THE ADAPTATION OF A CURRICULUM TO THE ENVIRONMENT OF A SCHOOL

AN EXPERIMENT AT JACK'S MILL SCHOOL

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If the whole purpose of education is the forming of good persons, then it is the duty of those responsible for education to see that this is done, no matter what the circumstances and the conditions which surround children. A theorist cannot go ahead with experimenting and making concrete his ideas with all children, regardless of the different environments. While not departing from the basic fact that each child is an individual with a right to assert itself and that all opportunities should be taken for boys and girls to develop their originality, their initiative, their special interests and abilities, yet we must also study the environment in which the children find themselves.

It is because of the different types of surroundings in which children live that there must be constant adjustments in the process of educating children. Notice must be taken of the district in which they live, of the type of work and the possibilities which exist for the children to develop themselves.

While an understanding of home conditions is of great use to the teacher of children who live in towns, it is of

inestimably greater use to the teacher of country children. There are greater handicaps in the way of those who are not able to continue their education at Secondary Schools because of distances and travelling difficulties. It is therefore the task of the teacher in a country school to make the fullest possible use of the few years at his disposal in making education a preparation for citizenship and life, in believing, as Dr. William Boyd says, that the basis of good education is a right attitude to the child as a person in the making, and since education is growth, giving him the zest to go on growing.

But, as Dr. Kandel has written, education must be adapted to the abilities and capacities of the pupils who receive it. Before any attempt can be made to teach children therefore, we must understand the environment which plays such a large part in determining, not their abilities and capacities which are inherent, but the chances that the children may have of developing those abilities and capacities.

Let me take a school in a district where it would be criminal to shut one's eyes to the conditions prevailing. An understanding of the environment and its effect upon the lives of the children is more than necessary. It would be like trying to swim the Tasman Sea before knowing how to swim.

THE DISTRICT.

Kotuku is a typical Westland saw-milling village. Everything in it is centred on the mill, as all the men in the district except one farmer look to it as their means of livelihood. The men are of a shifting, restless type, drawn towards work in

the mill by the high wages. It is for the most part unskilled labour. The only positions requiring any degree of skilled labour are those of the engine driver and boiler attendant, and even for these only low certificates are required. Certainly sawyers and tailers-out need some degree of skill, but that is supplied by experience and no training is needed.

A large amount of improvidence prevails, doubtless due to the type of men employed. No function is ever held unless directly after pay day. The chief amusement is spending the evenings at the hotel, four miles away. Once a week there are films shown at the local hall, to which all, even infants, flock. There is no library and few books in the homes, the main reading matter being the daily and weekly newspapers.

In the field of sport, there is a tennis club, but apart from a few playing tennis, the majority seem to like being spectators, especially at race meetings. There is a tremendous amount of gambling and betting, the hotel being the centre of such activities.

As for the homes, they were not cheerful to behold. The houses belong to the Mill Management, and as there was no incentive to improve them, they were generally unpainted with no gardens. There could not be the pride and satisfaction of looking after one's own property, and no well kept houses and gardens to act as examples and spur others on.

Among the women there was also apparent that "Don't care

about tomorrow" attitude found among the men, but not to the same extent, as the women found interests in their families. There was a lamentable lack of knowledge about food values and child welfare. A Women's Institute did attempt to improve matters, but was not a powerful enough force to shake some of the women out of their apathy and make them think.

The attraction of staying in the district and working in the mill lies in the high wages offered. A boy straight from primary school at 14 years of age immediately earns 14/- a day, while if he does a man's work he receives 20/- a day, with the prospect of frequent overtime in addition. True, there is a certain amount of risk as in tailing out and in bush work, but the high wages should not be put forward as an inducement for boys to leave school.

More so, perhaps, than in any other occupation, is the work unsuitable for young boys. The constant lifting of heavy weights gives stooped shoulders and makes old men out of boys. On all sides there is evident the deformity among the older men who started in the mill as boys.

There are also disadvantages in that the boys have had little experience in handling money and have not learned to save. There is also the attitude "Easy come, easy go" and the boys are quickly attracted to the hotel.

As for the girls, the general attitude is given in the words of one who when asked what she was going to do when she left school, replied "When I leave school I am going to hang around until I get married".

THE PROSPECTS OF FURTHER EDUCATION

The nearest secondary school is a train journey of 21 miles away. The village itself is more than twenty minutes' walk from the railway, and the train service until recently, ran in a very unsatisfactory way. The children had to leave home before 8 a.m. but could not take lessons in class till 10.30. They had to wait till 4.30 p.m. for the return trip and reached home at 6.30. It made a very long and boring day for the children who disliked the trip immensely, and the parents were therefore loath to send children to a secondary school. As the parents were mostly of an improvident type, they were not prepared for the outlay of boarding their children at school. Of a survey of those boys and girls who did go to secondary school, nearly all spent one or two years and then came back to the mill or home, while about one in fifty spent more than that time.

