

REPORT
OF
A CONFERENCE
ON
INDUSTRIAL EDUCATION.

ALLAHABAD.

March 25—29, 1924.

A Conference was convened at Allahabad from March 25th to 29th, 1924, under the auspices of the National Christian Council. It was attended by 35 persons, from 13 different missionary bodies, and was representative of Christian activity in the sphere of industrial education in North India, Bengal, the Central Provinces and Bombay. Several delegates from the South had intended to be present, but were unfortunately prevented

The members of the conference were the following:—

- Rev. T. C. Badley, Educational Adviser, M. E. Church.
- „ R. Banks, Regions Beyond Missionary Union,
Siwan, Bihar.
- Prof. and Mrs. Benade, Forman College, Lahore.
- Rev. C. Borup, American Presbyterian Mission,
• Saharanpur.
- „ A. C. Brunk, American Mennonite Mission,
• Dhamtari, C. P.
- „ C. G. Carpenter, B. M. S., Delhi.

- Rev. P. E. Curtis, C. M. S., Sikandra, U. P.
„ H. E. Dewey, M. E. Mission, Suri, Bengal.
„ Canon B. H. P. Fisher, S. P. G., Cawnpore.
„ Dr. H. D. Griswold, American Presbyterian
Mission, Lahore.
Mr. and Mrs. S. Higginbottom, Allahabad.
Rev. J. R. Hudson, Wesleyan Mission, Benares.
„ A. S. Hutchinson, Wesleyan Mission, Bengal.
„ L. B. Jones, M. E. Mission Aligarh, U. P.
„ H. W. Lea-Wilson, C. M. S., Manmad.
„ and Mrs. C. C. Millson, United Presbyterian
Mission, Gujranwala, Punjab.
Miss C. N. Norris, Community of St. Stephen, Delhi.
Rev. W. Paton, National Christian Council, Calcutta.
Mr. J. D. Paul, M. E. Mission, Muttra, U. P.
„ and Mrs. E. L. Pedersen, Allahabad.
Rev. M. A. Pedersen, Northern Churches' Santal
Mission, Benagaria, Santal Parganas
Miss B. Tosh, St. Stephen's Community, Delhi.
Mr. Mason Vaughn, Allahabad.
Miss E. M. Waller, C. M. S., Benares, U. P.
„ Williams, B. M. S., Delhi.
Rev. W. T. Williams, S. P. G., Gurgaon, Delhi.
„ F. A. Williams, M. E. Mission, Asansol, Bengal.
„ P. A. Wenger, Janjgir, C. P.
Mr. A. P. Young, M. E. Mission, Nadiad, Bombay.
and the members of the staff of the Allahabad Agri-
cultural Institute.

The reason for the holding of the conference was a desire, widely expressed especially among those who had been in touch with the meetings on Rural Education held during 1923, that steps should be taken to gather together some of those responsible for industrial education, with the object of reviewing the present situation in this branch of Christian activity and arriving at the principles which should be followed in the future. The general findings of the Conference are offered to those who may read them as an effort, limited by the experience and abilities of those who framed them, to explore one of the aspects of the Christian task in India to which perhaps too little attention has been given.

It is a matter for regret that very few Indians were present at the Conference, the missions being in nearly all cases represented by missionaries. This appears to reflect the fact that in so far as Christian industrial schools have been developed, they have been almost exclusively in missionary charge.

I. A Preliminary Survey.

The Conference was indebted to the Rev. A. McLeish, of the United Free Church of Scotland Mission, Ajmer, for facts and figures drawn from the new Directory about to be published. Mr. McLeish has devoted more labour than any other missionary in India to the task not only of collecting figures and statistics but also of interpreting them. His statement is therefore of particular value. It includes facts regarding agricultural settlements and farms, co-operative societies and banks, and printing presses, as well as regarding industrial schools.

Agricultural Settlements and Farms.

“ 93 in India, Burma and Ceylon, as follows :—

Assam 1, Bengal 2, B. & O. 4, Bombay 36,
Burma 1, C. I. 1, C. P. 12, Hyderabad 1,
Madras 12, Mysore 1, Punjab 10, Rajputana 6,
U. P. 6.

Co-operative Societies and Banks.

242 in all.

Bengal 6, B. & O. 161, Bombay 11, C. P. 3, Ceylon 1,
Hyderabad 5, Madras 37, Panjab 2 central and
others, Rajputana 4, U. P. 6.

Printing Presses.

43 in India, Burma and Ceylon.

Assam 2, Bengal 1, B. & O. 4, Bombay 6, Burma 2,
Ceylon 5, C. P. 1, Kashmir 1, Madras 13,
Mysore 2, Punjab 1, Rajputana 1, U. P. 4.

Industrial and Agricultural Schools.

62 for girls and women, 80 for boys—Industrial.

23 whole or part Agricultural Schools for boys.

The present extent of this work is not great, nor is it on close examination of much importance. Let us run over the facts.

Assam.—

2. Boys :—Agriculture, carpentry and commerce.

Bengal.—

17. 7 for boys and 10 for women.

(a) Women's work :—needle-work, drawn-thread work, fur manufacture, weaving lace, embroidery, knitting, " industrial."

(b) Boys' work :—fur manufacture, carpentry and joinery, training carpenters, technical class, " industrial."

B. & O.—

9. 5 for boys, 4 for women.

(a) Women's work :—Handwork and crafts class, lace and needlework.

(b) Boys' and men's work :—Weaving, agriculture, " industrial."

Bombay.—

18. 13 for boys and 5 for women.

(a) Women's work :—apparently lace only.

(b) Boys' work :—Carpentry, carving, smithy, iron work, tailoring, weaving, gardening, cane work, rope work and agriculture.

Burma.—

5. 4 for boys and 1 for women.

(b) Boys' work includes scientific agriculture, a technical school and a criminal industrial institution.

C. I.—

5. 4 for boys and 1 for women.

(b) Boys work includes a technical school, weaving, carpentry, blacksmithing, furniture and vehicle making.

C. P.—

9. All for boys.

Carpentry, woodwork, weaving, tin and brass work, tailoring and an "industrial" school (work not noted).

Ceylon.—

8. 6 for boys and 2 for girls.

(a) Women's work :—Lace making and needlework.

(b) Boys' work :—Carpentry, printing and book-binding.

Hyderabad.—

4. 3 for women and 1 agricultural school for boys.

(a) Women's work includes lace and "industrial."

Madras.—

55. 31 for boys and 24 for women.

(a) Women's work :—mostly lace work, some embroidery and 2 weaving.

(b) Boys' work :—Carpentry, agricultural vocational, rope-making, cabinet making and again "industrial."

Mysore.—

6. 4 for boys and 2 for women.

Silk farm and "industrial" schools.

Punjab.—

9. 7 for boys and 2 for women.

Weaving, carpentry and agricultural.

Sikkim.—

1. For women—weaving.

U. P.—

17. 10 for boys and 7 for women and girls.

(a) Women's work :—Sewing, embroidery, jam making, curry and chutney making, handkerchief work and embroidery.

(b) Boys' work :—Commerce, gardening and horticulture, agricultural, carpentry, blacksmithing and tailoring.

On examining this list it does not strike one that there is any thought-out policy of industrial education. It is quite haphazard. Also what is done has been mostly not for the children of the Christian Community as a part of their education but from philanthropic motives for orphans, famine work, the destitute or criminal tribes. This is very unfortunate, as in many parts of the country industrial education has come to be looked on as for the poor and the outcaste and not for the respectable.

What is done for women and girls is a very meagre contribution to any sound scheme of industrial education. The whole of this work is confined to 62 places mostly of a philanthropic nature. The real work for women is what is being done in the ordinary girls schools as hand work, domestic science etc. It is to the developing and perfecting of this that we should now give special attention.

