

EDUCATION *and the child*

Edited by
F.N. EBBECK and G.W. GIBSON

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F. N. EBBECK and G. W. GIBSON

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Preface

One purpose of this book is to provide Teachers' College students with some understanding of the great importance of education. If we say that education is the process whereby the skills and attitudes belonging to a particular society are passed on to the new generation it will become obvious why this is so. However, it is more than that. Education helps to preserve what is worth keeping in what people believe and do but it has also to prepare them for what will happen in the future. We need to remember that education is a process of living and learning. It includes all those experiences and influences which help to make a person what he is. Some of these we can control, others we cannot. As teachers, we can plan what students will do at school. We should remember that children spend more time out of school than in school and that they are learning *all* the time. The most important job of the schools in a developing country is to prepare their students to be ready for change—and this is not easy. In a society which is changing rapidly, this purpose of education is very important. We need to think carefully about two questions.

How can schools best do the job of keeping what is good in the past?

How can schools best prepare pupils for the sort of life they will have to live in the future?

It is not easy to provide answers to these questions. Indeed, there is no one answer that can be accepted everywhere. The amount of preserving and changing that needs to be done will vary from place to place and time to time according to the purposes and values of society. Different people have a different background of ideas, beliefs and ways of living and doing things. Because of this they do not always agree about the purpose of sending children to school. It is not the purpose of education to provide a job for people.

The change that education can bring about may not be very fast. Some people think that the schools are the main factor in changing

people. However, there is a continuous process of change in the life of any social group. This can be fast or slow. Moreover, there are many other things that cause people to change such as a war, exploration, revolution, disease, invention, religion and so on. Change in itself might not be much use at all. It might not go far enough or be the sort of change that is a useful one, for example, the case study reported on page one shows that because of the common attitudes to school education in India, more schooling for more people will not necessarily meet India's great need for increased agricultural production.

Education brings about changes and this often causes confusion. This is because ideas, beliefs and ways of living and doing things are questioned and begin to give way. Education then is very important to any country, particularly a developing country. It can help to decide how quickly a country can change by preparing young people for this change. As pointed out it can also cause confusion and problems because parents have never been to the sort of school their children are attending.

Another purpose of this book is to explain some of the factors essential to any understanding of what is meant by the process of education. It talks about children and their parents and teachers. It talks about how children learn, what makes them want to learn and how to measure what they have learned. It talks about how quick children are to learn and what makes them the sort of people they are. It talks about guiding and controlling the growth and development of children so that they can control themselves. All of this is considered against the background of a developing country, a country in which education is expected to bring about changes, a country in which there are special problems—social, economic and educational.

It is hoped that this book can be used to supplement lectures in education at Teachers' Colleges. Each chapter gives a point of view with which you may agree or disagree. You should not accept these views without question and careful thought because it is through such questioning and thinking that you will gain a clearer understanding of the process of education. Remember to ask questions and to examine the answers. To assist with this study and discussion the chapters all have questions at the beginning and the end, together with a summary.

It is hoped that as a result of using the book, those preparing for teaching will come to know their children as individuals, each one different, each one having the possibilities for growing and developing into a person who will want to make the society in which he lives a better place. As teachers we can help in this process—the process of education.

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It is suggested that the best way to use the book is first of all to read the preliminary questions to a chapter. Think carefully about them. You may like to discuss them with your friends to find out what other people think about the matters raised.

You will then be in a position to read the chapter and discuss in class what it is about.

At the end of each chapter there is a section to think about. Do just this. When you understand what one chapter is about you are ready to consider the next topic. The summaries to each chapter will help you remember the ideas presented.

G. W. GIBSON

Port Moresby

July, 1970

CHAPTER 1

Education and Modernization

CASE STUDY AND SOME QUESTIONS

'Educated boys—well, they are of no use to me in the field,' says an Indian father, referring to his own sons. 'But when I go into a government office no one will even look at me or pay any attention to what I have to say. If I take my sons with me, however, the work gets done in no time. They are useful there. That is why we are educating them even though we incur debts to do so.'

Ten boys from this village are studying at the secondary or high school and not one of them has gone back to work on the land. Even after they have completed their studies they expect to be maintained at the same standard they become accustomed to as students. One, who failed in Form IV this year and is doing no work at present, went to his father recently with a big stick and threatened to beat him unless he was given money to buy expensive shorts and shirts.

'This is our difficulty. They must have expensive (clothes) now they have become gentlemen. Please help us do something about it. With less than the money for the shorts and shirts our whole family is clothed for the year. But my son won't even look at what we wear. He wants a coat made of foreign material . . . ,' complains the worried father. Even so, he gave him the money. 'I had to—what else could I do?'

To Answer

1. What was the father's problem?
2. If you had been the father what would you have done? Why?
3. What was the son's problem?
4. Can you think of stories similar to this one?
5. Is this sort of thing common in our country? If so, why? If not, why not?

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6. Does this story raise any questions or issues in your mind? If so, what?
7. What had the students in the story gained from being at school? Had they learned anything worth while? If so, to whom?

To Think About

This problem is seen in different parts of the world but particularly the rapidly developing areas. Such problems raise many questions about what we should be trying to do and how we should be trying to do it. Why should we begin to change people through formal or school education? Who decides what changes are desirable? Is it possible to lessen many of the problems and difficulties that result from education?

Although these are all important questions, before we consider them any more we will first need to think about, and try to answer, some different questions. Then we will be in a better position to examine more closely the connection between education and development.

To Think About and Answer

1. What sort of society and country should our students be educated to live in?
2. What problems face our country?
 - social
 - political
 - economic
 - other

Make a list. You could do this individually and then discuss with others, or work in groups.

3. Do you think that a schooled population can solve the problems of a developing country like ours?
 - has education solved simpler problems in Western nations?
 - what sort of schools are expected to solve these problems?
4. What do you consider should be the aims of education in our country?

In your discussion of these questions you will need to pay some attention to the following things:

- what education is and the difference between education and formal schooling
- what development is
- what primitive or folk societies are like

- the characteristics of underdeveloped countries
- the educational problems of an underdeveloped country
- the social, political, economic problems of an underdeveloped country.

You should now study the Readings Section on Chapter 1. You might want to discuss some of the questions raised in your mind by these readings in class before you try to use them to help you answer the questions already listed. Many of the ideas included in this chapter and in the Readings have been written about by other people. Where there are well known works on the subject, and the Readings include material from these works, they are shown so that you can look them up if you want to.

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EDUCATION AND CHANGE

Education

Education is the process whereby knowledge, skills and attitudes belonging to a particular society are passed on to the new generation. This education is both formal and informal:

1. *formal* in so far as there are special institutions such as schools, staffed by people whose special work is to teach. These institutions are set up by society to achieve particular educational aims. Accordingly, the style and content of formal education is, to some extent, under control and able to be changed. This does not mean to say that it is easy to change.
2. *informal* in so far as the process of passing on is irregular or incidental, with no special arrangements within the society for passing on these things.

In a Western society, the main way in which culture is preserved is by formal education of children. In primitive societies informal education achieves the purpose. The Western type of formal education in these societies is something that has been introduced. As such it becomes a most important means of changing things because it introduces schools, teachers and teaching material not natural to the culture.

It is under such conditions of change that pressure on the individual is likely to arise. Consequently, the setting up of a formal educational system used in a Western country in a pre-literate society is likely to provoke conflict and lead to personality problems. This is because the content of the education is not natural to this society. On the other hand, the formal education of children is one of the most powerful ways of effectively changing a culture. If this be true for children from pre-literate communities who will be required to live in a Western culture, the school becomes the most important instrument in fitting the child for the world he will have to face. In this sense formal education is the means whereby the gap between the cultures is bridged. When first introduced, however, formal education creates the gap. It creates tension between students and their parents.