The train trip and seeing other boys flaunting money were inducements to leave school. Even the rare parents who wished their children to continue, mostly had to give in. The girls, too, envied the stay-at-homes.

The result was that the boys and girls tended to leave primary school, have no further schooling and become members of the army of unskilled workers, drifting from occupation to occupation, and being the first to suffer when times were hard.

WHAT HAPPENED TO THE CHILDREN

In the five years before the first attempt was made to interest them to continue further schooling or encourage extra interests, this is what happened to the boys and girls who left

primary school. More than half the girls did not go to any secondary school but helped in their own homes and with other families. One went as far as becoming a nursing aide in a nursing home. Of the few who went to a secondary school, not one stayed there for more than two years, coming back to a purposeless life in the village.

Of the boys, all except two went the usual way. Most went immediately into the mill as soon as they had gained their Proficiency Certificate or were 14 years old. A very few went to a secondary school, but did not stay more than one or two years. One did try to get into the Navy, but his standard of education was too low. Of the exceptions, one decided, after trying out work in the mill, that a trade represented more security, and apprenticed himself to a carpenter. The other exception was a boy of undoubted ability who won a Christ's College Scholarship. This boy has ambition, but his parents have hindered by not wanting him to be away from home, and he had to put up with daily travelling to the Technical School in Greymouth instead.

Thus of all the girls and boys who have left school, only one has continued his Secondary course long enough to be of any use to him, and one more has been interested enough to see that prospects in the mill will not always be rosy.

THE PROBLEM.

For the boys what was to be done in the matter? It was essential to get these boys out of the drifting to the dead-end work in the mill. But how to reverse the natural tendency of going where money was easily and quickly earned? It seemed useless

to try and explain to the boys or to expect the boys to think out their future position.

The aim seemed, therefore, to seek to interest the boys in other occupations, to find out their skills and discover their real interests. From there, the boys might be led by their interests to think out things for themselves. Even if still destined for work in the mill or in the bush, the boys would be given the chance to develop their skills and broaden their interests which would make for the boys' own better development and offset the narrow stultifying interest of the mill. One of the main troubles with the mill-workers was that once the mill whistle blew in the evening, the men seemed lost. There had been nothing done in educating these men for leisure, and it was really only education for leisure which these men should have had.

For the girls, the problem was how best could they be interested in making their lives of some value. They tended to carry on the same practices in the home as their mothers did, regardless whether they were good or bad. Early marriage was the rule, and the girls, like the boys, did not have interest enough in other activities.

HOW THE PROBLEM WAS TACKLED.

It was obvious that the school would have to supply in its curriculum much more than the three R's, and a dabbling in history and geography with a little drawing as an extra.

This primary school would have to take all the advantages that a secondary school can give and try and apply them. It would have to introduce a tremendous number of activities whereby the children could discover fresh and new interests. It would teach

the children how to make their lives for themselves by weighing up the advantages and disadvantages of different occupations.

But how could a small country school of 40 odd children with two teachers accomplish what high schools and technical schools with their variety of courses attempted to do? It was obvious that some subjects of a secondary course would have to be ignored and only those which would be of most value incorporated. The question was which would be of most value. Intelligence tests had shown that the average Intelligence Quotient was low; indeed, most of the children were barely average or below, while a very few were above average. It would not have been of any use trying to fit the boys and girls out for any classical career. What was wanted was a course to find out skills and interest them in occupations first of all.

It was decided to make the school work as practical as it could be made. It was suggested, and the children enthusiastically took up the idea, of building their own house, though at that time the children had no idea of the purpose behind it. This was to give the training in various forms of handwork that would be of the utmost importance in letting the children develop themselves. It was not to be just manual labour for boys, but a definite training in all the processes required for the building of a house, and for the girls a very practical application of the arts and crafts necessary for the furnishing of a house.

All the school work wherever possible was correlated with work on the "bungalow" as the children termed the house. It was rather amazing the amount of correlation that proved possible.

Each new process brought up new points for class study and application. It seemed almost incredible that the large amount of skill and useful information incidentally gained could have been acquired in three years.

It is impossible to go into full detail of everything learned through building the bungalow, but it had influence on work throughout the whole school.

First there came the modelling in plasticine, and building with blocks of the children's own ideas of what they should like in the way of a house. Discussions as to the suitability followed and the best one chosen.There were talks on direction of prevailing wind, kind of soil, drainage, and all the points that must be taken into consideration before a house is built. By this time the children were so fired with enthusiasm that they thought of some wonderful schemes, some practical and others not so, such as harnessing the creek to provide their own electricity supply. Unfortunately, though the boys were keen to learn the elements of electricity to carry this out, the Power Board decided against the proposal.