In the 80 institutions for boys we find the same difficulties. They are all very much alike and nothing very fresh can be elicited from a study of them. The real problem here again is in the ordinary schools we are at present running. What is being done there to give the basis of a handwork training:—

- (a) With regard to the rural side. We have before us the report of the Village Education Commission. We can add little to that. Its recommendations as to the ordinary village primary school have so far made very little difference principally owing to the absence of any teachers trained to give effect to such a programme. These teachers can only be created at vocational middle school centres, such as Moga. The material for such teachers must be those who have been through the whole course as scholars. Boys trained in the old cannot be shunted on to the new point of view at adolescence except in very exceptional cases. Our hope therefore of getting many trained teachers in the immediate future is small. It takes a very long time to change the outlook of any educational system. Thus what plans we lay should look fully into the facts and proceed carefully on indigenous lines and with little expense to Mission Boards.
- (b) With regard to the urban side. As we have seen most of the present industrial schools teach subjects that are properly subsidiary to agriculture. There are several commercial schools and several technical only. They do not contribute much if anything to a general system of industrial education. The problem lies again in the ordinary school. What is the extent of this problem? Of the total number of schools in India,

Industrial and Agricultural	number 162
Boarding Schools (mostly girls)	.. 113
Colleges	.. 40
High Schools	.. 243
Middle Schools	.. 280
	that is 838 in all

There is a total of 13, 537 mission schools in India, that is, 12, 699 primary schools both rural and urban. If we allow one quarter for urban primary schools we have 9400 village schools only. In all these schools we are educating 536, 283 pupils, 314, 060 of whom are non-christian and 182, 123 Christian. That is, there are 91, 837 Non-Christians more than Christians, and any policy we adopt must necessarily take this huge number into account. Industrial educational work must therefore be fitted into the curriculum of these schools for which we are already responsible. The problem we have to discuss here is How? The main educational problem in the West in recent years has been just this problem. This is not simply a question of how to prepare pupils for industrial life, but also a problem of real education. It is met by the growing emphasis on educational hand work on which there is now a great and fascinating literature especially in America. By drawing, brushwork, modelling, geometrical drawing, advanced wood and metal work, by practical science, by typewriting, shorthand and commercial arithmetic classes. How is this to be worked into our Indian curricula? It is mainly a problem for the Upper Primary and Middle sections. Into our boys' primary and middle school curriculums we shall require to introduce the new subjects. This will involve in the first instance a break away from the hard and fast curricula we have hitherto followed. The abolition of the Matriculation and the introduction of the more elastic S. L. C. certificate is an improvement and gives more scope but nothing like enough. I have no doubt that Government would welcome any genuine experiment on more practical lines, and that we will not lose our grants. But something very drastic needs to be done to get away from the past tradition which still governs our educational activities and results in our continuing to give the majority of our pupils an education which in no way fits them for life in modern India. I would consider this

the main problem of Industrial education before this conference.

The views expressed in the above statement were in the main approved and echoed by the members of the conference. There was a very general conviction that the work of industrial education had not been taken seriously by the Missions in the past, and that too often industrial schools or enterprises had been begun in response to a particular emergency, e.g. the provision for famine orphans, without either then or later any defined policy being developed. Further, the practice not infrequently prevails of sending boys, who have been found unresponsive to other types of education, more or less in despair to the industrial school—a practice which is perfectly intelligible but does not conduce to giving a worthy place of its own to the industrial school. To such reasons the conference attributed the very widespread disinclination among Indian Christians to let their boys go, if they can prevent it, to the industrial school, and the fact that while there is in India, taken generally, a great and increasing interest in the problem of industry and of industrial education, somehow the contribution to be made to the solution of this problem by the Christian forces is very far indeed from being clear. The first resolution passed by the conference dealt with this subject and is as follows :—

1. *Importance of Industrial Education.*

The Conference records its conviction that the present time is one of critical importance in the development of industry in India, and that the great amount of public attention now directed to the subject demands that the Christian Church should face with a new seriousness its responsibility and opportunity with regard to it. The

Conference has observed that industrial education, as carried on by Missions, has too often been confined to the succour of orphans or applied to pupils who have shown no aptitude for other types of training. It has not been regarded as a legitimate and indeed a necessary part of Christian education. The Conference considers that it is the duty of the Churches and Missions in India to do all that lies in their power to advance Christian standards in industrial life and to enable Christian boys and girls, men and women, to take a useful place in the growing industrial life of India.

II. INDUSTRIAL EDUCATION.

Definition and relationship to other parts of the educational scheme.

From the beginning of the discussions of the Conference it was apparent that the words "Industrial Education" are taken, in common parlance, to mean very different things. Sometimes they are taken to mean the training given definitely for the vocation of industry. At others the words apparently apply to any form of education in which the element of manual training is prominent. The Conference, therefore, sought to lay down a definition of what it meant by Industrial Education. Canon Fisher pointed out the difference between manual training, which should begin from infancy and belongs properly to the home and to the school, in so far as it is to replace or supplement the training of the home, and industrial education which is preparation for earning a living. The atmosphere which belongs to the two things is different. Manual training is an essential part of true education, and while therefore, essential to education for life is not specifically related to training for a definite vocation. The term "Industrial Education" should therefore be kept for that phase of education

which is directed to equipping a pupil to take up a definite vocation. This distinction was accepted by all the members of the Conference and was embodied in the following resolution :

2. *Definition of Industrial Education.*

The distinctive function of Industrial Education is that of trade teaching, i. e., the preparation of boys and girls for specific occupations, so far as possible under conditions which will enable them to take their places, in due time, in the industrial life of the country, whether in the village or in the city.

Out of this discussion arose the consideration of three points:—

- (a) The importance of manual training as an element in education.
- (b) The place of the Community Middle School as the pivot of the educational system.
- (c) The age at which specifically industrial education should begin.

(a) Discussion revealed a strong conviction in the minds of all members of the Conference that the establishment of Manual Training (otherwise called educational handwork) as a part of Primary and Middle School education is essential, and that without it no satisfactory industrial training can be carried on. The passage quoted above from Mr. McLeish's survey was endorsed by the

Conference as a whole. It was felt that the existing Primary and Middle School education being formal and unrelated to the life of the pupils, too exclusively literary and largely devoid of manual expression, was an unsuitable basis for any adequate industrial training and that reform, to be effective, must begin there. The criticisms made on Primary Education by the Village Education Commission and by those groups of Missionaries and Indian Christian teachers, who, since the Commission's report was published, have been working at the question of rural education, were fully endorsed by the Conference from its own point of view. It was felt to be one of the most important duties and opportunities of those in charge of Christian Education to endeavour to secure such modification of the Government course as would enable the place of educational handwork in Primary and Middle Schools to be established. The following resolution was passed :—

3. *Importance of Manual Training.*

The foundation for Industrial Training must be sought in the school or schools through which the pupils have already passed. A pupil who has had no manual training and has not learned to use his hands, is at a serious disadvantage in learning a trade. We consider that the greatest obstacle to the improvement of industrial education lies in the nature of the curriculum of the ordinary Indian Primary and Middle School, which gives no opportunity for the development of the wonderful manual aptitude found in so many Indian children. It is essential, both from the point of view of pure education and as regards preparation for later vocational training, that in the Primary and Middle School, educational handwork should find an adequate place.

(b) The Community Middle School. In discussing the relation of the Primary School—village or urban—to the industrial school proper, the Conference came to lay very considerable emphasis upon the Community Middle School. Reference may be made to the definition of the Rural Community Middle School advanced by the Moga Rural Education Conference, December 1922.

“The Rural Community Middle School (frequently referred to as the Vocational Middle School) is a school which seeks to use the activities and valuable interests of the village as a means for educating rural boys and girls for more abundant living and service in their communities. All the work of these schools, including the vocational or practical work, should be closely related to the pupil's village environment and so far as possible should grow out of it. The vocational work should not be a separate entity but should be an integral part of the curriculum, enriching it and having as its constant aim, (along with the other work of the school), the bettering of present village conditions.

Such a school differs from an industrial one in that it is concerned with a broad vital curriculum and the uplifting of the community through enriched and consecrated personality, while the latter has as one of its principal aims the training of pupils for a definite trade through which they may become self-supporting members of the community.”