Western Values and Education

It is fairly obvious that education is effective only if it meets the real needs of living for the people who are to be educated. The problem is to define these real needs. The skills, knowledge and

attitudes necessary for living in a Westernized community are many and complex, and a European-type educational programme aims to provide for as many of these as possible. It is open to question whether such a programme is wholly suitable to the peoples living in the changing culture likely to be found in developing countries.

The content of what is taught in Western schools shows what the people in Western countries think is important for their children to learn. School education in countries such as ours has generally been introduced by people from Western countries and the danger is that what they may value highly may not suit our real needs.

The 'real' order of importance in other countries may be different. In some countries history is regarded as being more important than agriculture and accordingly many more pupils study history than agriculture. In an endeavour to see that a 'good education' is given to the people of developing countries we must try to make sure that it is designed to meet the real needs of these countries.

Every educational system changes more or less slowly to meet the felt needs of the community. We should expect that the curriculum in a developing country will change from an imitation of the overseas form to more closely fit local needs.

Education and Needs

It is important that education should aim to provide training to meet both immediate and long-term goals. It is a short-term goal to teach a boy to build a house with concrete foundations or a girl to bake a cake from flour. It is a long-term goal to teach a boy mathematics so that he may then learn engineering and thus build better houses or to teach a girl chemistry which will enable her to carry out nutritional studies which will improve the use of available food. Consequently, in planning education, in any country, provision must be made for 'fundamental' studies which form the basis for the fulfilment of long-term goals, even if more advanced studies must be confined to a small number of people (called an educational elite).

Immediate goals usually have to do with an individual's survival. Consequently considerable attention must be given to skills at least in housing, food production and hygiene. The improvement of food producing skills alone in a subsistence economy will not be sufficient to meet the needs of a rapidly increasing population. The very improvements in health and hygiene which reduce deaths means that methods of living other than those of the subsistence agricultural economy must be developed, and this means that it will be necessary to provide, in addition, technical skills which will lead in turn to other sorts of jobs (vocations).

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Long-term goals are best served in any community by the development of social skills for successful survival and change. Social skills are in general very highly developed in pre-literate communities. They are considered to be an important heritage of the people and are successful in preventing the pressures of changed living from causing too many mental problems. If we are to have a real mixing of cultures then social skills must come in the area of important behaviours. The great strength of pre-literate communities lies with their well developed skills of responsibility exercised by and within social groups. The children learn these skills informally in their own villages through their parents and elders. But in a rapidly changing society not many of the elders can give a suitable training. It appears then that the preservation and development of group social skills are a primary responsibility of schools. Attention should be given to encouraging and developing these skills. The schools should provide training in responsibility, training in making group decisions, and training in leadership behaviour. How do you think they could best do this?

Social education should be one of the most important aims of education in the schools of pre-literate developing countries.

1. In the first place, it is a birthright which should not be taken from the people.
2. In the second place, it is a most effective way to prevent the tensions which are always present in a period of rapid cultural change.
3. And finally, it is a responsibility to provide this sort of training so that people can be more effectively educated for self-government.

In many schools ideas of this kind are absent. Children are drilled in all sorts of things that they do not understand. Sometimes even the teacher does not understand. It is hoped that such group reliance, responsibility, and leadership which existed when the children first came to school is not being lost. It is the responsibility of a teacher to make sure that it is not. In discussions during class you should discuss how this can be done¹.

Education and Economic Development

We need to think carefully when we hear the economists talking about the need for:

¹ See Sinclair, A. *Field & Clinical Survey Report of Mental Health of the Indigenous of the Territory of Papua & New Guinea 1957*. Government Printer, Port Moresby.

- *modern technical knowledge*
- *more money*
- *trained manpower*
- *a plan for economic development.*

These things are of little use unless other elements are present in a country. Such things as the following are very important and, if you think carefully, you will see why:

- *a stable government*
- *efficient public administration*
- *a fairly widespread system of popular education which makes people want to do things*
- *a social system which provides incentives.*

It is fairly obvious that skilled manpower means education and training. Moreover, education helps provide the necessary will and desire to develop, as well as the technical skills essential for development. After all, the attitudes of people, which help to create a situation in which modernization can be carried out, are even more important than knowledge and new technical skills.

These attitudes are:

- *a desire to experiment and create*
- *a spirit of adventure*
- *a healthy attitude towards manual labour*
- *new attitudes towards efficiency not based merely on narrow family loyalties*
- *honesty, kindness and social responsibility.*

It is interesting to note that recent studies show that money spent on education may bring larger increases in production than much money spent on direct economic development plans. Illiterate village farmers are, on the whole, not progressive. Literate ones, on the whole, are. Education then is part of, and necessary to, economic development. Education is a productive form of investment. It is not merely a service as some people say—a service which does not provide a return. However, what it provides cannot easily be measured. Moreover, we should remember that education is of most value to economic development when the educated people are usefully employed.

Education and General Development

Administrative officers who have to deal with urgent practical problems in a technically backward area do not always see the importance of expanding education as quickly as possible. The

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more urgent and obvious physical and social needs are said to be more important—such things as public health and the need to make money. However, unless changes are seen to be necessary and are actively encouraged by the people themselves, they will not be lasting and effective.

This will happen when the communities become responsible for making the decisions that affect them. However, just as important is the need for them to join in running their own affairs. Both of these matters will depend on them becoming better educated—educated to look beyond the immediate concerns of the village and the district to the wider concerns of the country as a whole.

It is obvious that the development (modernization, progress, advancement or whatever else we want to call it) of the people of an underdeveloped country depends a great deal on having people who can understand and use Western cultural skills. In general, these can only be provided by Western-type centres of education—by formal education at all levels provided in schools, colleges, universities and institutes.

This means that in the country as a whole, solutions to immediate problems such as the need for more money should be given the right amount of attention and no more. They should not receive more attention than they deserve. Often there is great emphasis on economic development—on making more money so that the country does not need to be given any; on five or ten year plans for economic development and on manpower surveys. This emphasis must be balanced with other requirements and must not be allowed to become the most important aim. It is only one aim amongst many. For example, unless people are physically healthy they will not be able to work well. Unless they have some education they will not be able to understand. If we concentrate mainly on immediate problems rather than those that take a long while to sort out, then we are not wise.

The long term importance of educational progress needs to be seen much more clearly. When people are better educated then they will recognize certain things such as:

- inequalities of wealth, power, opportunity, influence, education
- separation of people because of these inequalities or because of traditional loyalties
- disunity.

The Importance of Education

In fact it would be fair to say that in an undeveloped country survival and improvement depends upon education, upon the skill

of its human resources—its people. Obviously, trained people are in a better position to help develop a country than untrained people.

The importance of education, however, goes beyond its immediate contribution to material development. It lies in the fact that education raises the quality of human living. It helps to change the social and intellectual attitudes which hinder progress and make growth impossible. What are some of these attitudes?

The general abilities which education should try to develop can be used when facing any problem. These are:

- *a questioning approach which seeks out and makes a judgement on the basis of relevant facts*
- *an objective way of looking at things*
- *a wider outlook.*

Educated people should be able to:

- *think effectively*
- *communicate thought*
- *make relevant judgements*
- *discriminate among values.*

Educated people ask questions and examine the answers. Education, in its widest sense, is the most effective way of developing people. This is because education can change people. They in turn then want to change things. This leads to progress and development. Education can change the beliefs and attitudes of people and their way of doing things.