Then came the plan of the house. This involved borrowing of blue prints from many sources and learning how to make plans,and measuring of all kinds had to be taken up. This work fitted in admirably with English and Arithmetic work in the class-room.

One by one all the processes involved in the building of a house were studied when the need for them was apparent, not just to the teacher, but to the children themselves. The children were keen to learn so that they could get on with the house and

where interest was, there needed only a little practice to perfect. Measuring iron, timber of all shapes and sizes, learning to saw straight, to plane, to hammer in nails without splitting wood, to solder, to make cement and lay bricks and tiles, were a few of their many activities. It was not all straight-forward. For instance, there was the awkward time when the boys were mixing concrete for the chimney block and ran short of shingle. There ensued some anxious minutes with the boys frantically trying to keep the concrete from setting with wet sacks. It was from experiences such as this that the boys learned more than even a text-book could teach them. Girls helped where possible in the lighter parts of the work such as hammering, and left the rougher work to the boys, but all took part in the written work required. There gradually grew a large amount of correspondence as the children had to write to business houses and order the materials they needed. Side by side with this, the children had to learn how to handle accounts. A certain amount of book-keeping therefore was introduced, very elementary book-keeping certainly, and not notorious for its dryness as it is in secondary schools. Behind book-keeping, letter-writing, and all classroom-bungalow work, there was the vital interest to motivate everything.

The building of the house had its influence on other subjects besides those dealing with manual dexterity. The children had now something about which they could talk as they were sharing in making it. There could no longer be dumb children as each child had handled tools and created something new. It was no effort for a boy to give an impromptu talk on "Building a Chimney".

If technical names had been necessary he would have learnt them, but only if learning them had assisted him to gain knowledge of a process. Thus he would be able to give a lucid, intelligent account of some process he had assisted in. Daily contact and familiarity had taught more in a few weeks than months of text-book study would have done.

The girls, too, learned many new processes in handwork designed to make them feel creative ability and to train them in arts that would later be of benefit to them in their own homes. They began on the furnishings and equipment for the house. Here was a tremendous field to start on. Towels, curtains, sheets were only some of the many articles required. In addition there were carpets for the floors. As with the boys, there was interest to spur on the girls. Even the long hem on a sheet was not such a drudgery as it would have been if there had not been a purpose behind working on it.

The opportunity for art lessons was in evidence all the times there were colour schemes and arrangement to be considered. The children found many opportunities for design in carpets, curtains etc. Each child made a design and the whole class selected the best. The interest was apparent in the keenness of the pupils to use every available minute of their own time in designing patterns.

The building of a bungalow furnished many and varied problems to the children. In ordinary class work problems are mostly presented out of the blue, but problems here did not have to be suggested. The children came right up against them. Then came the children's own suggestions as to how they would tackle

them, and actual experiments by the children themselves. There still had to be explanationsas to the operation of tools and processes to avoid loss and destruction, but it was given only when the children saw a meaning for them.

The first year 1938 saw the completion of the framework of the bungalow, the roofing with iron, the chimney built, window frames made and fitted and the flooring roughly fitted.

WHAT THE FIRST YEAR TAUGHT.

The first year of the child's activities centred about the bungalow - taught many things, chief of which was that the children were vitally interested in this product of their hands. It was not merely a temporary interest in something which was different from any schoolwork that they had had before.

The school time directly spent on the bungalow was two afternoons a week. These were labelled "Centre of Interest" periods. In addition there were the ordinary times for English - written work and oral expression, arithmetic, arts and crafts, in which everything possible was centred on the bungalow.

School hours, however, were not long enough for these children. Many, especially the older ones, gave up much of their own time for work on the bungalow. During the summer time in the evenings some were soon back again after their evening meals. It was no uncommon sight to see them working on Saturdays also.

The success of this first year was an encouragement to continue with the scheme and, indeed, to extend it further. The lessons learnt were that every child, boy and girl, enjoyed this

enlarged curriculum and put more time and interest into it than in purely academic subjects. It was proposed to the girls and boys leaving Form II that those not going on to a Secondary School, should continue at Primary School and study a special course. For the boys there was to be a practical course centred on the bungalow. It was to include arithmetic, algebra, geometry, book-keeping, elementary chemistry, English literature, letter writing, drawing, singing, history and practical building. For the girls it was proposed to run a home science course with special emphasis on the domestic arts. With the boys they were to have arithmetic, book-keeping, English literature, letter writing, drawing, singing, history and physical instruction, but they were to study as well cooking and nutrition, elementary home science, housewifery, house decoration, sewing, crafts and dress-making. In addition, both girls a nd boys were to study First Aid, while the girls were to have Home Nursing too.