From the point of view adopted by the Conference (*i. e.* that industrial education is not simply any kind of manual training, but training of those who have reached a point at which they ought to be trained for a vocation), the Community

Middle School is the clearing house or testing place at which the aptitude of the boy or girl is discerned, and from which the pupil will pass on to whatever form of further training (if any) he or she appears most suited for. For instance the Community Middle School may lead on to industrial training or to an agricultural course or (as at Moga) to teacher training, or in the case of pupils who exhibit an aptitude for such studies, to the High School. It was recognised that as things are (and are likely to be for a long time) many boys will be unable to go further than the end of the Primary School before reaching an age at which they ought to undertake industrial training if they are to undertake it at all. While recognising such necessity the Conference considered that the ideal which should be maintained is that pupils should pass on to the Community Middle School from the Village Primary School and from the Middle School (probably half way through the course) should proceed to definite training for industry. A passage from a memorandum written for the Conference by Mr. McKee of Moga may here be quoted.

“On the relation between Industrial education and other education, I do not think pupils should begin real trade work until they are 12 or 13 years of age. Also that pupils should be selected for Industrial work *because they have special aptitude* and not, as is often the case at present, of their being too dull to go on in the ordinary school. This involves co-operation between schools from the lowest one up to the higher ones. It also involves careful observation of pupils in activities where they can not only show their mental ability but manual as well. It is in this regard, (as well as others) that the Community Middle School through its enriched

curriculum, (containing projects involving manual work), can be most valuable in selecting desirable boys for industrial education and training.

As I see the relation of rural schools one to another, we would have the rural primary day schools (3 or 4 grades) in the villages; selected boys from these schools would proceed to rural community schools. After completing the 4th and 5th grades (or possibly the 6th grade) (Upper Primary or Lower Primary), they would be selected either to proceed further in the Community School or to take up some other line of work, one type of which would be industrial. Also if boys were old enough when they completed the 4th grade in a village school and had the aptitude, they might be sent directly to an industrial school.

Selection for Industrial work would be based upon the boy's or girl's aptitude for manual occupations, he being encouraged first, however, to get as much general education as he could profit by. I am not very much in favour of carrying both academic and industrial work in an Industrial School (as is done in some places), for the academic work is usually poorly done and is of a rather formal nature. I think it is much better for pupils to finish their general education first and then to take up the industrial, only doing such academic work as comes about naturally in their trade work."

The following resolution was passed :—

4. *The Community Middle School.*

The Conference considers that the Community Middle School, whether urban or rural, should be the place where a child's natural ability is tested, and from which he is passed on to some specialized training, for instance, agriculture or teaching, or, in the case now under consideration, industry.

It may here be added that the Conference recognised that where industrial occupation was normally and easily open to Christian boys, and Christian boys had been given a good middle and primary education of the kind referred to above, it might well be needless for boys to have any industrial education proper, as they could probably pass direct into the workshops. As an illustration the experience of the S. P. G., Cawnpore, may be quoted. The highly successful industrial work of the S. P. G. in Cawnpore was started because Christian boys were virtually barred from the industries of Cawnpore. The industrial education carried on by the Mission had the effect of so changing the attitude of employers towards Christian apprentices that the latter came to be welcomed, with the result that the Industrial School of the Mission proved to have finished its work and so closed, Christian boys proceeding direct from the middle school to the workshops. This, however, is by no means always possible, and where specifically industrial training is considered necessary, the Conference suggests the above resolution as suitably defining the relation of the Primary School, the Middle School, and the Industrial School.

(c) Age of entry into industrial training. Granted that industrial training is taken to mean training for the vocation of industry, it cannot begin until the pupil has reached an age at which he will readily think of life occupation and

adjust himself to undergoing a training which has as its conscious end the entry into a life occupation. Moreover, he must be of an age at which study of industrial processes is intellectually possible. Some members of the Conference put this age as low as 12 or 13, others about 14, and in regard to more elaborate industrial processes such as those involved in Engineering 16 was considered a suitable age. In its resolution the Conference suggested 13 or 14 as a general standard.

It was pointed out that if this is generally accepted, as it was in the Conference, the clash which is some times conceived to exist between the Industrial School and the Community Middle School is an illusion. Excepting the case of backward boys (and even with them good educational methods might well work wonders) a pupil should have passed through at least two classes of the Middle School before reaching the age suggested and the Industrial School proper would, as already stated, succeed the Community Middle School: the two are complementary, there is no conflict. The Conference passed the following resolution:—

5. *Age for beginning Industrial Training.*

It is generally held that pupils should not devote themselves to specifically industrial training before the age of thirteen or fourteen. By that time the average pupil should have passed the second class in the middle school but it will frequently be necessary for pupils who have only reached the Upper Primary standard by the age mentioned to pass direct to the industrial school.

III. Curricula.

While the Conference was composed of a number of people who were themselves thoroughly acquainted with the

practical work of industrial education, there was among them a general consensus of opinion that a great deal more work requires to be done in the creation of curricula for the Industrial School on methods and principles approved by the best educational science. A portion of the memorandum by Mr. McKee may here be quoted:—

“First of all I think there should be very clear, *definite objectives* in industrial education. We should know more clearly than we do, just what skill (manual and intellectual) is required in each trade and what speed of working is necessary. This can be determined by a careful study of present shop or factory conditions. This will include not only the ability to use tools quickly and satisfactorily but the ability to look ahead, to plan wisely and to judge materials and results. There should be recognized minimum essentials in all these things, which would be the necessary standard which each pupil must reach.

All this is closely related to the *method of teaching* trades. Here it seems to me, we have tended to depart from what is now recognized as good psychology and valuable educational principles, also to depart from the procedure used in life. I refer to the practice of putting a boy for a certain length of time (if he is learning carpentry) on chipping at a piece of wood so as to get it to some certain shape or squaring up a piece of wood, etc. Now this is not interesting to a boy, and hence it does not call out his best effort. In fact it often lays the foundation for habits of working which are very harmful.

It is also doubtful to what extent these manual skills carry over into the actual making of a marketable article. And yet many in charge of industrial training will insist that a boy must first learn how to use the various tools before he can make any piece of furniture or article he is interested in. It seems to me that we need to apply the principles of the *project method* to all this work. (In fact the project was originated by those engaged in Industrial & Agricultural work).

In using this method the boy would be set to work on making something he was vitally interested in. With the help of the instructor he would make his plans and divide up the work with regard to the various processes he would need to carry through in order to complete successfully the article he wished to make. The responsibility in all this, including the selection of materials, organizing the work, gathering information, securing skills, judging the results should all be the pupils', although the instructor would always be there to guide whenever that was necessary. Pupils should learn however to face difficulties and work their way through them. The necessary practice in carrying through various mechanical processes skilfully, such as sawing, planing, chiseling, etc. would come about naturally and on a high plane of interest when pupils saw that they needed these skills in order to be successful in the making of the article in which they were interested. Moreover the industrial teacher should try to grade these

various processes, (as well as arrange the shop environment), so that the articles the pupils desire to make are graded in difficulty and emphasize sufficiently the various necessary processes of the trade, so that the necessary minimum skills and speed (set up as objectives) are obtained. This all needs to be carefully worked out in a curriculum, and such a curriculum should be flexible in the sense of providing for electives, so that the pupils might have sufficient opportunity of selecting the things they were interested in. Also pupils should keep necessary accounts, price of the wood and materials used, value of the labour put on it, and this compared with the price obtained for the completed article. I do not believe any industrial work which is truly educative can be self-supporting, but I feel that pupils should come to know this by actually keeping accounts and seeing to what extent they are supporting themselves by their labour. Properly handled this should become a great incentive to securing a higher degree of skill and speed so that they might reach the place where they might receive some share of the profit on the things they make. Every opportunity should be made use of in developing the character of the boys, and here the project method is most valuable in that character is emphasized in the natural carrying out of the activity. Initiative, self-reliance, foresight, a sense of responsibility, persistence in overcoming difficulties and carrying the work through to completion, ability to co-operate and work with others, reflection and

organizing power, ability to judge values and results, a healthy independence, etc. should all arise naturally in the use of the project."

It was strongly felt that efforts should be made by co-operation to secure that such curricula should be prepared.