This is why teachers, particularly in developing countries, are such important people. Where few people can read and write, the future happiness and well-being of the many depends on the education and training of the few. You and your teacher friends are very important people.

Education and Change

Slow Change. Many people who want to change things in developing countries think that the Western type of education is the best way to do it. We must remember that although education is a very important means of changing people its main effect is a long-term rather than an immediate one. It takes a long while for a child to pass through school. Sometimes education does not have the effect that people would like it to have. Change in itself might not be much use at all. It might not be aiming at the right things. It might not be wide enough to have much effect. The sort of change taking place might not be a useful one. In some countries such as India, for example, the

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spread of education among the peasants will not help to increase agricultural production (think again of the Case Study). This is because educated people see new opportunities and jobs open to them. They do not want to return to the land and be farmers because these other jobs seem more important to them. These jobs are open only to people who have been to school and had a formal education. In this way the social attitudes associated with education mean that more schooling of the Western kind for more people will not help India's main problem very much.

Some people think that all changes in underdeveloped countries have been the result of formal Western education and contact with Europeans. They think that the schools are the only factor in changing people. This is not the whole truth. There are many other things that can cause people to change such as war, exploration, revolution, disease, inventions, religion and so on. This does not always happen since tribal wars quite frequently hinder culture change. Disease can have the same result too. Moreover, people change gradually according to the surroundings they live in. If there is a volcano in a place where people live, they may have to move often to a different place and they get used to the changes in their way of living that this makes necessary. Even under normal circumstances there is the continual slow movement of village groups from one place to another in search of fresh garden areas. Thus there is a continual process of change in the life of a social group.

Rapid Change. The progress of change in a really backward culture is more rapid when:

- there are towns depending on trade
- it becomes easier and easier to communicate
- things are grown for sale (called cash cropping)
- there is a foreign governing or controlling authority.

These provide important informal means of education. These factors do not encourage the continuance of traditional ways of thinking and doing. At the same time they bring new job opportunities and create a different order of importance so far as jobs are concerned.

These jobs and their importance depend on having a Western-type education and the higher the level of education the more important the job a person can apply for. In this way schools and formal education become important. This is why there is an increasing public demand for school education.

The process and rate of change is greater after Western contact than before. This is because there are so many new experiences

and opportunities available and because it is much easier for people to communicate with one another.

In some countries, for example, this process of change will be firstly in the direction of accepting other ways of living and doing things. However, this does not mean to say that these ways will be the final ways of doing things in that country. Instead of transferring and imitating ways of living and doing things, people will want to change these ways to suit themselves. They will want to modify many of the things they see to suit their own local needs. This will be difficult so long as external educational patterns are followed closely. This is one of the reasons why you should be thinking about what sort of country you want to live in. Then you should start thinking about what sort of education is most likely to prepare citizens for this country.

TO THINK ABOUT AND DISCUSS

What should we of the Education Department try to do in our country?

Remember

- Our country depends mainly on agriculture.
- Education is wider than schooling and this has certain implications.
- Generally there is a fairly clear distinction between formal and informal education.
- Schooling can be functional or dysfunctional.
- Only when goals are clear can sound programmes of action be planned.

Aims

- Aim or aims of education? Whose aim or aims?
- Do you consider that there are aims of education which would apply to all people everywhere?
- Do we ever think about them? Often?
- List some specific aims of education you would consider relevant to this country?
- To which of these would you give priority?

NOTE: 'While other countries aim to reach the moon . . . we must aim to reach the village.'

Some Final Questions

The questions we have to ask ourselves are:

- What do our schools offer to the majority of students when they leave (before the end of their course or after)? Anything? If so, what?
- Are they literate? Is their language adequate for everyday needs? For anything else? What evidence do you have?
- Do they have sufficient skills to enable them to find employment appropriate to their attainment rather than to their desires? If so, are they ready to accept such employment? What evidence can you find to support your answer? If not, what are the implications?
- Have desirable habits and attitudes been developed that will give personal satisfaction as well as prepare students for citizenship in an ever widening community that will, sooner or later, be self-

governing and independent? What evidence can you find to support your answer?

- Do students reach the level of attainment needed for the better paid jobs and do they really know the level of their own attainments? If not, what are the implications?

Further Reading

To read further about the matters mentioned in this chapter and the readings it is suggested that you look in your library for the following books.

Title	Author	Publisher
Education for Self Reliance	J. K. Nyerere	Government Printer, Dar Es Salaam, 1967
Educational Planning	V. L. Griffiths	Oxford University Press, 1962
Imagination & Hallucination in African Education	J. W. Hanson	Michigan State University Press, 1965
Blossoms in The Dust	K. Nair	Praeger Paperback, 1962
Education & Change	R. Hodgkin	Oxford University Press, 1957
Thinking With You	Tai Solarin	Longmans, 1965
New Nigerians	M. Dickson	Dobson, 1960
A Humanist in Africa	K. Kaunda	Longmans, 1966
<i>More difficult books you might like to try are:</i>		
Education & The Development of Nations	ed. J. Hanson & C. Brembeck	Holt, Rinehart & Winston, 1966
The Quality of Education in Developing Countries	C. E. Beeby	Harvard University Press, 1966
The Great Ascent	R. Heilbroner	Harper Torchbook, 1963
Economic Development	J. K. Galbraith	Harvard University Press, 1964

Child Growth and Development

CASE STUDY

A woman was talking to a friend outside the store.

'How are your twins?' she asked.

'Very interesting,' was the reply.

'Interesting?'

'Yes, they are not identical twins of course, but they are the same age and they are so very different, they sound different and they do things differently.'

'They look alike to me.'

'You look at them again. This one is two inches taller than his brother. That one has one more tooth.'

'Well, I suppose they are both walking by now?'

'Yes, they are both walking but one of them has been walking for a much longer time. It's funny too, you know, the twin who crawled second, is the one who is walking better now.'

To Think About

1. Do you find that children of the same age are alike in behaviour, appearance or ability?
2. Why are children, even of the same age, so different in so many ways?
3. Why is it, do you think, that children are expected to start school at the same age?
4. Do you think that your parents can help you as much with all your problems now as they could when you were younger?

HEREDITY AND ENVIRONMENT

As you will see in the chapter about Individual Differences (Chapter 4), each one of us is very different. We are different at birth and continue to be so for the rest of our lives. Some babies are born fat and some thin. Some have plenty of hair, others have none. Some are happy and friendly, others are miserable and demanding.

As the baby matures he changes and grows as an individual personality and his exact pattern of growth, mental, physical and social-emotional, will be different from that of any other child. You only have to look at a preparatory class of five-year-old children to see how physically different they have become in five years. Some are tall, some are short, some fat, some thin, some look happy, others look serious and each face is different.

Socially, emotionally and mentally too, they are just as different from each other as they are physically different. It is just a little more difficult and takes more time to see and understand these other differences.

This difference in the development of each child is a result of two things. It is a result of the interaction of his inherited potential capacity for development and his environment.

Heredity

This potential capacity for development (or heredity) is determined at the moment of conception when one particular sperm cell from the father unites with a particular egg from the mother. No two sperm cells and no two eggs are exactly the same, not even from the same parents. When these two particular cells unite, a male cell or sperm and a female cell or ovum, each one is carrying a set of chromosomes which will determine the child's physical, mental, and social-emotional potential. These chromosomes join together in pairs and each pair will interact in different ways.

