinize every means and method.

SHORT TERM SCHOOLS FOR WHOM?

Our Short Term schools are for Christian boys and girls and young men and young women of the villages. Both those who have received some instruction in their villages and those who have never been taught are allowed to enter. In two of the schools the girls have numbered from one-fifth to one-third of

enrolment. In the Kasganj school which has been held every year since 1914 only boys have been enrolled, yet those who have had charge of this school favour the teaching of girls in such schools if the necessary arrangements can be made.

The number in attendance in the different schools in different years has varied anywhere from 10 to 75.

The age of those attending has varied from 8 to 30 years, although by far the larger number of those experimented with has been of boys in their early teens. Two of those submitting their opinions feel that by far the best years for dealing with young folks in such schools are those from 12 to 16. If young married couples are sought then the average age will likely be somewhat higher.

SEASON AND LENGTH OF SCHOOLS SESSION.

For such a school to be at all effective opinion agrees that the session must be at least for two and a half or three months. These schools have been held only in the summer months but there is a difference of experience and opinion as to the exact months. Two favour the season immediately following the harvest, that is from the latter part of May up to the beginning of the rains, while two think that the months July to October are the best. For the former it is advanced that this is a slack season for work and it is easier to get pupils; at the same time there are no rains to break in on the day's schedule and the pupils are more easily cared for. For the latter position it is held that the heat is not so oppressive and that the missionary and the teachers can in the school do some effective work during a season when touring is almost out of the question.

OBJECTIVES OF THE SHORT TERM SCHOOL.

For such schools there may be a number of objectives, different ones being stressed according to the needs and conditions of the community worked with. The purposes that such schools serve are listed as follows :—

1. Starting a group along the road of learning by giving them something worth while in reading, writing and arithmetic.

2. Supplementing teaching work carried on in the villages.
3. Creating the desire in those most promising to go further in school.
4. Giving a group really effective instruction in the Bible stories and bhajans.
5. A means of awakening the more promising boys and girls of the villages by giving them a short experience of a Christian atmosphere such as can not be known in the villages.
6. Conversion of a group of pupils to higher ideals and standards.
7. A good toning up and training for the village teachers who help to run the school under close supervision; in fact a short term normal school where theory and practice go hand in hand.

CURRICULUM.

The curriculum of all these schools has, of course, included reading, writing, arithmetic, bhajans, Bible stories and the learning of Bible verses. One school has especially emphasized the learning and singing of bhajans as a means of instruction in Christian truths, and has constituted the whole school a catechist class; the majority of the pupils having joined the church at the end of the school session.

Some form of handwork has usually been a part of the curriculum, such as the making of *supps*, fans, cutting and pasting pictures in scrap books, carpentry work and sewing. The latter in one school has been taught by a local darzie, whose services were secured for the length of the session.

One school, which has included carefully supervised play and daily bathing as parts of the curriculum, feels that these two elements are invaluable. The evening story and bhajan singing hours are always popular and helpful.

SUPERVISION AND TEACHING

All the schools referred to have been carefully supervised by the missionary and almost without exception the missionary has taught part or all of the time. In some cases a capable Indian

worker has been considered the head-master ; bearing much of the burden of organizing and carrying on the work and taking complete charge when the missionary was forced to be absent.

The other teachers for these schools have been drawn from among the village pastors and village teachers of the district in which the school is held. Some of these men have been only Primary school pass men, others have been Middle and S. L. C. passes.

Opinion is unanimous that this form of short term school is about the best training for village school teachers that can be arranged for annually. The Missionary and Indian School Supervisor in such a school can work side by side with their teachers and give them both theory and practice in the art of teaching.

FINANCING THE SCHOOL.

Since the District teaching staff is drawn on there is practically no extra outlay for teachers, except incidental expenses in moving them from and to their homes.

As to clothing and bedding, it has been the general practice not to provide the pupils with any, except in unusual cases.

The arrangements for food have varied. In one school food is always provided at mission expense but the boys, under supervision, do their own cooking. Plain village fare is given with a little extra in the way of vegetables and fruit. The cost per pupil generally runs about Rs. 3 per month. This same school in 1925 off-set part of the expense by charging Rs. 1-8-0 in fees per pupil and collected a total of Rs. 40.