Subject to this general proviso the Conference considered that two types of Industrial School were required, one type looking to rural industries, especially to industries subsidiary to agriculture and related to the life and needs of the village; the other looking towards urban industries, and preparing for the industrial life of the city with its more elaborate large scale industrial concerns. In the former type of school such subjects would be taught as weaving, manufacture of clay products, cane and bamboo work, leather work, rope-making, village carpentry and village blacksmithing. Such a school related as it would be to village conditions would necessarily be located in a rural area, and very possibly in proximity to a Community Middle School. The second type looking towards the trades and industries of the city and to large scale industry would teach such subjects as carpentry (including cabinet and pattern making), blacksmithing, fitting, motor mechanics, work in sheet metal (including copper and brass), foundry work, engine driving and printing. Naturally no one school would teach all these subjects, but these are mentioned as included actually in schools of the type suggested. Training in such subjects as these, if well done, would enable the boy to take his place in the industrial life of the city with fair certainty of making good.

For both types of school the curriculum should consist mainly of actual work at the trades or crafts concerned. In the case of the Industrial School, which looks to urban industry, some study of drawing, book-keeping and commercial arithmetic, will probably be desirable, and in any industry

where contact with Europeans and others who work mainly in English is likely, some instruction in English by the direct method should be included in the curriculum. Similarly business methods should be taught in such schools.

Some members of the Conference felt that the less machinery and illustrations the School contains the better, as it is essential that boys should be taught to use their hands. Moreover, there is the danger of accustoming boys only to work with elaborate machines at the risk of their being unable to obtain work of that type later on, and being unable to adapt themselves to more indigenous methods of work. Boys who have been trained to use their hands and to become resourceful will not be at any loss, rather the contrary, in dealing with more elaborate industrial processes, but they are more likely to find their place in the industrial environment of India if they are trained on simple lines by methods not too far removed from indigenous processes.

It is recognised that most schools must depend to some extent on orders given and relate the practical work done to such orders in order to reduce cost. The ordinary daily work, that is to say, will be on exercises which arise from orders received for work. Such exercises can be supplemented by others which can be carried on when orders are lacking, and which should be directed to the making of articles to be kept in stock. The choice of such work requires study of local needs.

The finance involved in such curriculum is dealt with later. While recognising the wide-spread need in India, especially in relation to the economic position of the rural Christian communities, for training in village industries and those subsidiary to agriculture, several members of the Con-

ference were insistent on the importance of some first-rate industrial training being done under Christian auspices. Others felt that while there might be a few places where work of such a first-rate standard might be done—preferably by co-operation; in view of expense—efforts should be made to use as fully as possible the Government institutions. It was also felt that in view of the financial difficulty of establishing fresh industrial schools, some study should be made of the location of the present Schools with a view to developing the efficiency of those which might prove particularly adapted to serve a wide constituency and suitably related to markets and outlet for trained pupils.

The following resolution was passed :—

6. Curriculum.

The task of drawing up curricula for the industrial school is one which needs the attention of experts, conversant both with sound educational principles and with the nature of the several studies and processes required. The Conference urges the National Christian Council to take steps to secure that such detailed curricula may be prepared.

It is however, convinced that two types of industrial schools may usefully be defined :—

- (a) *The first looks towards village needs and industries, and should be located in rural areas. It will teach such subjects as weaving, the manufacture of clay products, cane and bamboo work, leather work, rope making, village carpentry, blacksmithing.*

(b) *The second type looks towards the trades and industries of the city and the developed industrial regions. Schools of this type will teach such subjects as the following:—Carpentry (including cabinet and pattern making), blacksmithing, fitting, motor mechanics, work in sheet metal (including copper and brass), foundry work, engine driving and printing. It is not suggested that all these subjects should be dealt with in each school, but that a selection should be made in accordance with the needs of each district. The curriculum should include mainly work at the trade but time should be devoted to drawing, book-keeping and mathematics related to the work in hand. In some areas it may be advisable to give some instruction in English by the direct method. Wherever possible, business methods related to sales, purchase of materials, etc. should be taught.*

IV. The Training of Teachers of Industry.

There is a general sense of the extreme difficulty of securing good teachers for industrial schools. In a few cases appreciative reference was made to the facilities afforded by Government training institutions. It was, however, felt that the chief hope lay in schools training their own teachers, *i.e.* provided one thoroughly efficient man, whether Missionary or Indian Christian, is in charge so that he can gradually train his own teachers how to teach. The same need for the application of educational science to industrial teaching was felt here as is referred to above. Teachers need to be taught how to teach industrial subjects, and too little knowledge of this exists in our Christian institutions.

It was regarded as essential that a teacher in an industrial school should himself have been through a school of the type in which he is to teach.

Strong emphasis was laid upon the importance of having Industrial Schools conducted by men who are reasonably expert in the work. Several members of the Conference explained that they themselves had for various reasons undertaken the oversight of industrial education, without any industrial training whatever, simply because of the dearth of men with the particular qualifications required. The Conference recognised the enterprise and devotion of evangelistic missionaries through whom industrial education had been in many places undertaken, but considered that it should be laid down as an important principle that industrial education should be in charge of those trained for that work and that success could not normally be expected without this. The following resolution was passed:—

7. *The procuring and training of teachers.*

Teachers for industrial schools should have passed through the full practical course in a school of the type, whether looking towards village or urban industries, in which they are to teach, and should in addition receive teacher training, not of a merely general character but related to the industrial subjects they will have to teach. In view of the scarcity in India of persons, whether Indian or foreign, who have experience in training teachers of industries, it is highly desirable that institutions for industrial teacher-training should be on a co-operative basis. In several places excellent Government industrial training institutions exist, and Missions should wherever possible make use of these.

While we recognise that many industrial schools owe their inception to the enterprise of the evangelistic missionary,

we consider it necessary for permanent success that the supervision of industrial education should be continuously in the hands of those who, whether foreign missionaries or Indian Christians, are properly trained for the work.

V. The following up of Industrial Education.

The Conference devoted a great deal of attention to the important problem of how to follow up the education given in the industrial schools, and how to help the pupil, who had been trained, to take a proper place in industry, whether of the rural or the urban type. A good deal of evidence was produced to show that many industrial schools fail, and the reasons are usually either that the boys have been trained in such a way and in such an atmosphere that they are totally unfitted to fend for themselves when they leave the school, or that the course through which they have gone has had little relation to the possible market for the pupil's labour or outlet for his services. Further, there is the question of capital. Boys, for instance, who do not go into large industrial concerns as apprentices, but who launch out on their own, require some small capital if only to equip themselves with tools. The two main points, therefore, were (1) how to create in the schools, and specially at the end of the course, an atmosphere similar to that of practical industrial work so that boys will become accustomed to the conditions under which they will later have to make their own way, and (2) how to provide pupils on leaving the schools with a certain amount of capital. Along with this went the consideration of a generally felt danger, viz. that boys on becoming partially trained and thereby acquiring a small market value, should be tempted to leave the school and abandon a completer training in order to obtain an immediate financial return.

A section of Mr. McKee's memorandum bears upon the problem of investing the entire industrial course with the sort of spirit and atmosphere which will help a boy to adapt himself quickly to working conditions outside:—

“Opportunity should be given towards the end of the course in actually working under factory or shop conditions, with some experience (under guidance) in what the boy will have to encounter when he gets out in the world. It is a great advantage to have industrial schools located near a natural market for their products and also where there will be real opportunity to observe actual shop conditions of the trades taught and possibly even to share in them.

This leads to a consideration of the boy being enabled to take his place in industry. Often the making of the necessary tools can become one of the projects of the course, so that the pupil would largely make his outfit of tools while undergoing training. Also in the accounting spoken of above, I believe the pupil should be permitted to share in the profits of his work, after he has made a reasonable contribution toward the cost of his living and training. This would provide opportunities for the teaching of thrift, and the saving up of sufficient money to make a small start in his trade. Personally I would not favour subsidising a pupil or promoting centralized mission industries to provide industrial opportunities for earning a living. If the training and education given in the Industrial School have been of the right sort, I believe pupils should desire and be

able to stand on their own feet at the conclusion of their course."

In so far as methods such as the Project Method are adopted, either in the Primary and Middle School or in the Industrial School, the result must be to call out continuously the initiative and self-reliance of the pupil which educationally is the basis of future success."

The Conference listened with interest to a description by Canon Fisher of the practical methods formerly used at Cawnpore, and to the memoranda by Mr. Randle of Tinnevely and Mr. L. Barber of Faridpore, as to the method of the "finishing school" whereby the total objective named above is sought to be obtained, *i. e.*, experience is given to the young worker in conditions as closely as possible approximating to those of the industrial world, and at the same time he is enabled to store up for himself some capital which he would forfeit should he leave the school still only half-trained.