THE SECOND YEAR.

In February, 1939, there came back the two girls and the two boys who had been in Form II the previous year and another girl who had left school for one year. She had followed the usual course, but was intelligent enough to see that staying at home was merely wasting time and would get her nowhere. This girl wanted to be a nurse and indeed showed an aptitude in that direction, so that part of the course was designed to suit her.

There followed a year, which benefited everybody, pupils and teachers alike. There was so much to learn by both sides.

The boys learned the various processes in building a house - bricklaying, the chimney was built entirely by the boys; painting, while a painter was painting the school and could help the boys; plumbing which was supervised and passed by a master plumber as the law demanded, but would have been satisfactorily done without supervision. Then there was putting in the electricity. While not doing the actual wiring the boys looked on at the process and fitted up conduit pipes and did everything that they could possibly do. There were window frames and door frames to be fitted and cupboards to be made. The boys found that it was not all straightforward, and that practice and experience were often necessary before a task could be accomplished. For instance, in hanging a door, the boys found that they had to find out for themselves just exactly what they should do. Advice and text-books helped to prevent waste which might be caused by use of the wrong methods, but personal experience was necessary before perfection could be attained.

Mathematics and chemistry courses had been prepared so that the boys could understand the various steps in their building work, e.g. the work of acids was necessary when the boys were dealing with the action of muriatic acid when soldering, and a knowledge of angles when marking timber for sawing.

The girls studied their home science subjects in a very practical way. The children had been presented with an electric range for the bungalow and while at first this had to be set up in the school until the wiring was completed, it proved very useful.

The girls were given practical lessons in cooking and from the very first they were given complete responsibility for the oven. With bigger groups in manual training centres, the teacher has always been in charge of the oven and the girls have thus missed the most important part of the process - the actual cooking. Side by side with practical cooking went the study of nutrition and food values. The senior text-book "Nutrition" by E. N. Todhunter was used and the study was given special emphasis. It was essential to give these girls such an extensive knowledge of food values that it would enable them to overcome what custom has dictated to their mothers. The usual cakes and scones and pastry ideas were discarded, while dishes with food values were prepared instead. There were milk, egg, cheese and fruit dishes and vegetable soups - all alternatives to the meat and starch policy of their homes.

Housewifery proved another fertile field of study and that girls progressed far beyond the elementary standard is evidenced by the fact that the Home Science Department of the University of Otago text-book by Balderstone was constantly used as a reference book.

The home science was also correlated as far as possible with housewifery and cookery, e.g. in the making of soaps and baking powder.

The needlework embraced many and varied objects. This post-primary group did not monopolise all the sewing for the bungalow, as the girls in the primary group were given all the

simpler articles. The girls made curtains and cushions, sheets and pillowcases, bedspreads and even wove blankets. All the older children joined with making the carpets and weaving blankets.

Then, too, there was plenty of opportunity for art. The children worked on paintings and pen and ink drawings which were later to be framed and hung.

While there was much activity on the manual side, yet the aesthetic side of education was not forgotten. It was not enough that these boys and girls should be encouraged to interest themselves in occupations which might attract them away from the mill. Even if attracted to trades or professions, there must be more than merely economic motives behind their work at school. The most apparent fault in the district was that the men seemed to have no preparation for leisure. The newspapers, the more sensational the better, furnished the reading matter, but no attempt was made to interpret the news, nor to understand what had given rise to events. A general course, for the most part modern, of history and English literature was therefore undertaken. Formal work in English was cut out, but the pupils were expected to be able to write letters logically and correctly. Stress was laid on the pupils' ability to read and interpret the printed page. The ability to use one's own language is a qualification demanded always throughout life, and the pupils were expected to be able to speak clearly and intelligently about something they had studied or constructed.

To assist the pupils in their economic activities,

book-keeping and arithmetic were studied by both boys and girls. Correspondence was filed, copies were taken of all letters sent out (a great amount of this work was undertaken in the primary part, but all work was supervised and signed by the secondary group).

In book-keeping each pupil kept a Journal, Cashbook and Ledger and learnt how to manage accounts, a very necessary process, as the money handled by the children for the bungalow rose from £16 in the first year to over £100 in the second year.

While the secondary group was having this course, the primary group in the school was not being sacrificed. The whole school was included in the attempt to give more manual activity than the traditional curriculum gave. Everything that the younger children could do they were allowed to do, and the older ones acted as helpers and supervisors.

This working outside on the bungalow meant that the children had to be left to work by themselves. At first the boys found it difficult, and arguments soon arose, but in a short time family feuds were cast to one side as the boys worked with one end in view, that of making something with their own hands.