Let us consider what appears to be the simple matter of eye colour among white peoples. One parent may have blue eyes and the other brown eyes. Let us suppose that they have three children. One could have blue eyes; another, brown eyes; and a third, grey or green eyes. This is because the blue-eyed parent has blue, brown, grey and green-eyed ancestors. So has the brown-eyed parent. The chromosomes of the two parents interact, and their child may have the grey eyes of a grandparent and neither the blue eyes of one parent nor the brown eyes of the other.

It is very unlikely, then, that a child will be the same as any one parent. He is a mixture of the characteristics of his parents and their parents, their grandparents, and so on.

It is very unlikely, too, that one child in a family will have the same potential capacities for development as any other child in his family.

Environment

Each child, with his particular potential for development, is born into a different environment. By 'environment' we mean the whole physical, mental and social-emotional surroundings (climate) provided by his immediate family and the other people and things that he comes in contact with. His environment can help or hinder the development of potential characteristics that he has at birth, physically, socially-emotionally and mentally. A child may be born with the potential to grow big and strong, but, if he lives in a family where he is poorly fed and neglected, he will probably not reach his full growth potential.

A child may be born with potential for a happy, pleasant, co-operative personality and develop quite differently as a result of an unhappy, tense home situation.

A child with a potentially high I.Q. may be born into a family where the parents have little respect for learning and, as a result, do not encourage him to develop to his full potential ability. Alternatively, he may be unhappy at school and as a result not utilize his full potential for I.Q. development.

It is not possible to separate clearly hereditary factors from environment or to estimate how much of a person's behaviour and development is a result either of his heredity or of his environment.

Take intelligence for example. We cannot measure a child's *potential* or innate (or hereditary) intelligence. All that we can do is to set him tasks that will give us some idea of how intelligent he is now. We cannot tell, except very roughly, whether, given another kind of environment, his potential to be intelligent could have been more effectively developed.

Environment is a particularly important factor in a developing country. Children's pre-school environments can vary here so much. After children reach school age, environments will vary greatly too. A child who attends school will have, after the age of five years, a very different mental, physical and social-emotional environment from the child who remains at home.

PATTERNS OF GROWTH

Despite the fact that each one of us develops differently, we are human beings and our development fits into a broad common framework of human growth and development. Different children will learn to walk by themselves at different ages but, unless there is something seriously wrong with them physically, they will all learn to walk.

It is very helpful for a teacher to have a knowledge of these patterns of growth from birth to adolescence. Although most of you will probably deal with children in middle childhood (from 6 years to 13 years), it is valuable to know what development has taken place before they came to you. It is also helpful to know how they should develop after they leave you.

Although each child will be ready for things such as learning to read or write at a different time, it is helpful to know that each child will be ready in his own time. If we know this we can wait for the best time to teach new activities. If we really acted on this knowledge, if we took this simple fact clearly, then there would be very little class teaching, no class tests, no annual examinations, no promotions and, of course, no failures. I wonder whether you would be lost without all these familiar school practices?

Children's behaviour and physical abilities change as they grow, and, if we know that most children at a particular age behave in a certain way (for example are restless at six or cannot catch a ball well) then we do not worry too much. We can wait and watch until they are ready to change instead of forcing them to do things that may be too difficult for them.

Patterns of Growth in Infancy and Early Childhood (Birth to Six Years)

Let us look now at a summary of the development tasks that a child has to master between birth and six years and then look at a description of a typical six year old, remembering nevertheless that not every six year old will have all these characteristics.

1. Physical development

Very soon after a child is born he starts to make efforts to move. First he moves his arms and legs, then his head. Later he starts to roll over and a few months later he crawls. Somewhere between nine and fifteen months he is ready to walk by himself. This is a tremendous step forward. At birth he could not control any of his movements. Now he has enough control of his large muscles and enough co-ordination to stand up and walk. Later he learns to run, jump and skip.

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During the second year his jaws and teeth and his digestive system are sufficiently developed to allow him to start eating solid food. This has to be given to him in small pieces at first. Later he will learn to feed himself larger pieces, either with his fingers or from a spoon.

During these years too, when he has sufficient control over the necessary muscles, a child learns to control his elimination. He learns to urinate and defecate in the right place and at the right time, in a pot or in the toilet and not on the floor or in his clothes. Most children have complete control by four years and can wake themselves up at night when necessary.

In the first few years of his life a child suffers more from heat or cold than an adult does and gets sick more easily. But on the whole, by the time the child is four or five he has achieved a good deal of control over his body.

2. *Mental Development*

The physical potential for speech is usually present at birth. At first a baby makes sounds (meaningless to an adult, perhaps meaningful for him).

Somewhere between twelve and eighteen months most children begin to associate a particular sound with a particular meaning. This is the beginning of human speech. Between this age and four years he tries to imitate nearly every word he hears. From three years onwards his vocabulary expands rapidly and he makes attacks on the grammar of his language. If his language has a logical grammatical structure he makes more rapid advances. A child learning English soon realizes, unfortunately, that all words do not behave as they should. He tries to say 'I taked' and finds that it is not like 'carry' and many other verbs and that he should be saying 'took'.

The kind of language a child speaks and the speed of his development will depend to a certain extent on his environment (how his parents and his friends speak and how much they speak) and also to a certain extent on his intelligence and ability.

A child who does not learn to speak somewhere between twelve and eighteen months can become seriously disturbed, because language is a necessary tool for expressing feelings.

By the time a child is six, given a favourable environment (parents who speak to him and encourage him to speak) he can have a vocabulary of twenty thousand words in his own language.

In these years he is very curious about sexual differences and, if his parents are prepared to answer his questions sensibly, he accepts and understands the basic differences and roles of males and females. If a child's questions are not answered he can become quite worried.

He learns or should learn to make independent decisions. A child who is dominated and organized during these years will find it hard to become independent later. He learns to come and go, eat some things and not others, to go to the toilet when he needs to and to build with blocks, read a book or go for a swim, depending on his own wishes.

He learns to distinguish right from wrong. (He does not always do what is right, and will often say 'I know, but . . .') He has the beginnings of a conscience.

He develops concepts of the people and things around him (often rather vague and confused concepts) and learns a great deal from his parents and playmates by watching and imitating.

3. *Social-Emotional Development*

He learns to get on with and react to his parents, brothers and sisters and playmates. Often, the kind of relationships he has with them will determine the way he behaves with other people for the rest of his life.

Patterns of Growth of a Six Year Old (In Transition from Early Childhood to Middle Childhood)

The developmental and behavioural characteristics that a child is likely to have at six years are important to us as teachers. Most children become six during their first year at school.

The child at six years has come a long way in his development since birth but still has a long way to go.

I have taken the summaries in the Readings on Chapter 2 from a very interesting book by Gesell and Ilg, called *The Child from Five to Ten*.

Gesell and Ilg have a lot more to say about the six-year-old child than children of other ages. You might like to read the book for yourself. This extract should be enough, though, to give you some idea of the kind of development that you can expect from your Preparatory or Standard I children. I have asked you to consider the six year old carefully because this gives an idea of what he is usually like when he first starts school.

Now let us look at the kind of things a child needs to learn and usually does learn between six and thirteen years. The following

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applies mainly to children who attend school. We call these years middle childhood.

Patterns of Growth in Middle Childhood

Much of the information in this section and the following section on adolescence has been taken from a book called *Human Development and Education* by R. J. Havighurst.¹ The context is European. It has been summarized and adapted to make it more applicable to our country. Much of what is said will be true for our children, of course, but I do not know how far.