Another school has made no arrangements for food, leaving the matter to each individual ; *wazifas* amounting to Rs. 5 to Rs. 6-8-0 per month for single people and Rs. 9-8-0 per month for married people have been given however. Another has given 12 annas per day to day pupils and Rs. 1 per week to those from a distance, no food being provided.

GETTING THE VILLAGERS TO COME.

In the beginning especially, the village boys and girls, as well as their parents, may not take to the idea of a three months' school off in a central but distant place. One school when first

opened had one boy on hand, all that the whole staff of workers could produce. When the workers were sent back to the villages to get boys, that month's pay having been withheld until results were forthcoming, thirty boys were soon secured and most of them stayed through the entire session. The following year there were 56 pupils representing 35 villages.

Even after a Short Term School has become a fixture in a district, constant effort must be put forth to get the villagers to take advantage of it. Good results are possible only when consistent work with this aim in mind has been done among the village Christians during the preceding cool season. Numberless reasons are advanced why a given boy or girl can not go to the school, most of the reasons being absolutely worthless. One of the real rocks of offence is the prevalent psychological attitude. This needs changing of course. By telling the people of the large number of possible pupils and the limited number which can be handled, and by charging fees one district aims to develop the idea of a "special privilege" in the minds of the people. They come to want very much what they fear they can not get. However, one large element in one's favor in securing pupils for such schools is the fact that many can be persuaded to leave home for two or three months who could not be persuaded to go to the central station to attend school for most of the year.

THE EFFECTIVENESS OF THE SHORT TERM SCHOOLS.

What, in the light of objectives, can be claimed for these schools? In the first place experience proves that something really worth while in teaching the three R's. can be achieved. To quote, "two boys of about sixteen came from their village that year and began reading the primer. In this short term they learned to read the Gospel in Roman, to write from dictation and to do some arithmetic in rupees, annas and pies."

Pupils who have had a little teaching in their villages first usually make rapid progress under intensive cultivation and achieve a measure of real satisfaction for themselves.

The amount of Christian teaching which can be imparted, especially in the form of Bible and bhajans, in three months is often surprising.

Not less noticeable is the change in standards and ideals which takes place in this short time. An almost absolutely new environment for three months does produce results.

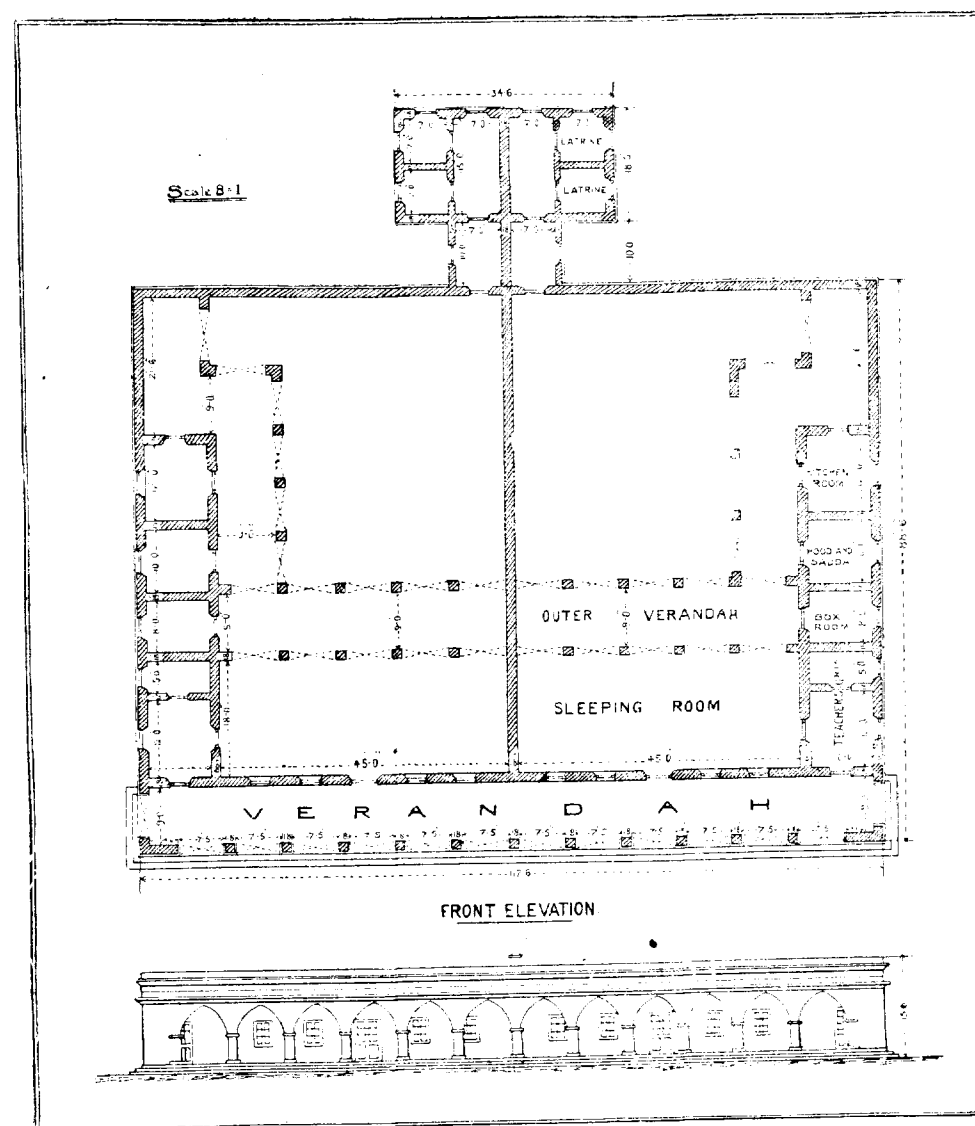
These schools have invariably succeeded in getting the pupils interested in further education. One writes, "More of the pupils wished to go on to the Central Primary School than I desired." Another says, "Of thirteen from this district, now in the Mainpuri Training School, nine were short term school pupils. Of four boys in the Fatehgarh Boys' School, three were pupils in the short term school." Another writes, "Many of these boys go to the Central Training School and other boarding schools."