In the actual classroom, too, the children had to learn to work faithfully by themselves. Constant supervision was not possible when there were three, four or five separate groups working. Great use was made of the project method in history, geography and English literature, and the results fully justified its use. The children were helped in this

respect by having a well-stocked library of books and illustrations. After each phase of work, there always came the time when the children had to report on what they had studied.

THE RESULTS OF THE SECOND YEAR.

The end of the second year of this scheme found everyone still enthusiastic, and, in fact, more enthusiastic than ever. The children saw with pride that they were capable of doing more things that they had ever thought themselves capable of doing, and tackling a job for the first time presented no fears. The parents, too, saw the possibilities and were anxious to help with gifts for the bungalow and plants for the garden. There were some persons outside the district who decried the bungalow as a show piece and declared that the real school work must have been neglected. That these persons had a false idea of education as a very narrow process was quite evident. In fact, even if judged by the old idea of progress in the three R's the work of the school had not declined. Children who had transferred to other schools through leaving the district showed that they had not suffered. Some of these children were so much ahead that they were promoted to higher classes. The second year had good results especially with the Secondary group which it was intended to benefit. One boy who had found a real aptitude in carpentering was apprenticed to a builder who expressed himself as very pleased with the boy's work. The school did not stop at finding out the children's interests, but made contacts for them so that they could be led to the work

in which they were interested. Two of the girls decided to have a further year, while the other decided to go to a Secondary School.

An appeal was made to all the children that they should continue their primary schooling at some Secondary School and that to come back to Jack's Mill School was only a second best.

In this new project at Jack's Mill School the parents saw that here was something quite new, new methods, a new curriculum, and they realized that their children were getting something more than the ordinary school child. This was what they appreciated, though perhaps they did not realize the aims of this new curriculum, which according to Dr. William Boyd must take account of both social and personal needs. "One, it must prepare a person for his place in society as a worker, neighbour, parent and citizen. The other, it must provide the kind of education which yields personal satisfaction in the sphere of physical performance, in the sphere of fine things, in the sphere of workaday knowledge."

Satisfaction could be felt over this year's activities as it had accomplished much of what had been set out to be done. There was concrete evidence in that a boy had been directed away from the mill to a more profitable and interesting occupation. Another boy, too, was only waiting for his parents to live in town before he too would be apprenticed. The girls had proved that the venture had been worth while as they wished

for a further year.

The end of 1939 found the outside of the bungalow finished and the children keen to start on the internal finishings and the furniture. The bungalow was now almost two years old and every child regarded it as his property as he had shared in building it. Even the smallest five-year-old who had picked up nails or fetched a brick felt a share in it.

THE THIRD YEAR.

Prospects for 1940 seemed rosy. While there were no post-primary boys, there was a group of keen and energetic boys in Forms I and II. There were the two girls of the previous year and one more beside.

Although the outside of the bungalow had taken one year longer than had been planned, it was thought that the inside would progress at a faster rate as the boys would not be so dependent on the weather. It was a mistake that a workshop had not been built in the first place, but this handicap was overcome as much as possible by using the class room and porch.

The course for 1940 was essentially the same as for the previous year. Work on the kitchen was pushed ahead, as the girls were wanting to use the room. The girls had a real home atmosphere in which to work. Housewifery, cookery, laundry, all were combined when the girls kept house for themselves. The girls had to prepare meals for visitors, but these were always prepared with a balanced diet in view. Then too there was the training in acting as hostesses which accompanied looking after

visitors. Judgment of quantities necessary and catering was also something which the girls had to acquire through practice.

As the rooms became habitable the girls found there were many problems in keeping them clean and tidy. Their housewifery course here proved of great value, e.g. in combating stains and looking after linen.

This year saw the boys working on the finishings and here they had to learn to work with extreme carefulness and neatness. There was the making of a window-seat and china cupboards in the sitting room; there was the tiling, enamelling of the bathroom and the fitting of the bath and the basin; there was the fitting in of the sink, cupboards and bins in the kitchen and afterwards the enamelling; there was the fitting of the plasterboard in the sitting room, bedroom and kitchen, and architraves and door frames to be finished. After the plasterboard came paper-hanging, a process which the children learned could not be mastered in a few minutes. The wiring was then completed and the house, as far as the permanent fixtures were concerned, was almost completed.

As soon as it had been made possible by the completion of the exterior, a garden had been made around the house, in keeping with the garden that had been made around the school itself. This garden aimed at setting off the bungalow by the way it was laid out, and many and earnest were the discussions

before the most suitable plan was agreed upon. A kitchen garden was prepared so that the girls could use fresh vegetables in their cookery. A revolving clothesline was also constructed by the boys and placed where the clothes would receive full value from the sun and yet not detract from the appearance of the bungalow.