Havighurst deals with growth and development during middle childhood by discussing a series of tasks that the child should and can master in these years.

The child who starts school at the beginning of this period faces many big changes. Physically he must learn new skills for games and work. Intellectually he has to learn to use symbols, that is, to read and write. He is helped to form general ideas or concepts. Socially he must also learn to get on with a new, larger and, perhaps, less sympathetic group of people.

The school specializes in teaching mental skills, but must also help other institutions such as family, church and clubs to develop physical and social skills. Let us look briefly now at these tasks of middle childhood.

1. Learning physical skills for games

This is a period of muscle and bone growth (large muscles develop before smaller ones). The child develops better co-ordination during these years. He must use this development and co-ordination to learn skills for games. Boys may be expected to master these skills better than girls and suffer more, socially, if they fail.

2. Accepting self and growth

Physical growth is important during this period and the child develops permanent physical characteristics, for example teeth. Towards the end of this period he matures physically. He must learn to accept body changes and to care for his body. This is a particularly important task for the school in our country as it may be neglected at home.

3. Learning to get on with age-mates

The child in these years must develop socially. An acceptable physique, physical skills and cleanliness are necessary. He must

¹Havighurst, R. J. *Human Development and Education* (Longmans, U.S.A., 1953).

start to depend, for friendship and security, on his age-mates as well as his family. If he fails to do this it can have a serious effect on his behaviour and work.

4. *Learning the role of girl or boy*

This is particularly difficult in some ways in this country, as behaviour expected at school, particularly from girls, will vary from traditional roles. Towards the end of this period the child learns that the physical differences between sexes cause different physical abilities.

5. *Skills in reading, writing, calculating*

It is sometimes difficult for children in school here to see the value of some of these activities, particularly if their parents are not sure of the value themselves. The school must help the child to see a reason for what he is learning.

By six years of age children are physically and mentally mature enough to begin learning these skills and can and should have mastered basic techniques by twelve or thirteen.

6. *Concepts necessary for everyday life*

The school in this country has an important role to play in helping children to understand concepts of space, time, travel, social service and other things, so that they will have a sound grounding as a basis for adolescence and for living in a changed world.

7. *Conscience-morale*

A child has no conscience or morals at birth. He begins to learn about these from his parents in early childhood. He has to develop these concepts further during middle childhood and help must be given by the school and teacher as well as the family.

8. *Independence*

The child must learn to act sometimes without his parents. He is physically more and more capable, during this period, of looking after himself. Independence will develop slowly with the help of the school.

This, then, is a brief summary of what the child has to learn during his primary school years. Let us now look at adolescence.

Patterns of Growth in Adolescence (from thirteen years onwards)

Adolescence is difficult to deal with as exactly as early or middle childhood. The major task for most children during early childhood seems to be an adequate development of physical skills. The major

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task for a school child during middle childhood is to develop cognitive or mental skills.

Adolescence is often a difficult time. The two major tasks here seem to be the development of adult social-emotional skills and preparation for a chosen career. Let us look at some adolescent developmental tasks.

1. *Developing socially*

The peer group (the child's age mates) becomes very important. He must learn to mix well in all sorts of activities such as social activities like games and dances. He must learn to work with smaller groups than formerly. He must also learn to understand and accept himself. Success or failure in this task is important for adult life.

2. *Learning finally to accept a masculine or feminine role*

In this period a child has to grow towards becoming a satisfactory adult. The adolescent must accept body changes and physical differences and must learn the appropriate role for his or her sex. This can be particularly difficult for educated girls in this country as they must accept and reconcile the two alternatives of career and motherhood. The school should attempt to advise and make this task as easy as possible.

3. *Independence*

The adolescent learns now what he will be like physically as an adult. He is sometimes worried about himself in comparison with others and needs help to accept himself as he is.

He must learn to achieve emotional independence from his parents—substituting affection for dependence. He must learn to make satisfactory emotional ties with people of his own age.

4. *Economic independence*

He must make plans and start preparing himself to earn his own living. He should be given as much guidance as possible (particularly by the school) to choose carefully and wisely. He should be helped to choose a career that will be possible for him with his particular capabilities. He must understand such things as law and government and should now be behaving in a responsible fashion. He should also, where possible, be given some instruction in the problems of marriage and family life as, once he leaves school, he may find it difficult to obtain this information.

This then is a summary of the problems that face an adolescent. You as a Primary School teacher can make this period smoother

for him if you try to ensure that during middle childhood he succeeds in all the necessary developmental tasks.

Summary

Growing from infancy to adulthood, as you can see, is a long and difficult process. Looking back, one often wonders how people succeeded reasonably well.

You, as teachers, have an important part to play in assisting the child to grow and develop as well and as happily as possible. You can fill this role satisfactorily only if you have a real understanding of the problems a child faces at each stage of his development.

Each child that we have to teach is different. Each child develops at his own rate.

However, every child grows according to the patterns of human growth and we can expect the majority of children of the same age to have broadly similar developmental problems and tasks to fulfil.

Teachers and parents need to have a knowledge of these patterns of growth in order to be able to help children grow and develop effectively at each stage.

TO THINK ABOUT AND DISCUSS

1. Describe briefly the behaviour of a six-year-old child that you know. (Check your description with the information in the Reading on Chapter 2.)
2. What do you think is the most important thing that a child has to learn during middle childhood? Give reasons for your answer.
3. In what ways can the school and its teachers help to prepare a student for life after he leaves school?

CHAPTER 3

How Children Learn

CASE STUDY

A woman is busy cooking the evening meal. Her baby is holding on to her skirt. He puts out his hand and touches the fire. Immediately he withdraws his hand and cries loudly.

For some time afterwards he cries if he is put near a fire. He does not touch the fire again.

To Think About

1. Has the baby learnt anything?
2. What makes you think so?
3. What do we mean by learning?
4. How do people learn things?

WHAT IS LEARNING?

How would you answer that question? Many people will answer: 'Learning is what children do at school'. But do we only learn at school or Teachers' College or University? We all know many things that we did not learn at school. As well as learning to read and write, we learn to ride bicycles, we learn to swim, we learn how to behave in a social group. Learning covers many different kinds of activities.

We could make long lists of the skills and knowledge that human beings need to learn. Some of these would be physical (psychomotor) skills, some would be cognitive knowledge, skills and attitudes and some would be social-emotional knowledge, skills and attitudes (how we behave).

This, then, is why it is so difficult to answer the question: 'What is learning?' The answer must cover learning in all of these three main areas—psychomotor, cognitive and social-emotional. Some people have tried to answer the question but no one has yet given an answer that everyone accepts.

One important group of educators and psychologists say that learning is a change in cognitive structure. What do they mean by this? Learning is a very individual process. It cannot be the same for any two people. We learn to read differently. We learn to ride a bicycle differently. The new things we learn change the ideas already in our minds. The way each person changes these things in his mind depends largely on his previous experiences, his intelligence and his particular personality.

There is another group of people who describe learning in a different way. They say that learning is a change in behaviour. They believe that we can always see some small physical sign, either now or later, that learning has taken place. It is rather hard to see how this 'stimulus-response' definition applies to some cognitive learning situations, but the two theories taken together give us a reasonably satisfactory picture of the process of learning.

Why Do Children Learn?

This is covered more fully in the Reading on Chapter 3 (concerning motivation) and that Reading should be read together with this topic. Motivation will be discussed only briefly here.

Children learn because, for one reason or another, they are motivated. They are motivated by needs—primary and secondary needs. Secondary (acquired or learned) needs are the kind that are most

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important in learning. These needs can be caused either by intrinsic or extrinsic motivation.