Speaking more generally of the results, the following quotation seems to sum up the opinion of all: "This is the most effective method we have in our village school work."

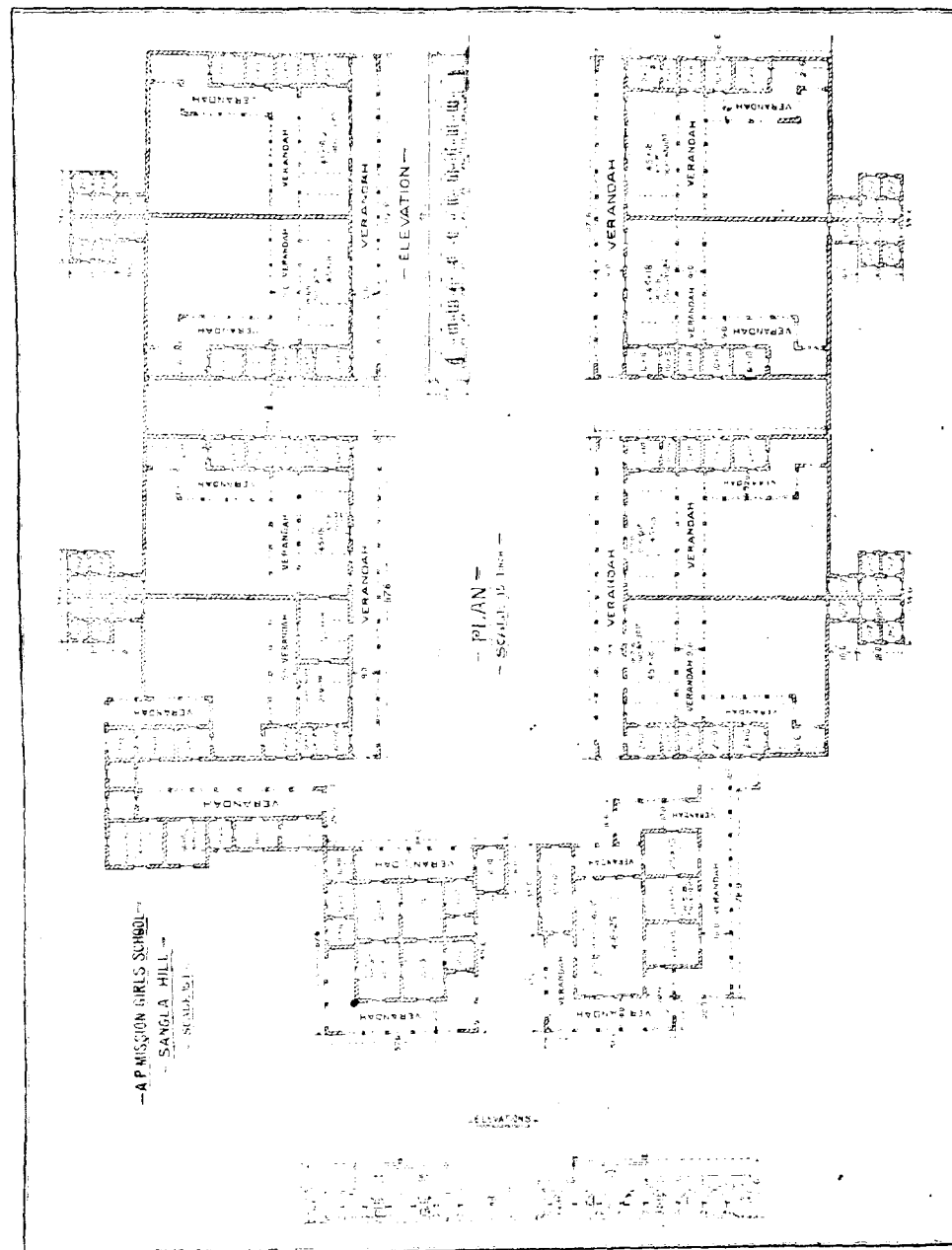
THE COTTAGE HOSTEL, SANGLA HILL, PUNJAB

Many visitors who have seen the Sangla Hill buildings desire such a plan but feel that the expense is too great. Having had experience in a school of the Dormitory Plan, and later in Sangla Hill, I am most enthusiastic in expressing the idea that any who desire the Cottage System, if but once they try it, will never regret the greater expenditure in building when compared with the better advantages in training of girls. I do feel that the Cottage gives a far better chance for individual work and training amongst the girls. Each regards her cottage as her home, and never enters another. In the Cottage group of twenty-four girls when there is a serious offence, it is very much easier to find the one at fault, than in the whole school of one hundred sixty-eight girls, housed according to Dormitory plan.

A delightful and appreciative group can always be found upon entering a cottage for a heart to heart talk, and many plans and ideals for the Cottage for the week are formed at that time. Advantages in Character Building are obtained through their responsibility for the work of the Cottage. No one wants another Cottage to keep a better home. It is easier to get many more girls doing real cooking, i.e., cooking in smaller quantities



Enlarged Plan showing a Double Cottage,
Girls' School, American United Presbyterian Mission,
Sangla Hill, Punjab.



Plan showing Mission Bungalow, School House and Cottage Hostels,
Girls' School, American United Presbyterian Mission,
Sangla Hill, Punjab.

and all kinds of common food, than when cooking according to Dormitory plan, and that in itself makes up for the greater expense in the wood. This has made it possible to say that no girl will be able to pass through the Upper Primary Grade, without being a regular cook on some one team. Of course there are many girls from lower grades on the cooking teams, and helpers are chosen from even smaller girls, but *these* girls must be at some time senior cooks on a team, before being allowed to read in Middle.