Apart from the manual work, a big proportion of school time was still centred around the bungalow. As the house had grown, its value had also grown. There were insurances to be worked out and the children had taken out their own insurances with approved companies. The book-keeping became more and more complicated, but with the experience gained in keeping accounts for three years, the children were not frightened of handling money.

Nor was any chance neglected of giving the children a wider basis for citizenship. The whole school from Standard 3 upwards had had Elementary First Aid, while the Secondary group in the second year had gone to the Senior First Aid Examination and passed very creditably. The girls had been given lectures on Home Nursing and were also successful in this.

During the year there had been a special dressmaking course for country women run by the Federation of Women's Institutes, and the three senior girls had been allowed to attend. To enable them to do so, the School Committee had paid

the fees for them. One of these girls who was particularly interested in art was given a special course in Commercial Art. This was a Correspondence Course set by a master in a technical school and supervised in school hours.

THE RESULTS OF THE THIRD YEAR.

After the third year one more boy had decided that he would learn a trade and had been apprenticed to a plasterer and paperhanger, a contact which he had made through the school. One girl who had wished to become a nurse was taken as an attendant by a doctor until she was of age to enter a hospital. The medical man had personally asked for this girl because he had realized her keenness and capability when examining her for First Aid and Home Nursing. Another girl who wishes to be a Karitane nurse is now waiting at home till she is old enough, but yet has a better foundation for nursing because of the course she took at school. Efforts are now being made so that the third girl who specialized in Commercial Art will be able to get a position as a Show Card writer.

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At the end of this third year of activities centred about the bungalow, it seems wise to stop and take a critical view of the value of the three years' work. This is a record of a part of a school's activities, which, or rather the continuation and extension of them, are still going on.

In attempting to get away from a scheme of learning

that dealt with subjects that came too little into relation to the common life of man and neglected those that called for creative personal work, have we gone too far to the other extreme by giving a too specialized and narrow range of subjects and a too narrow range within those subjects? Have we by limiting the subjects i.e. those centred about carpentry and allied crafts for the boys and domestic science for the girls directed their interests into channels which are not broad enough? Have we neglected to open up a big enough field wherein the boys and girls could explore and develop new interests and find out their abilities? Have we pushed them into trades and professions without giving them a chance to find out for themselves?

I think this is not the case, because the school has done the very best within the limits imposed by the necessity of running a school for all children from five-year-old upwards. It is not a Vocational School, but it has attempted to supply to the children some of the advantages and vocational guidance which a technical school or High School can give. Though the school has had to deal only with small numbers, I think that the results achieved by this extension of manual training has justified its existence. That it has may be proved by the fate of the boys and girls who have since left school after having shared in it. Those boys who would have been naturally attracted to the mill have now become attracted to trades

which will enable them to make a steady living. It is evidence of the fact that the children themselves appreciated the advantages that boys who had previously left school when they had reached the age of fourteen years returned to school again without any coercion by their parents. The girls, too, have been enabled to gain a knowledge of subjects which will be of great use to them in their future careers, and indeed, have been given the means of commencing their careers. The school did all in its power also to make sure that those children will continue to reap the advantages of this extra training by making arrangements for the children to meet master tradesmen and discuss the benefits of apprenticeship. On the other hand no boy has been forced into any permanent position simply because it has been a chance for him to get a position away from the mill.

Even where the boys have entered the mill, this extra training will be of use to them if only for the reason that they will be handy men about their own homes. They have gained a knowledge of tools and processes, which knowledge will always be of value. Besides the utilitarian value, however, there is the benefit derived from handwork in giving real control and co-ordination of muscular movements. "The fact that he is making things gives just that stimulus the child needs to enable him to keep on at the task, to repeat over

and over the same efforts of mind, hand and eye, to give him real control of himself in the process" - Dewey. The concept of education as growth is recognized in giving these children the opportunity to grow "all-sidedly" by furnishing them with the practical subjects hitherto rather neglected.

There were social values too in the building of the bungalow. The children had to learn to co-operate in their activities and slowly they learned the value of co-operation. Each part of the house depended on the way a previous part had been put together and slapdash work by one would mar the efforts of others. A boy with a special gift in one direction would be chosen to make or finish off an article, and so each child learned to contribute his special skill to the welfare of the group. In this community project also, a greater variety of processes was gained than if individual projects had been carried out. Thus was wider experience gained. Even if the sole aim had been to increase dexterity, this wider range of operations would have been instrumental in giving an allrounded dexterity.

There was, however, much more behind it all than the acquiring of manual skill. Though the boys might go into the mill, they had learnt more than merely technique - they had learnt to know themselves. By tackling problems the boys gradually acquired the ability to act for themselves and permanently gained a sense of responsibility.