If a child works well and successfully in his mathematics lessons because he really enjoys solving the problems presented, then we say that his motivation is intrinsic.

If a child only works well in his mathematics lesson because his father has offered him some kind of reward, or because his teacher has threatened to punish him, then we say that his motivation is extrinsic. His need or reason for learning comes from outside the subject matter itself.

We know that intrinsic motivation is much better for learning than extrinsic motivation. As teachers we must try, whenever possible, to make the children so interested in their work that their motivation will be intrinsic.

Individual differences in the child himself, his intelligence and the interests he has acquired from his own environment will also decide whether the motivation used to stimulate his interest in a task will become intrinsic or remain extrinsic.

When Is A Child Ready To Learn?

As you will find in Chapter 4 which deals with individual differences, each one of us is very different from everybody else.

No two children are ready for the same learning task at the same time. You can explore this topic thoroughly if you find the article on readiness in the Readings on Chapter 3.

Let us take a very simple physical learning task—learning to walk. The average age for a baby to walk by himself is twelve months. Many babies, however, do not learn to walk at this age. Some start earlier and some start much later. A thin, athletic baby might be walking at nine months. A fat, lazy baby might still be sitting and being carried at eighteen months. Physical development, interest and the particular kind of personality that each child has, will determine his readiness for walking.

Readiness for school subjects, reading for example, varies just as much. The average age of reading readiness is some time during the sixth year. However, a very few children will be ready to begin reading during their third year and others will not be ready until they are eight. We must try to decide whether a child is sufficiently ready before we try to teach him something new. If he tries to learn too early he will fail and feel badly about that particular learning task. If we leave it too late to teach him something he will probably become frustrated and then bored with the slow pace.

A child also must be in good physical health to learn well. If he is tired, ill or suffering from a poor diet, he will not be able to pay

attention for any sufficient length of time. If his sight or hearing are poor, he will not be able to get information clearly enough to form sound accurate concepts.

INFORMAL LEARNING

We learn many things without anyone trying to teach us. From the moment a baby is born he begins to learn. He feels and tastes and hears and sees and through these senses he gets information (very hazy at first) that he stores up in his mind.

A child learns many things by himself in his pre-school years. He puts things in his mouth and tastes them. He learns that he likes to eat some things and that he does not like other things.

He touches fire and learns that it is hot and unpleasant to touch. He watches his mother doing her daily tasks and he tries to do the same things. He watches and imitates until he learns to build a fire or sweep the floor. He tries to make the sounds that he hears being used around him and soon he learns to talk.

All through our lives we learn things by seeing and hearing, touching, thinking and then trying things for ourselves.

Our motivation for this kind of learning is intrinsic. We learn because we see someone we admire doing something and then want to try it ourselves. This kind of learning is usually very successful. It is a pity that many children do not seem to feel this way about school learning tasks. The motivation in the formal classroom situation is often mainly extrinsic.

We must try to make the activities interesting enough for the children themselves to really want to perform them. If, as teachers, we can try to get the children to like and respect us enough to want to do what we do, this is a start.

LEARNING IN THE FORMAL SCHOOL SITUATION

Although most people immediately think of learning in the school situation as consisting almost entirely of cognitive knowledge, we should remember that a great deal of physical and social-emotional learning takes place in the school. Much that is learnt in school is deliberately taught but a great deal of valuable informal learning also takes place.

Cognitive learning

A child's formal education usually begins at six years of age when he first starts school.

Before this, as we have seen, he has formed many concepts. Some of these concepts will be clearer than others. When a child first starts school the teacher must aim at helping him to clarify concepts he

already has and then build on these for new learning. For example, when a child comes to school he probably has quite a clear, well-formed concept of what a dog is. We want him to learn more about dogs—that they are animals, how to feed them, how they can be useful and so on. We can do this by helping him to recall what he already knows and then adding to this knowledge. There are some ways of making it easier for the child to learn new concepts. Let us look at these.

(a) *Personal Involvement*

We want the child to feel that he is working at a learning task because it is important to him personally. This is really only another way of describing intrinsic motivation. We can try to get this kind of motivation, as discussed earlier, through showing our own enthusiasm for a particular subject. We can also help the child to feel personally involved by our structuring of the learning situation (the way in which we present material to be learnt).

The child will learn more if he is actively (mentally or physically) engaged in a task. He could be making something perhaps, or finding out relevant information for himself. He is likely to learn more if he has to make trial solutions and test them. It is good, too, if the learning situation is sometimes puzzling and, therefore, challenging.

(b) *Success and Failure*

Too easy success and too much failure can both have an adverse effect on a child's attitude to the learning situation. Success and failure do have different effects on different children because each child's personality is different. No matter how determined a child is to succeed, if he constantly fails at a particular task he will lose interest in that task. This is due in part to his fear of failing again.

Success in a particular task usually gives a person confidence to continue with similar tasks and gives added motivation and interest. However, too much success can be bad for some children. This depends again on their personality. It can make them too confident and lazy. A small amount of failure now and then does not harm a child's interest but too much failure is not helpful to a child's growth.

(c) *Appealing to as many senses as possible*

When we are teaching something new we must try to appeal to as many of the child's senses as possible. If he gets information

only through one sense, for example, his sense of hearing, his resulting concept may not be very clear.

If, for example, when we are teaching a social studies lesson we discuss the topic, show pictures, bring objects for the child to touch and hold and allow him to act out the situation, then we are appealing to his senses of hearing, sight, touch and also movement. In this way we are making the subject matter as real as possible for him.

Aids that we use when teaching lessons should not be just trick materials to gain quick interest. They should be carefully planned and considered so that they really clarify and reinforce important concepts.

(d) Attention span

We must remember that a small child's attention span is short. It increases with age and can increase temporarily with strong motivation.

If we try to keep a child working at a task too long he will get tired and bored. He will stop concentrating and then probably (although not always obviously) stop working.

Social-Emotional and Physical Learning

Some of this learning in school will be formal and planned—some will be informal and incidental. In physical education lessons we try to teach the children necessary physical skills. In the classroom we teach them to write and thread beads and build with blocks. Much of a child's learning in the physical sphere, however, will be picked up from sometimes watching the teacher and sometimes other children. His friends will probably teach him important things (socially as well as physically important) such as how to play marbles or how to climb a tree.

Social-emotional learning, too, is sometimes formal and planned and sometimes incidental or informal. The teacher will tell stories and teach about correct behaviour and attitudes in, for example, social studies periods. However, a child will often learn more about acceptable behaviour from his classmates. If he fights the other children too much he will probably find that he loses friends. He learns in this way, informally and effectively, that this kind of behaviour is not liked by the other children.

The teacher, too, must try to analyse the children and determine their social and emotional strengths and weaknesses. In this way he can aim at giving one child more confidence, trying to make another child more friendly and co-operative and, perhaps,

trying to suppress the aggressive, anti-social tendencies of a third child.

This kind of emotional aid needs to be given informally and continuously by the teacher, who must have a real understanding of each child and his problems.

Learning, Remembering and Forgetting

Remembering and forgetting are important factors in any kind of learning—physical, cognitive or social-emotional. If a person can produce from his mind, when necessary, something that he has learnt in the past, then we say that he has remembered.

As with every other ability, each person's ability to remember is different. Some children have a good memory for physical skills, others for cognitive knowledge. Memory is not necessarily connected with a person's intelligence level. There are some people who have a low I.Q. and a very good rote memory. Generally speaking though, we remember material better and for longer if we really understand it.