Canon Fisher explained that in the S. P. G. Industrial Schools, where carpentry, printing and foundry had been carried on, the place was run as a business concern, the age of entry was 14 and there was no half-time. Factory hours were worked, orders were taken in the office, business settled between the customer and the head mistry. One of four or five working mistries arranged to undertake the work for an agreed price, materials were supplied by the school and the mistry carried out the work with three to five boys working under him. He paid for these boys to the school so that it was to the interest of the mistry to see that the boys worked and worked hard, and it was also essential for him in his own interests to see that the boys learned the trade and learned it well. The boys got pocket money together with a propor-

tionate amount in the Savings Bank which could only be drawn during their apprenticeship.

Mr. Randle's statement is as follows :—

“ Dealing as we are with all types of boys it is clear that the finished product will vary, and they seem to tend to fall into three groups. 1st the Teacher, 2nd the Mistry or foreman or master workman, 3rd the Skilled Cooly worker. The first period in the school is probationary, and though a boy may apply for, say, carpentry he is only admitted on probation, when he is tested to see into which department he might be placed and into which group he would tend to fall. Generally speaking within a year we are able to judge.

The above three types up to a certain point will receive the same training but afterwards a distinction should be made. Speaking broadly, the Teacher will need more literary training, and an opportunity to place into practice whatever he may have been taught before he is launched out into the world. The Mistry and even the Cooly worker needs more than a mere certificate to state that he has passed through such and such examination. The after-care of a trained pupil is a real duty which devolves upon a school of this type. For the sake of argument a carpenter needs at the least a set of tools and a small capital to enable him to set up on his own account, the weaver should be able to purchase a loom with its accessories.

How is this to be met? By the introduction of a finishing school. After a certain period in the school proper, (time varies with different boys) he is drafted into the finishing school, where he is paid at the current market rate for any work done, deduction only being made for simple overhead charges. The balance after allowing a certain amount for pocket expenses is placed by the boy under the supervision of the Superintendent in the Post Office Savings Bank. He is expected to work with very little supervision, and more or less under conditions which he may rightly expect when he leaves the school. We go a long way to remove the stigma which attaches to boys trained in institutions that they cannot do a reasonable day's work.

The boy who is mapped out for a teacher spends a certain time each day giving him sufficient time to earn at least the cost of his keep, the rest is spent in teaching young boys on the school side, and in receiving more literary education.

Two years should be about the time allowed in the finishing school. We have experimented on the above lines for the last four years, and have now definitely committed ourselves to the scheme. We are building extensions so as to enable us to have about 70 boys in each department, giving us 40 boys in the finishing school. But of course such a scheme takes 5 years to work out."

Mr. Barber's statement is as follows :—

“ When a boy has finished the training school course, we have ready for him two paths.

1. Back to the village, for dull clumsy boys. The boy continues to learn village trades.

2. To the Zilla towns. These boys are taught finer work such as town dwellers demand.

From the training school a boy enters the Piece-work Department. He can earn at least Rs. 8. He has already learned to do that. Here he learns speed. He has to work hard. He only gets what he earns. We take 10 per cent. profit for management. The boy is fined if he spoils wood. In other words, he is faced with actual conditions. When he can earn his wage here, he can do it outside. The Training School is kept up by grants, the Piece-work department is pure business, and has to earn its own profits. Until a boy is a profit to the school, he will be no good to employ outside. Piece-work department boys have to attend lectures.

An independent unit is weak. Try bands of boys. Then they can take up contracts and bigger work.

After our boys pass out of the piece-work department, we combine them into firms, giving them business training. They learn to work together and manage their own business. It takes a long time to weld together a set of lads. Some have to be changed. Boys from one village or district do best.

Paper co-operation is easy. Practical co-operation is a long job and needs heaps of patience.

Transplant the firm to some country town. Lend them the tin roof over their heads. When they pay back the cost of the tin they have proved they can make profits. If they fail to pay, break up the firm or change its personnel. Ask the local missionary to be a member of the band to help in accounts, squabbles, etc.

We have just reached this stage in our school and are forming our bands. When we get several bands planted we will supply them with goods on the co-operative society plan. We will also have an Inspector to visit and help them with new ideas, plans, etc.

When a boy leaves the Training School and enters the Piece-work department, he is given a complete kit of the finest English and American tools, costing about Rs. 100. Each month he pays nearly all his earnings to reducing his tool debt. The tools are the property of the school till paid for. If a lad runs away, he loses his tools.

We keep a sufficient staff of permanent workers who with the aid of machines can deal with extra work. Except in a big city there is not enough work to keep all the trained boys in work.

Provided there is sufficient work and that the whole concern does not depend on one man, but is formed into an Indian company, I think centralized work good. The industries of England grew round the abbeys, and then formed industrial towns."

In connection with the "finishing school" and the problem of finding economic employment for those trained in the Industrial School, careful consideration was given to the question of the maintenance by Christian missionary bodies of commercial industrial concerns. There was general conviction among the members of the Conference, though they were aware that others not present in the Conference might differ,

that it is not the function of the Missions to conduct industrial concerns except in so far as they are related to an educational purpose. There are exceptions, and the most notable case is that of the Mission Press, in which a very high standard of excellence has been attained, and in addition there are obvious reasons why the Christian bodies should have certain efficient presses under their own control. The argument against the mission industrial concern, as advanced very strongly by several members of the Conference, is three-fold. In the first place it is not desirable that Missions should enter into the relation of employer with a considerable proportion of the Christian community in a given locality. Secondly such a relationship tends to increase in the Christian workmen the spirit of dependence upon the Mission and to strengthen the tendency already sufficiently strong in the Christian community towards segregation from the normal contacts of Indian life and the engendering of a Christian caste. Thirdly, experience in a considerable number of cases has shown that it is not an easy thing for Missions to command the permanent expert management without which an industrial concern standing on its own legs commercially cannot be made to succeed.

A "finishing school" such as is suggested in the above extracts will probably be a source of income and will be economically self-dependant. It will not retain the trained pupil permanently in the school, except in a few cases, as the instructors' object will be to turn the pupil out efficient and able to make his own way in the world. The mind of the Conference was definitely opposed to the building up of industrial concerns which gradually lose their educational objective.

An instance was quoted of a Mission Industrial concern which had been taken over and floated by an Indian Christian Company. Where this is possible, it seems an ideal solution.

In relation to the question of following up industrial education it is worth emphasizing that a good industrial training enables a boy of average ability to earn more than he probably could in any other capacity. Instances were given by members of the Conference. From the United Provinces one member quoted two boys, one who had taken a Carpentry course, was industrious and finished his training and is now getting a regular wage of Rs. 60 a month, the other who refused to be trained is getting Rs. 8 as a temporary gardener. Another from a village near Delhi said that a boy who had a practical training for 18 months after passing the boys' course in the Industrial School should get regular employment at Rs. 20 a month or more, rising as his strength grows to Rs. 40 or more. Boys of more ability get jobs as coach-makers, mill-operators, etc., at from Rs. 40 to 80 with no fear of unemployment. In Lahore ordinary carpenters get Re. 1-8 or Rs. 2 per day, mechanics Re. 1-8 to Rs. 3 per day and more in proportion to their skill. The same figures apply to Saharanpur region. All these figures are given for boys who have duly passed through Mission Industrial Schools.

Mr. Hutchinson of Raueganj dwelt on the importance of holding before Christian boys in industrial schools the possibility of helping to build up a self-supporting Church. He also had found boy-scouting extremely useful in maintaining the spirit of service among the boys.

On this entire discussion the following resolution was passed:—

8. *The following up of Industrial Education.*

It is essential that the pupil shall be trained in an atmosphere of real work; that he shall remain long enough to be adequately trained and not leave the institution as soon as he has begun to acquire a small market value; and

that he shall be equipped on leaving with a sufficient capital in money or tools to enable him to start life for himself. Our report contains examples of ways in which these ends can be achieved. The institution of "the finishing school" seems to us to offer an excellent means of advancing these ends.