Once a week certain girls from each cottage go to secure the allowance of wood and food supplies. Either meat or vegetables are given out daily to each cottage. The girl in charge of the cottage together with her senior cooks, plan how the food will be prepared, and the teacher in the Cottage has the privilege of teaching them new ways of cooking, and the duty of seeing that the food is properly cooked. (We have no matron.) In addition the head girl of the cottage distributes among the others, at least once a week, specials, such as oranges, sugarcane, dates, nuts, etc., and seldom have we found the girls unfaithful in this duty.

I was greatly pleased last Sabbath when I entered a Cottage for a time of personal contact with the girls. When I asked if any had performed some special service during the week, one Fifth Grade girl who has been so trying, said, "We have divided our Cottage into three groups, and every morning and evening each group meets for prayer. We want to make progress." They were discussing in their groups the need of obedience concerning their home life, such as obeying bells, speaking more quietly, keeping heads covered, having better table manners, etc. Each group was giving special attention to the teaching of the little ones in that group. I rejoiced exceedingly to find such a desire springing up in the heart of that girl. In every cottage Bible stories, verses, S.S. lessons, songs, etc., are taught the little ones by the older girls of the Cottage. The Cottages give real opportunities for just such development. To get them into smaller groups, seems to be half the fight in getting them started on a warfare, against noise and many other evils. The family idea can be carried out much better in the Cottages than in Dormitory life.