Even if it was only for the purpose of giving these

boys interests for their leisure hours, the course proved itself of value. Their homes and their future homes will benefit by the boys' knowledge of practical carpentry.

The policy of making the school hours so full of interest to the children had its effect upon the district as a whole. The school became the cultural centre of the district and the people regarded it as an asset. It was an integral part of the life of the people. Any parent or other person who could give help and advice promptly offered his services, and others showered, almost embarrassingly, presents for the house and plants for the garden.

When the school had embarked on its policy of making the grounds as atrractive as they could be made, its beneficial influence could soon be seen. Gardens began to appear and some houses were painted. The district, though it could never be anything else than a mass of cottages huddled together, yet took on a brighter air. This was evident when similar mill districts were contrasted with Kotuku.

While this extension of manual training will be of inestimable value to the boys, it was hoped that that provided for the girls would be of still greater value. The girls have now a thorough foundation for homemaking, acquired through a training that was long enough to impress facts and thus impressive enough to overcome tradition.

These girls, even if they do not take up careers, will still

be competent housewives and mothers.

While the building of a bungalow was an honest attempt to get away from that legacy of the past - the purely theoretical approach to learning, and in the realisation that the purpose of education was the growth of the whole man, yet many criticisims have been levelled against the project.

Most of the adverse criticisms have been merely superficial; as none have disputed the fact that the idea underlying the construction is a sound one. Many have remarked that the children built the bungalow "only for show", but even if this were so, which of course it is not, surely the children were learning something worth-while in the process and learning to know themselves as well. Others claimed that the school wished for publicity. While at first it seemed very gratifying that the public generally, and business firms in particular, were so interested that gifts to help in the making of the bungalow were showered on the school, later it was realized that this interest had harmful effects as well. As the bungalow had become more and more known, business houses found in it an opportunity for free advertisement. Thus it was found better to discourage people from making gifts, because

of the opportunity it afforded critics to deride this school effort. It was not in the best interests of the children that they should hear these criticisms, but if it had not been for the generosity of many people these children would not have been able to complete the bungalow. The girls would have had no cookery without the electric stove, the pots and kettles, the cutlery and the dishes, with which they had been presented. The mill management had supplied all the timber, both rough and dressed, but otherwise the boys had been dependent on outside gifts - of bricks and tiles for the chimney and fireplace, of iron for the roof, of spouting and pipes, of glass for the doors and windows; of plaster board and paper for the walls, of fittings for the electric light, of a bath and basin for the bathroom, of blinds for the windows. The girls, too, had been presented with material for sheets, curtains and wool for blankets. There had been many gifts of money and with this the school had to buy all the things that were not donated such as nails, screws, putty, cement, hinges and fastenings, paint-brushes and tools of all kinds. At times the offer of gifts had been embarrassing, as some persons wished to donate objects that would not have been in keeping with the colour schemes that the children had worked out. There were gifts of ornaments when the children had intended to make their own.

Those who claimed that the school sought publicity were wrong, though it must be admitted that publicity came to

the school through the actions of outside people, and in the later stages this publicity was severely discouraged. On the other hand those who made criticisms were mostly those who criticized the work from a distance and did not understand the basic purpose.

There were those, who, while admitting that the children had learned something of value while building the bungalow, yet thought it had been a waste of time and money. They wanted to know what was to be done with the bungalow when it was finished. They did not realize that it was part of the training of the girls in their school work, and the idea of housecraft being included in the school curriculum seemed strange. The children had built for themselves what is provided for home science courses in secondary courses, i.e. model flats and houses. It provided for housecraft in a very practical way as well, as the senior girls took it in turn to sleep in the bungalow, cook their meals and look after the house and laundry.

There was inside criticisms, too, but this was the right kind of criticism. Before the building was half finished it was realized that mistakes had been made with the planning of the house. So that the building would not be too large, a plan in which the house seemed to be as compact

as possible was chosen. There was no passage way between kitchen and bathroom and to get to the bathroom one had to pass through the bedroom. By trying to make the roof space small the boys gave themselves much more work, as there was not a sheet of iron in the roof which had not to be cut. The greatest mistake was the smallness of the kitchen and at one stage it was proposed to knock down the wall between the kitchen and bathroom so as to provide more space in the kitchen. It was decided, however, to leave the bathroom as it was, because of the example to the district. Many of the mill houses had no bathroom at all, the bath being in the washhouse or the kitchen. The bathroom with its pale green tiled wallboard, fitted-in bath and basin, a rubber tiled floor, and cupboards also fitted in, was a very useful object lesson to the district.

One disadvantage was that there was no laundry and the girls found later that washing day had its difficulties.