There are some things that we should know about memory, so that we can help every child to remember things better.

Remembering

(a) Practice and Insight

Sometimes, when we have been trying for a long time to understand something, it suddenly happens that the solution of the problem comes to us in a flash. We call this insight. This often happens with cognitive learning. We can think about something like a mathematics problem for a long time and then suddenly the answer seems to come to us. When a person understands like this he usually remembers easily.

There are some kinds of learning, especially physical learning, where lengthy practice is required. A non-swimmer cannot learn to swim suddenly as a result of insight. He must practise. Some kinds of practice are better than others. Repetition without thought is practically useless. For learning to take place a person must think and make changes and improvements while he is practising or repeating an activity.

Spaced practice—practice for a short time at regular intervals—is better for learning than much practice at the one time. A person can learn to ride a bicycle better and more painlessly if he practises for an hour a day for a week than if he tries to master the activity in one day. If a person continues too long with an activity, then fatigue and boredom begin to make him less efficient, rather than more efficient.

(b) Recency and Frequency

We remember material that we have learnt recently—material learnt begins to fade if it is not remembered or used for a while. If material is used and revised at regular intervals then we remember it better because we are thinking about it frequently.

(c) Part and Whole Learning

Sometimes we break up cognitive material or physical skills into parts and try to learn the activity part by part. This succeeds particularly well with some physical activities, for example, we should teach a child the basic skills for a major game, like basketball, before we let him try the game. However, the child will be better motivated if he can see first how the individual skills lead up to the major game.

This overview, or understanding of the whole of the material to be learnt, is very important in cognitive learning. It is much easier to learn a poem line by line if we have first read the whole poem and have a general idea of the meaning. You probably know yourselves that it is easier to understand the various aspects of modern mathematics if you first have a general idea of what it is about.

Forgetting

No matter how much effort we make and trouble we go to to remember things, a certain amount of forgetting takes place. Some people get very angry because they forget things easily. It would be terrible if human beings could not forget. The ability to forget is, in some ways, a safety device that allows people to forget unpleasant things for their own good. Remembering this, we must try to help children to have pleasant feelings towards learning situations. If a child has been forced to complete a learning task by a teacher using some unpleasant kind of extrinsic motivation, then the chances are that he will forget the material quickly because it has unpleasant associations for him.

There are two main reasons for forgetting—fading and blocking.

(a) Fading

If you leave a piece of coloured paper in the sun too long it will fade. The same thing happens if we leave information in our minds for too long—it fades. There can still be some traces of the learning in our mind. Probably you are finding that some subjects you learnt at school are already fading. You can remember a little but not clearly. This is why we must regularly use material that we want to remember.

(b) *Blocking*

Sometimes we become very worried about something we have to do. You probably have some experience of the person who is so frightened and worried that he forgets temporarily what he has learnt, for example, the person who stands up to make a speech and can't remember a word of what he has to say; the student teacher who begins to teach a song and forgets it completely; meeting someone important and forgetting their name. This kind of forgetting is temporary but it often happens. We must try to see that children don't become too worried or nervous about their work if we want to avoid blocking.

Summary

As teachers we are all concerned with learning. We are responsible for seeing that learning takes place in the minds of the children in our classes.

As we saw at the beginning, it is very hard to sum up learning in a few words. This is because learning is a private, individual, internal process. We cannot see exactly how learning takes place in our selves. It is far more difficult to understand how learning goes on in other people.

Even though we don't know exactly how learning takes place we know methods that will make learning more, rather than less, effective. We must keep these things in mind in all our teaching to ensure that the most effective learning possible takes place in each child we are teaching.

There is not one definition of learning that we can apply satisfactorily to all learning situations. Some people define learning as a change or re-organization of the ideas in our mind and others describe learning as a change in behaviour. Children learn because they are motivated to learn. No two children are ready for the same learning task at exactly the same time.

We learn many things without anyone trying to teach us. This is called informal learning. Formal learning takes place in a school-type situation. This learning may be physical, cognitive, or social-emotional. When we are planning this kind of learning we must consider the importance of the following:

- appealing to as many senses as possible
- the length of time a child can pay attention
- his personal involvement
- the effect of success and failure
- our knowledge of the causes of remembering and forgetting.

TO THINK ABOUT AND DISCUSS

1. Can you describe briefly the difference between formal and informal learning?
2. Think of a learning task suitable for a group of children that you know and describe briefly the way in which you would try to motivate them intrinsically towards this task.
3. What do you know about forgetting that will help you when you are planning to teach and revise?

Individual Differences and What the Good Teacher Can Do

To Think About

A great deal of the time of the teacher is spent in what is called class teaching. The important question to think about is whether class teaching always or nearly always works well, and if not, how it can be improved.

Try to answer the following questions, *in writing*, before reading this chapter. Work by yourselves. Keep the answers for group discussion later. Some of the questions could be answered in one word ('yes' or 'no') but it would be more useful to explain them briefly.

1. Can a teacher teach a *class*? Briefly explain your answer.
2. Can a *class* learn, remember, understand? Can the whole class learn equally well, at the same pace?
3. In a first lesson on a difficult topic, about how many children put up their hands to answer a hard question?

Now look again at questions 1 and 2.

4. If the teacher asks the class to *write* the answers to a hard question about how many children would write anything at all? All of them? Most? Half? A few?

How many of these written answers would show clear understanding?

5. Do you think that your answers to the first four questions (especially to questions 3 and 4) show that class teaching always or nearly always works well?

A General Statement

No two children are exactly alike. Not even 'identical' twins are identical, or exactly alike. Children in the same family are usually more like each other than they are like children in other families but in most cases even children in the same family are far from exactly alike. One child may be taller than the average height for his age and another one in the same family may be shorter than the average height for his age. You may find in the same family one child who is lively, noisy and adventurous, and another who is gentle, quiet and timid.

One child in a family may get on very well at school, and another in the same family may do much less well.

The School Class

The first section talked about children in the same family. This section will talk about the children in any school class. How many children will you find in a class? Thirty? Forty? That's a far bigger number than you'll find in any family. A second, and a very important point, is that the children in any one class will come from as many or nearly as many different families as there are children in the class. You will see at once that these two points lead to an interesting conclusion: the differences between the individuals in any school class are likely to be much bigger than the differences between individuals in the same family.

Here is a third point for you to think about. When a teacher says, 'I teach the Preparatory Class,' or another says, 'I teach the Standard III Class,' what does this really mean? What each teacher should say is, 'I have thirty, or forty, different children in my class. I must do my best to teach each one of them as well as I can.'

Here is a fourth point. To help each individual in a class to learn well is just the work you are being prepared for. It is the teacher's hardest task. It is also the surest way of sorting out the best teachers from the poor teachers. The best teacher knows every child in his class as an individual, and helps each one to learn as well as he can. The poor teacher talks at the class as if it had one pair of ears. He teaches as if he expected every child to understand from the same amount of telling. He teaches and sets exercises as if he expected every child to be able to do the same amount of work in the same time.

This is foolish. It does not happen in any school class in any country. It does not happen in any school class anywhere in the world. It never has. It never will.

Ways in Which Individuals Differ

(a) *Physical*

Children differ from each other in many physical ('bodily') ways: in height, weight, strength, length and shape of nose and in a thousand other ways. As was said earlier, no two people are exactly alike. This is good, for it helps to make people and the world much more interesting.

Let us consider individual differences in height for children of nearly the same age. It is not that height is important to school work. But the example will help you to get a clear grasp of some important scientific facts. The best way, of course, is for you to find the facts for yourselves. Here is an experiment (an attempt to find what is true) for you to try.