All the work of the Cottages is done by the girls. The washing is done after school Friday evening, and on Saturday all the girls from the third to the eighth grade gather together in the Hall for the mending work, which takes about two hours. To increase the interest in the sewing work, a chart of white cardboard was hung in the room. Names were written according to classes, and lines drawn forming squares opposite each name. As each child completed her work, it was inspected and recorded in the proper square, according to the kind of work done. To indicate the article made, such signs were used as +, ×, -, =, o and to indicate the grade, the following colors: red, blue, green, purple and brown. That the desire of each girl has been to secure the red is apparent from the number who have received it during the past month. Buttonholes, formerly so difficult, are being rapidly improved.

The greatest number of articles made by any one girl in her daily 35-minute period between October 1925 and March 1926 is ten: 2 Pajamas, 1 Suttan, 5 Kurtas, and two small pieces of Drawn-work, and three of these have received the coveted color. Needless to say that the sewing room is a more pleasing place to see since the children are so keen on good work.

VILLAGE TEACHERS' INSTITUTE, VELLORE

MASON OLCOTT, ARCOT ASSEMBLY, VELLORE.

One of the greatest of the many problems of village education is to keep the teachers active and progressive. In solving this problem teachers' institutes may be of great value. Because some of the ideas worked out in the Institute, which was held for three weeks in February at Vellore, may be suggestive to others, I shall outline its main features.

The Institute gained in value from being held at the Union Teachers' Training School, which has been given the exceptional privilege by the Madras Government of conducting a five-year experiment in the preparation of village teachers with its own curriculum and its own certificates. The Principal, C. J. Lucas, Esq., and the staff placed all the resources of this progressive Training School at the service of the Institute.

The three weeks' work centered around the demonstration classes held every morning for four periods twenty minutes each. The first standard children, who walked every day from a village three miles distant, furnished the kind of raw material of education always found in the villages. The second standard were town children from the Model School attached to the Training School. The Village School supervisors of the Arcot Assembly taught the first standard in the first and third periods, and the second standard in the second and fourth periods. Meanwhile they assigned some educative activity connected with the lesson to the standard that was not under instruction. A single teacher took charge of the two standards at the same time. In the course of the three weeks, projects and work were taken up which would normally take two months, according to the syllabus recently prepared for the Arcot Assembly school. The project for the first half of the Institute was, "The Cleanliness of the House and its Surroundings." With this project the teaching of reading, arithmetic, hygiene, stories, and work and other projects were correlated. The children went to a small mud house made by other children to observe it and learn the various lessons connected with it. These demonstrations began the day and served, not only to give many practical suggestions, but also to make clear the principles presented in the later periods.

Mr. S. G. Daniel, a retired Educational Inspector, talked about methods of reading and explained his Word Method of teaching reading which he has thoroughly systematized in his readers. He also gave a remarkable demonstration of the way in which his method can be applied to the instruction of illiterate adults by means of a magic lantern. The amount that was learned in four nights by leather workers, who had never before learned to read, was truly striking. I believe that this is one of the most promising ways of instructing illiterates to read, since it is possible for one man to teach several hundred people at the same time. The necessary lantern slides for teaching Tamil which have been prepared by Mr. Daniel in collaboration with others, are available from the Lecture Department of the Young Men's Christian Association.

The Story Method of teaching reading was also described and demonstrated in the morning session of the Institute, but

this very helpful method was not given the sole place because it has not yet been so worked out in Tamil that ordinary village teachers can successfully apply it.

An hour and a half was reserved for lecture and discussions in the morning and another hour in the afternoon. During these times not only reading, but teaching of arithmetic, Bible stories, kindergarten, games and gardening were discussed. A neighbouring pastor from his long experience gave four talks on Rural Social Problems.

A knowledge of hand-work and vocational work and a zest for them is very important to the successful village teacher. Vocational work was given an hour and a half on the programme three days a week. An Agricultural missionary dealt with the essentials of poultry rearing in the first week. During the rest of the time, different groups received training in basket-making in mat-weaving and the weaving of cot tape and towels. The delegates observed other forms of vocational work during their excursions to the Vellore Central Jail and to the Agricultural and Industrial Institutes at Katpadi. What was there learned of better methods of farming and of the care of cattle and poultry was specially valuable.

At the end of the Institute we conducted a two-hour test to find out how much the delegates had thought about what they learned. On the basis of this certificates were later sent out. But we trust that this is by no means the end—only the beginning of real influence of the Institute in the villages of the five Missions from which the delegates came.