The bungalow had been planned to be two-thirds ordinary size, but it was found that it would have been better for it to have been a full-sized house, because of the awkwardness of making smaller things.

There were minor details which were wrong too. The carpets, a big one for the sitting-room and a small

rug for the bedroom, had been designed and planned when the bungalow was first commenced. Though the designs chosen had been simple geometrical ones, it was found that it would have been much better to have had severely plain carpets because of the smallness of the rooms. This mistake, however, was instrumental in bringing home to the children the fact that overcrowding of designs and furniture is worse then too little.

THE FUTURE OF THE BUNGALOW.

Though the outside and inside of the bungalow have been finished there is still a tremendous amount that may be done. The boys have fitted up cupboards, drawers, bins, and a table which fits into the wall, in the kitchen. They have made a let-down table in the sunporch. They have made two china cabinets, a bookcase and a window-seat in the sitting-room. They have made a linen and other cupboards in the bathroom. There is still, however, the movable furniture to be made. If the children are to learn upholstering in order to make chairs, they will have plenty to learn, though they have already made a mattress and a squab for the window seat.

In the field of pottery there is a vast amount

to be done. The children will have to learn how to mould clay and make an oven to fire their pottery before making dishes for the bungalow.

There is the constant maintenance of linen supply and the problems of laundry. The kitchen is used every week and of course there is the everyday work of the house. The bungalow will be a permanent asset to the school if only because it will provide the girls with a training in housewifery and cookery.

A suggestion has been made that the Plunket Nurse use it on her monthly visit, as she would be able to work under better conditions than is available in some of the homes. A well-equipped bathroom with a supply of plentiful hot water, an open fire and good ventilation, an electric stove for cooking, should make the bungalow a good clinic.

THE INFLUENCE OF THE BUNGALOW ON THE DISTRICT.

Besides its value in impressing upon the children what is necessary to make a well-built home, the bungalow has a direct influence upon the adults. The blue and white kitchen as compact as it could be made, yet with every labour saving device possible, is an inspiration to those who labour in old-fashioned kitchens with old-fashioned methods. The bathroom is an example as it was intended

that it should be. Each room has a colour scheme and everything was made to conform with that colour scheme, from curtains to bedspreads and wallpaper and carpet in the bedroom, from walls and flooring and curtains in the bathroom, from table and linoleum in the sunporch, from electric stove, saucepans, walls, sink top, curtains and linoleum in the kitchen, and from wallpaper, fireplace, carpet, squab and curtains in the sitting room. Even the pictures which the children have drawn and painted have been framed and hung to fit in with the colour schemes.

Thus the bungalow has shown that a beautiful home can be achieved by careful planning and selection, and also that it can be run at the expense of much less time and labour.

THE INFLUENCE OF THE BUNGALOW ON THE CHILDREN WHO CONSTRUCTED IT.

Underlying all the work on the bungalow was the principle of "learning by doing", but it was not merely by haphazard manual training. All the school work centred around activities which had intrinsic meaning to the children and most of the initiative for the work came from the children themselves. Rather than making school work an accumulation of dead facts, the impulse of children towards

action was made the basis of the scheme. By acting on the idea that "the key to method and curriculum should be activity and experience, rather than knowledge to be acquired and facts to be stored", the children have gained a practical many-sided manual training. Spending so much school time on this has not, however, deprived the children of other essential subjects. The ability of the children to use their own language has indeed been increased, as the children have had to be able to speak clearly and concisely in order to give instructions to others and to explain what they have been doing.

In the specialized aspect, i.e. the desire to let the children become interested in activities which might give them an impetus away from work in the mill, the course has partly, if not fully, achieved its ends. The children who have been led into trades and professions will not regret their decisions - decisions which would not have been taken if an ordinary school course had been followed and the children's own interests had not been pursued. Since the building of the bungalow was commenced, of those boys who have left school, only one is now working in the mill. Of the girls, there is only one who is living at home and she had one year at a Secondary School.

The construction of a bungalow was only one phase

of a school's activities. It was not forgotten that the first requisite was the good health and physical fitness of the children and physical training was well catered for. Moreover, the influence of a beautiful environment in assisting the children was also not forgotten and the gardens were recognized as an integral part of the school. The building by the children themselves of something which they had designed and over which they had spent so many school hours working with one end in view, had great results, which, though not tangible, are and will be always evident. These children have been helped to realize themselves and to know of what they are capable.

As for the home science course which the bungalow has made possible, its value can never be questioned.

We have tried to make Jack's Mill School "A school which teaches children how to use the lever which has ever raised the world above itself - purposeful activity" -- Adolph Ferrière, and if the children have been helped to grow more completely, then the amount of time and energy which has been spent on manual training has been worth-while.

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