It appears to us that the reasons urged against the conduct by missions of industrial commercial concerns, apart from industrial education are every strong. (We do not include the every special cases of Mission Presses). There has rarely been a continuous supply of expert management. There is grave danger of creating and continuing in the Christian workman the spirit of dependence upon the Mission, and further, of engendering a Christian caste, segregated from the currents of national life. All assistance should be given to trained pupils to set up in business for themselves.

VI. FINANCE.

A good deal of discussion centred on the question whether industrial schools can be self-supporting. In the early part of the Conference there was acute division of opinion on the subject some members holding it to be axiomatic that industrial schools must be made to pay, otherwise they would be unbusinesslike and educationally unsound: while others held, it to be equally true that if industrial schools are educationally sound they cannot be made to pay. Further discussion showed that members were speaking about different things and including or excluding from the total costs of an industrial school certain items differently treated by other members. There was in the end a complete agreement that if the entire cost of an industrial school is counted in, including the maintenance of the boys and the cost of trained management, whether missionary or other, no industrial school that is aiming at training boys can possibly cover its entire expenses; and the attempt to make it do so must

result in a mode of work which will sacrifice the educational advancement of the boys to an immediate financial return.

A careful discussion was given to the financing of the industrial school. It was felt that the problem of financing a simple industrial school, whose objective was village industries, and the problem of financing a school of the more elaborate type embracing subjects such as motor mechanics, fitting, etc., were entirely different. Accordingly it was decided to include in the report three typical budgets, one of which is taken from a highly developed industrial school at Nadiad in the Bombay Presidency, one from a very simple village industrial school in the United Provinces and the third from a school in Benares occupying a position intermediate between the other two. These budgets are labelled A, B, & C.

A.

Estimate of Equipment and Buildings necessary to establish an Industrial School capable of training 75 boys having the following trades ; Machine Shop. Blacksmithing, Carpentry, Motor Mechanics, and Mechanical Drawing.

Drawing Equipment for a class of twelve :—

12 special desks at Rs. 75 each	... 900
1 Table	... 30
3 Chairs at Rs. 8 each	... 24
2 Cupboards at Rs. 50 each	... 100
2 File racks at Rs. 25 each	... 50
15 Drawing boards	... 45
12 Compasses	... 30
6 Dividers	... 15
15 T. Squares	... 22
15 Sets of triangles	... 15
Miscellaneous text books, etc.	... 100
Total Rs	... <u>1,331</u>

Benches of different kinds may be had at less expense per boy. Price of equipment varies in different localities. Estimates only approximate.

Carpentry Department :—

12 Benches at 150 each with vices ...	1,800
3 Cupboards for tools	150
1 Power saw circle	500
1 Power planer	1,500
1 Band saw	2,000
1 Hand power saw	300
1 Wood lathe head and tail stock and bed	1,000
3 Wood lathe heads and tail stocks small	1,500
1 Grind stone	130
3 Clamps, 4 hand saws, 12 small saws, 2 braces, 12 planes small wooden 4 planes large wood, 4 iron planes 12 squares small, 3 large squares, 12 level squares, 12 marking gauges, 60 chisels, 1 saw clamp, 12 mallets, 3 adzes, 3 screw drivers, 3 groove planes, 1 axe, oil stone, hammers, and miscella- neous tools	730
Total Rs. ...	9,610

Some tools could be left out and reduce expenses somewhat, much could be added if wanted.

Machine shop and Fitter Department :—

1—14" lathe	...	...	4,500	Approx.
1—10" "	...	...	2,500	"
1— 6" "	...	...	1,800	,
1—14" Shaper	...	...	4,000	"
2 Drill presses @ 1250	...	...	2,500	"
1 Bench drill	...	...	60	
Grinding head	...	...	350	
1 Die machine (pipe)	...	...	500	
1 Metal saw (power)	...	...	250	
1 Milling Machine	...	...	4,000	
1 Anvil	...	...	75	
6 Bench Vices different size	...	...	200	
1 Set pipe taps and dies	...	...	250	
1 Set bolt taps and dies	...	...	100	
15 Hammers, 4 Sledges, 3 pipe wrenches, hand vices, clamps, dogs, tool holders, machine accessories, hacksaws, chucks, levels, sets of drills, large and small spanners, calipers, squares, files, hand emery stones, and other miscellaneous tools	...	...	1,500	
			<hr/>	
			Total Rs	
			...	22,585
				<hr/>

Blacksmith Department :—

Power fan and installation	...	...	1,000
Forges, sight building	...	...	400
Anvils—force	...	...	300
Block, benches, cutters, chisels, tongs, hammers, punches, etc.	...	...	750
			<hr/>
			2,450
			<hr/>

Power Department :—

20 M. P. Engine	...	...	5,000
Tanks and installation	...	...	1,000
Shafting to drive machines	...	...	5,000
Belting	...	...	2,000
Countershafting	...	...	3,000
Total Rs.	...	...	<u>16,000</u>

Motor Department can be equipped with pit, jacks, tools and other accessories for about Rs. 1,500. This will form only a beginning. Machine shop tools can be used for this department.

Buildings to house and godowns :—

Building 30 ft. wide, having 13,000 sq. ft., floor space.—

Floors at Rs. 15-0-0 per 100 sq. ft.	...	1,950	
Walls at Rs. 45 per 100 Cubic ft. lime used.	Mud walls at Rs. 30	...	5,940
Roof trusses and labour at 75 per 100 sq. ft.	...	9,750	
Roofing corrugated at 38 per 100 sq. ft.	...	4,740	
Total Rs.	...	<u>22,380</u>	

Summary :—

Building	...	...	22,380
Drawing Department	...	...	1,331
Carpentry	..	...	9,610
Machine shop	...	...	22,585
Blacksmith Department	...	...	2,450
Power Department	...	...	16,000
Motor	..	...	1,500
Total Rs.	...	...	<u>75,856</u>

By watching the market, taking advantage of sales and good second hand equipment, making some equipment, using second grade buildings and bargaining, the initial cost can be reduced as much as 1/5 of the above total. The estimate is not accurately figured for each piece because the market prices vary so much. The average has been aimed at.

Hostel buildings would be extra at above rates.

Note:—This estimate is not the actual or accurate cost. Some of the prices are catalogue prices and machines could probably be purchased at discount prices. We have however taken what we consider to be the average price for such a machine in India. In some parts it would cost more, in some parts it would cost less. I feel quite sure that at least an initial investment of Rs. 60,000 would be necessary for beginning a school like this not including hostel accommodations. To this capital investment would need to be added other machines as the school found necessary."

B.

Rural Industrial school Asamgarh, U. P. statement of cost, recurring and non-recurring :—

I. Hostel and School accommodation.

Non-recurring :—

Cost of Dormitory and Housemaster's quarters	...	...	4,500
Cost of building for School and "church"	...	...	3,750
Cost of school-master's house	...	...	2,250
			<hr/>
Total Rs.	...	...	10,500
			<hr/>

Recurring :—

Cost of maintenance of 40 boys @ 7-8-0	...	...	3,600
Salaries, housemaster and schoolmaster @ Rs. 50 per mensom each	...	...	1,200
			<hr/>
Total Rs.	...	...	4,800
			<hr/>

II. Carpentry School.

Non-recurring :—

Cost of building, 30 ft. by 16 ft.	...	450
Cost of outfit	...	500
		<hr/>
Total Rs.	...	950
		<hr/>

Recurring :—

Master's salary at 25	...	300
Wages, 5 students at 8 per mensom	...	480
		<hr/>
Total Rs.	...	780
		<hr/>

III. Weaving School (not in existence at present)—
Probable estimate.

Non-recurring :—

Cost of building, 30 ft. by 16 ft.	...	450
Cost of outfit, any four looms	...	300
		<hr/>
Total Rs.	...	780
		<hr/>

Recurring :—

Salaries of students 4 at 8	...	384
Master's salary	...	300
		<hr/>
Total Rs.	...	584
		<hr/>

Note.—No allowance is made for repairs.

C.