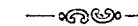
Notes and Comments

PICTURES ILLUSTRATIVE OF INDUSTRIAL ART IN INDIA.

ENQUIRIES have been made, as to whether the pictures published in "*Christian Education*", with the suggestions for their use in composition work in schools, can be procured as a set. The Manager of the Magazine states that this can be done, if there is a sufficient demand from teachers and schools. The pictures will be printed on art paper, in loose leaf form, and supplied in packets of ten. The titles of these pictures, published during 1924 and 1925 are :—

Story of a Chappati.
Helping the Dhobi.
The Herd Girl.
Sawing Wood.
The Potter.
The Shoemaker.
Irrigation.
Weaving.
Making Brick.
The Worker in Brass.

It will greatly help the management of "*Christian Education*" to take the matter in hand, if school people who desire to have the pictures, will send the Rev. C. B. Hill, Ajmer, a post card, stating the probable number of sets required. The price of each set, including postage will be annas 6.



MRS. H. W. LINDSEY.

THE Editorial Board of this Magazine desire to express their great appreciation to Mrs. H. W. Lindsey of Budaon, U.P., who has now proceeded on furlough to America, for her help in selecting and furnishing pictures illustrative of Industrial Art in India, together with Outlines suggesting how the pictures could be made use of in the class room.

Beginning with this number, Miss E. Calkins, Moradabad, U.P., has kindly consented to continue this feature in "*Christian Education*."

"OTHER INDIAS".

THE Rev. E. L. King, Secretary of the Epworth League in India and Burma and editor of the Religious Education section of this Magazine, has published a pamphlet, while on furlough, entitled "Other Indias", containing "One Hundred and One Items of Varied Information". The chief object in issuing this pamphlet is to bring before those interested in the work in India, facts which are often overlooked in the conventional interpretation of India to the west, and in the selection of interesting and pertinent facts, concisely stated and conveniently classified, the author has succeeded admirably in his purpose.

The following facts quoted from "IX : Education" are of significance to all interested in Christian education in India:—

64. Among men literacy stands at 122 per thousand, and among women at 18. The figures for 1911 were 106 and 10.

65. On the other hand the figures for secondary and higher education compare favorably with those of England and Wales. Education is top heavy.

66. Out of the two-hundred forty-seven millions in British India less than nine millions are now being educated. This is considerably less than 4 per cent. In the primary school less than 3 per cent of the population is enrolled.

67. It is estimated that 39 per cent of those who do achieve literacy of the very elementary kind demanded for census purposes very soon lose it through failure to continue or through lack of follow-up measures.

68. The majority of the children in the primary school receive only three to four years schooling and four out of five of them spend most of that period of opportunity in the lowest class.

69. Less than seventy million dollars is spent on education in India. This does not compare unfavorably with what other countries are spending but it is totally inadequate in view of the gigantic task to which it is put. In a recent two-year period the increase in expenditure on primary education was only one-fourth the corresponding increase in enrolment. In secondary education it was 8 per cent and 19 per cent.

70. Christian literacy figures being high in comparison with other religious groups an investigation was made, eliminating the influence of the European population upon the statistics. *The Indian Year Book* for 1924 says that the result was "surprising, for although the Indian

converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and four times as many as the Mohammedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille among their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the school-going age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians." *The Year Book* is not a missionary publication.

71. A remarkable educational, social and religious influence is that of the Boy Scouts who now number 15,202. The Girl Guide movement is also rapidly growing.

72. Three-thousand seven-hundred ninety-five presses issue 1,017 papers, 2,297 periodicals, 1,690 books in English and 10,105 in the vernaculars (1919-20.)

TEACHERS' RECORD BOOK

Books for securing a systematic record of the qualifications, service and professional improvement of teachers have been adopted by the Methodist schools of upper India, and are available for other schools desiring them. The headings of the books are as follows, with sufficient space provided for the necessary entries. Each book provides for twenty-four teachers.

Name _____
 Date of Birth _____ Religion or Denomination _____
 Date of Employment _____ Date confirmed Ed. Service _____
 Qualifications:—Professional and General _____
 Salary Record: _____
 Service in other Schools _____
 Married _____ Children _____
 Single _____
 Living in:—Mission Quarters _____ Rented Quarters _____ Own Home _____