Industrial school, Benares capital expenditure :—

Shed, Tiles, etc.	...	...	4,500
Rooms for office stock, polishing and Class rooms	...	...	7,500
Timber Godown	...	...	1,500
Master's house	...	...	2,000
Hostel for 40 boys	...	...	15,000
Tools (spread over several years)	...	...	4,500
Stock (& Reserve Fund)...	...	...	5,000
			<hr/>
Total Rs.	...	...	40,000
			<hr/>

Annual budget :—

Head Instructor	...	...	750
(Rs. 60 p.m. plus Prov. Fund)			
Second Instructor	...	...	500
Polisher	...	...	360
Cane worker	...	...	300
Smith	...	...	360
Clerk and Time-keeper	...	...	500
Servants (Chaukidar etc.)	...	...	150
Drawing Master (part time)	...	...	180
			<hr/>
Total Rs.	...	...	3,100
			<hr/>

(Note.—The Missionary Superintendent's salary is not included).

Material	...	...	3,000
Renewal of tools	...	...	400
Stipends for 40 boys	...	...	3,840
Taxes, etc.	...	...	240
Drawing Class and other Classes	...	...	240
Tool Fund	...	...	480
			<hr/>
Total Rs.	...	...	8,200
			<hr/>

GRAND TOTAL ... 11,300

The proceeds of work done should cover the cost of material and of stipends, *i.e.*, Rs. 6,840, leaving a net cost of Rs. 4,500 plus the Missionary salary plus a further Rs. 1,200 for deficit on the boys' hostel.

Note:—Such a School could act as agent for a firm as the Industrial School at Tumkur, Mysore, acted as agent for the Basel Mission Tiles.

On the whole problem, the Conference was aware that the conditions under which Christian Missions and Churches are now working are such that the prospects of large financial extension are somewhat remote. At the same time the Conference considered that the place of industrial education in the whole scheme of Christian education in India is important and inescapable. It was felt that Mission Boards and Church Councils ought to give definite consideration to the place of industrial education and should regard it as having a certain claim on their financial resources. Several members considered that funds could be raised in the West for such work which might not be available for other objectives. All considered that by a careful study of the situation, by co-operation between different Missions and Churches wherever possible, and by the economical and wise development of existing schools great advances might be made without much additional outlay.

The following resolution was passed :—

Finance.

Pupils during the earlier stages of learning a trade cannot be self-supporting and therefore no institution in which a real training is given can be financially independent. But in an industrial school every effort should be made to ensure that the conditions of work during the course increasingly approximate to the actual conditions under which the pupil will eventually have to practise his trade.

The Conference has given careful consideration to the cost of industrial education, and includes the costs of three typical schools in its report. It urges missions and churches to revise their attitude towards the subject of industrial education, to regard it as having a claim on Christian resources not less than other departments of education, and to make regular and increasing provision for it, both in money and in personnel.

VII. INDUSTRIAL TRAINING FOR GIRLS.

While the women members of the Conference took part in all the meetings and a large part of the discussion at the Conference affected equally the education of boys and of girls, special attention was given to the problems peculiarly related to girls' education. There was a general feeling that specific industrial education occupies a very minor place in the case of girls, and that by far the most important consideration is the provision of good manual training in primary and middle schools. The great mass of girls in our schools marry, and the main objective of the school should be first to see that their education is sound, which means that there must be an adequate element of manual training, and secondly that when the time comes for more definite "vocational training" it should be related to the work and necessities of domestic life and the maintenance of the home. In Rajputana Mr McLeish stated that all girls who proved unsuited for the pursuance of literary education were at the end of the higher primary stage drafted into a supplementary class where the main subjects of instruction were practical, including the usual girls' handwork, domestic work in all its branches and domestic hygiene. Similar evidence was given from other schools. It was felt that the urgent problem is the development of manual training in the Primary and Middle Schools, and the Conference heard with pleasure that a special intensive course of two weeks has

been arranged to be held at the Allahabad Agricultural Institute in the latter half of October, 1924, for women teachers in Girls' Schools.

VIII. THE NEED FOR A SURVEY.

As the members of the Conference faced the thorough consideration of the problems involved in industrial education, they were confronted at every turn by the lack of thorough and accurate knowledge of the economic background of the entire subject. It was felt that not only does there exist no thorough and reliable survey of what is done by Missions and Churches in the matter of industrial education, but that development of policy should be dependent upon and follow after a study of the facilities offered by Government in the matter of industrial education, and still more upon a study of the economic tendencies in the country in their relation to the life of the Christian community and the outlet and market for the labour of the Christian workman. Mr. B. T. Badley, the educational adviser of the Methodist Episcopal Church, urged that such a survey should be undertaken, and felt that all the problems relating to the location of schools, the provision of markets, the selection of places where co-operation might be undertaken, etc., etc., depend upon such a survey first being made. The Conference all through its discussions was conscious that the beginnings of industrial education as undertaken by Christian Missions had very often been thought out not in relation to the economic forces dominating the life of the District or Province, but in relation to some particular need of the local Christian community, e.g. the provision of work for orphans. There was a strong feeling that the next stage of Christian industrial work demands a careful study of the economic and industrial situation of the country and the relation of Christian industrial education to it. The Conference expressed the hope that the Provincial Christian

Councils and the National Christian Council would endeavour to accomplish this work and resolved as follows :

Survey.

The Conference considers that in order to assist Missions and Churches in forming decisions as to the places in which industrial training should be developed or strengthened, it is necessary that a thorough survey of the ground should be made, including all existing Christian institutions for industrial education, their success and failure ; the facilities for industrial education and the training of teachers afforded by Government ; the economic needs and tendencies of the country so far as they bear on this subject ; and urges that such a survey should be undertaken by the National Christian Council.

In connection with this may be mentioned the vigorous feeling that much more should be done to provide hostel accommodation in the large industrial centres for young unmarried Christian workmen. Several members of the Conference spoke with feeling of the conditions known to them to prevail in the large industrial centres where Christian boys and youths, many of whom had passed through Christian Industrial Schools, are living and working in deplorable surroundings. It was felt to be within the power of the Christian bodies to establish hostels by co-operation. Moreover, instances were adduced of actual facilities being available for Christian boys in the way of scholarships which were unknown to Christian Missions and Churches in the neighbourhood, and it was urged that the Provincial Christian Councils might, each within its own area, become acquainted with and publish such facts, as also information as to regions where Christian workmen were particularly welcomed. Interesting and conflicting evidence was given from different parts as to the willingness of employers and commercial concerns to accept Christian workmen.

IX. THE FUTURE.

The Conference was acutely aware that it was predominantly a body of Missionaries and that Indian opinion was very poorly represented in the gathering. This is a reflection of the fact that, as with the development of Agriculture, comparatively few Indian Christians have yet assumed places of responsibility in the establishment and management of Christian Industrial Schools. It was felt that the hopes of the Conference that industrial education might be lifted in general estimation, and might become a worthy and honoured part of Christian education, depend for their realisation entirely upon the degree to which the cordial assent and support of the Christian community is given. It is recognised that among many of the leading Indian Christians in the country there is a prejudice and dislike towards existing industrial schools. Such men do not desire their own boys to go into mission industrial schools. Partly this is due to reasons already stated—the Industrial Schools have not infrequently arisen in order to provide especially for orphan children or those who showed no aptitude for any intellectual studies. No one can overlook the practical necessities which have led to such enterprises being undertaken, but there is no future for the Christian Industrial School unless it can appeal, and afford a worthy education, to boys of ability. The attitude of Indian Christians was felt in some cases to be due not merely to the causes just mentioned, but to an undue emphasis upon literary studies, and it is earnestly hoped that a study of the economic potentialities of the Christian community and the necessities by which its development must be governed, may lead to an enthusiastic support for an improved industrial education, in which gradually the leadership will pass from the Missionary to the Indian Christian.

All the members of the Conference, at the close of their days of thought and prayer together, were deeply convinced of the immense importance of the matters which they had been brought together to discuss. For good or evil, the industrial development of India has come to stay, and no man can arrest it. The members of the Conference were all acutely conscious of the terrible evils attending upon the progress of industrialism in Europe and America. There are already signs in India, as there are in China and Japan, of the many ways in which the same evils will manifest themselves here, and in a country where there is an almost unlimited fund of labour, where living is at a low level and the corporate organization of the workmen almost nil, the opportunity for abuse is only too obvious. It was felt that one of the objectives which should be steadily kept in view by the Christian forces in India should be the application of Christian principles to industrial conditions. We are concerned not merely with the equipment of a certain number of Christian boys and girls, but with the establishment of Christian standards in the country, and it may well be that one chief effect of Christian activity in the industrial sphere may be the opening thereby made for influencing the industrial development of India and for witnessing within it to the moral standards which the Church has learned from Christ and to which, though all too feebly, it has witnessed.

The work done by the Conference is in the nature of a survey of the problem and a statement of the main lines along which investigation should be made, and the principles, which so far as our present knowledge avails us, should be followed. It is the earnest hope of all the members of the Conference that by co-operation between all the Churches and Missions in the country this work may be carried on to greater and fuller development.

RECOMMENDATIONS.

1. Importance of Industrial Education.

The Conference records its conviction that the present time is one of critical importance in the development of industry in India, and that the great amount of public attention now directed to the subject demands that the Christian Church should face with a new seriousness its responsibility and opportunity with regard to it. The Conference has observed that industrial education, as carried on by Missions, has too often been confined to the succour of orphans or applied to pupils who have shown no aptitude for other types of training. It has not been regarded as a legitimate and indeed a necessary part of Christian education. The conference considers that it is the duty of the Churches and Missions in India to do all that lies in their power to advance Christian standards in industrial life and to enable Christian boys and girls and men and women, to take a useful place in the growing industrial life of India.

2. Definition of Industrial Education.

The distinctive function of Industrial Education is that of trade teaching, i.e. the preparation of boys and girls for specific occupations, so far as possible under conditions which will enable them to take their places, in due time, in the industrial life of the country, whether in the village or in the city.

3. Importance of Manual Training.

The foundation for Industrial Training must be sought in the school or schools through which the pupils have already passed. A pupil who has had no manual training, and has not learned to use his hands, is at a serious disadvantage in learning a trade. We consider that the greatest obstacle to the improvement of industrial education lies in the nature of the curriculum of the ordinary Indian primary and middle

School, which gives no opportunity for the development of the wonderful manual aptitude found in so many Indian children. It is essential, both from the point of view of pure education and as regards preparation for later vocational training, that in the primary and middle school educational handwork should find an adequate place.

4. The Community Middle School.

The conference considers that the Community Middle School, whether urban or rural, should be the place where a child's natural ability is tested, and from which he is passed on to some specialised training, for instance, agriculture or teaching, or, in the case now under consideration, industry.

5. Age for beginning Industrial Training.

It is generally held that pupils should not devote themselves to specifically industrial training before the age of thirteen or fourteen. By that time the average pupil should have passed the second class in the middle school, but it will frequently be necessary for pupils who have only reached the upper primary standard by the age mentioned to pass direct to the industrial school.

6. Curriculum.

The task of drawing up curricula for the industrial school is one which needs the attention of experts, conversant both with sound educational principles and with the nature of the several studies and processes required. The Conference urges the National Christian Council to take steps to secure that such detailed curricula may be prepared.

It is, however, convinced that two **types** of industrial schools may usefully be defined:—

- (a) The first looks towards the village needs and industries, and should be located in rural areas.

It will teach such subjects as weaving, the manufacture of clay products, cane and bamboo work, leather work, rope making, village carpentry and blacksmithing.

- (b) The second type looks towards the trades and industries of the city and the developed industrial regions. Schools of this type will teach such subjects as the following:—Carpentry (including cabinet and pattern making), blacksmithing, fitting, motor mechanics, work in sheet metal (including copper and brass), foundry work, engine driving and printing. It is not suggested that all these subjects should be dealt with in each school, but that a selection should be made in accordance with the needs of each district. The curriculum should include mainly work at the trade but time should be devoted to drawing, book-keeping and mathematics related to the work in hand. In some areas it may be advisable to give some instruction in English by the direct method. Whenever possible, business methods, related to sales, purchase of materials, etc., should be taught.

7. The Procuring and Training of Teachers.

Teachers for industrial schools should have passed through the full practical course in a school of the type, whether looking towards village or urban industries, in which they are to teach, and should in addition receive teacher-training, not of a merely general character but related to the industrial subjects they will have to teach. In view of the scarcity in India of persons, whether Indian or foreign, who have experience in training teachers of industries, it is highly desirable

that institutions for industrial teacher-training should be on a co-operative basis. In several places excellent Government industrial training institutions exist, and Missions should wherever possible make use of these.

While we recognise that many industrial schools owe their inception to the enterprise of the evangelistic missionary, we consider it necessary for permanent success that the supervision of industrial education should be continuously in the hands of those who, whether foreign missionaries or Indian Christians, are properly trained for the work.

8. The following up of Industrial Education.

It is essential that the pupil shall be trained in an atmosphere of real work, that he shall remain long enough to be adequately trained and not leave the institution as soon as he has begun to acquire a small market value; and that he shall be equipped on leaving with a sufficient capital in money or tools to enable him to start life for himself. Our report contains examples of ways in which these ends can be achieved. The institution of the "finishing school" seems to us to offer an excellent means of advancing these ends.

It appears to us that the reasons urged against the conduct by missions of industrial commercial concerns, apart from industrial education, are very strong. (We do not include the very special case of Mission Presses). There has rarely been a continuous supply of expert management. There is a grave danger of creating and continuing in the Christian workman the spirit of dependence upon the Mission, and further, of engendering a Christian caste, segregated from the currents of national life. All assistance should be given to trained pupils to set up in business for themselves.

9. Hostels in Industrial Centres.

The Conference desires to draw the attention of Missions and Churches to the great need for hostel accommodation in the large industrial centres for young unmarried Christian artisans, including many who pass through Christian industrial schools, and urges that steps should be taken to provide such hostels, where necessary, by united action.

It is further suggested that steps should be taken by the Provincial Christian Councils to arrange for information as to places where Christian workmen are welcomed, and as to facilities for scholarships, etc., for Christian boys in industrial schools, to be made generally known.

10. Special Courses.

Steps should be taken to arrange for special courses (which might be short and intensive) in the manual arts to be given to the women teachers in girls' schools.

(Note. A course of two weeks has been arranged to be held at the Allababad Agricultural Institute in the latter half of October, 1924.)

11. Survey.

The Conference considers that in order to assist Missions and Churches in forming decisions as to the places in which industrial training should be developed or strengthened, it is necessary that a thorough survey of the ground should be made, including all existing Christian institutions for industrial education, their success and failure; the facilities for industrial education and the training of teachers afforded by Government; the economic needs and tendencies of the country so far as they bear on this subject; and urges that such a survey should be undertaken by the National Christian Council.

12. Indian Christian Co-operation.

This Conference, composed in the main of missionaries, records its conviction that the advance in industrial education which it desires, can only be achieved if the Indian Christian Community is heartily convinced of the wisdom of the plans proposed and if its co-operation is given. It observes with pleasure the opinions recorded by representative Indian Christian Conferences in favour of an extension of industrial education, and trusts that the present prejudices against industrial training, some of the reasons for which have been already admitted, may vanish.

13. Finance.

Pupils during the earlier stages of learning a trade cannot be self-supporting, and therefore no institution in which a real training is given can be financially independent. But in industrial schools every effort should be made to ensure that conditions of work during the course increasingly approximate to the actual conditions under which the pupil will eventually have to practice his trade.

The Conference has given careful consideration to the cost of industrial education, and includes the costs of three typical schools in its report. It urges missions and churches to revise their attitude towards the subject of industrial education, to regard it as having a claim on Christian resources not less than other departments of education, and to make regular and increasing provision for it, both in money and in personnel.

14. Christian Ideals in Industry.

The Conference considers that the contact of Christian Missions with the industrial life of the country should have as its final end the application of Christian principles to

industrial conditions and the avoidance of the failures of the West; and it holds that one value of Christian activity in industrial education is the opening thereby made for influencing on the social side the new industrial development of the country.

15. The Future.

The Conference considers that this meeting marks only the beginning of the work that is needed in the field of industrial education, and urges upon the National and Provincial Christian Councils that they should apply themselves to the problems involved, both by carrying out the survey already mentioned and by aiding the Churches and Missions to make plans in co-operation with one another and where possible with Government and other agencies, for energetic action along the lines indicated in these recommendations.