When you go to a school for teaching practice ask the Headmaster for permission to try this experiment. Fasten a clean piece of wood about 5' 6" long and two inches wide, firmly to a post. Mark off on it the height of every twelve year old in the school. Use a 6" square of wood, and slide it against the post until it rests firmly on each head. Make the mark for each child carefully and very neatly. You will soon see the importance of neatness.

It would waste a lot of time if you tried to do the measuring for all the twelve year olds in the same period. Spread the children over different recess times. Another group of you could do the same thing for all the six year olds. (If a child is not sure of his age make only a faint mark so that he will not feel left out of it.) Now look at the kind of pattern the two sets of marks make. Take the piece of wood back to the College and discuss with your lecturer how to draw graphs, using a suitable scale, for both sets of marks. They will show three interesting facts:

- a wide range of individual differences
- a closeness together of the marks near the average, with bigger distances between them as the marks go further above and below the average
- a much wider *range* of individual differences for the 12 year olds than for the 6 year olds.

By the way, you've only just begun to be scientific by taking the measurements and by making graphs of them. The harder and much more exciting part of the work is to look for the *meaning* of the graphs. Differences in height do not matter very much when the children are doing their school work but the three principles (main ideas) are true whether you measure height,

weight, running speed, reading speed, reading comprehension, the ability to spell, the ability to do arithmetic and so on. So discuss your ideas about the graphs with each other and with your lecturers until you are clear about the *meanings* of the graphs. You will then really understand the three principles.

Brief mention must be made of two kinds of physical difference that can be very important in the class room. They are eye-sight and hearing. In any class there will be a fairly large number with average eye-sight and hearing, some with much better than average eye-sight and hearing, some below the average, and usually there will be one or two who find it difficult to read what is on the blackboard or to hear the teacher unless they are close. The good teacher will do the sensible thing. He or she will put these children near the front of the class. If a child's right ear is good, and the left ear no good, at which side of the class would you place that child?

(b) '*Personal Differences*'

Everyone knows of these. Some children are bold, others are timid. Some are noisy, others are quiet. Some will work steadily, others have to be pushed along. Some can be trusted, others have to be watched. In other words children differ very greatly in *personality* and in *character*. (A dictionary will help you to see the difference in the meanings of these two words).

The important thing is for the teacher to get to know and to understand every child in the class as well as he or she can. The good teacher learns much about his children by seeing them in the playground and by taking them on excursions. The good teacher learns about the kind of homes the children come from. This helps greatly in understanding them.

One of the hardest things for the teacher to do is to be the *same yet different* with each of his children. The teacher must be firm with every child, yet in different ways. Think of the difference between the shy, timid child, and the bold, noisy one. The teacher will expect each to obey. He must not be afraid to be very firm with the child who is too bold. He will be equally firm but in a different way with the child who is too timid.

Above all, the good teacher will have no favourites. Some children are much nicer than others but it is not a good idea to make a special friend of any child. It is bad for the class and bad for the child. It is much harder to be kind to the unlikeable child but he needs kindness much more than the child whom nearly everyone likes.

(c) *Differences in Abilities to do School work*

Did you notice that the word in the heading was 'abilities'—plural? There are many kinds of abilities needed for success in school and children of the same age or in the same class differ greatly in each and in all of them. Here are a few of them. Some children are good with their hands, some are poor. This makes learning to write or draw very difficult for some children. A few children make very few spelling mistakes others make a moderate number, a few regularly make a good many mistakes. A few children get nearly all their sums right, some get a fair number right, some get a fair number wrong, a few get most of them wrong.

When you teach something new you will find that a few children understand the new idea the first time you explain it, some will need it explained a second and a third time, others a fourth and fifth time, and a few will hardly understand anything.

Have you noticed how often the same words have been used: a few . . . some . . . some . . . a few? Now go back to what was said of differences in height and to the three principles, especially to the second one. These three principles are just as true of differences in school abilities as they are of differences in height. But two points must be added. Differences in school abilities among the children in nearly every school class are bigger than the differences in height; differences in school abilities are far more important in the class room than differences in height.

Can differences in school abilities be measured? This is an important question to ask. In a way, they are measured every time a teacher marks a set of sums, or a composition, or a list of spelling words. Here are a few experiments for you to try. (You might think that they are too simple to be called experiments, yet, if you do something to find facts with the purpose of finding an answer, then you are making an experiment.)

Here is the first one. Make a list of twenty words, from fairly easy to fairly difficult, for the class you are teaching. Dictate the words to the class. Mark each child's work. Make a graph from the number of errors made by each child. Now compare the pattern of that graph with the pattern of the graph for heights.

Do the same thing with ten questions in mental arithmetic. Again make a graph. It would be advisable first to show the list of spelling words and mental arithmetic problems to the teacher.

Remember to start with fairly easy tasks and work up gently to fairly hard tasks.

Here is a third and more interesting experiment. Prepare ten sums to be done on paper. Begin with fairly easy sums and work gently up to fairly hard sums. (Discuss the list of sums with the teacher.) Mark each child's work yourself, carefully. This time make two graphs, one to show the number of sums each child got right; the other to show the number of sums each child finished in, say, thirty minutes. You must count every sum finished whether the answer was right or wrong.

The fourth experiment will be harder to manage. Ask whether you might try this experiment while the teacher is giving an oral lesson with a good deal of questioning. Before the teacher begins, make a plan of the children in their desks with one square for each child. Make a small, neat stroke in the appropriate square every time each child puts up his or her hand. Then total the number of marks for each child and compare them.

Here is a fifth experiment. Tell the children in a middle or high standard that you are going to teach them a new poem. Just two verses, of four lines each, would do. Read it to them twice, then let the whole class read it aloud, from the blackboard, six times. Cover the verses on the board and ask the children to write them from memory. Now mark the results. Count the number of lines each child has right, or very nearly right, and make a graph.

You could think of many other experiments. You might prefer to try some you have worked out for yourselves. That would be fine. But you must get definite *facts*, and it will help you to see the meaning of these facts much more clearly if you graph the numbers you get from your experiments.

What the Good Teacher can Do

Let us talk first of the poor teacher. Even the poor teacher knows that the children in this class differ a good deal in school abilities. What makes him a poor teacher is that he ignores individual differences while he is teaching. Read the Section on 'The School Class' again. Give special thought to the sentence that says: 'The poor teacher talks *at* the class as if it had one pair of ears.'

Would you like to know a sure way of testing whether you are teaching poorly or well? Here it is. Suppose that you are teaching a new and rather difficult lesson. If you just talk and talk and talk without asking questions you're about the poorest kind of teacher

there is. Think again of the graphs and the principles stated and discussed in the preceding Section. A few of the children will understand and remember a good deal; some will get a fair amount; some will get a few bits here and there; a few will get so little that they might as well have been out in the school ground playing.

Now let us consider another teacher, teaching the same new and rather difficult lesson. He asks plenty of questions, but as soon as he gets one right or even a half right answer he goes on to the next point. Such a teacher is certainly better than the first kind of teacher, but he's still poor. He not only teaches 'as if the whole class had one pair of ears' but as if every child understood because one child could give an answer. This poor kind of teacher doesn't realize that he's teaching only the bright children well. But the bright children don't need much teaching! The teacher's hardest task is with the others.

Now let us look at the really good teacher. He realizes that he is teaching thirty or forty *different* children. He knows all about few-some-some-few and he *individualizes* his teaching. He varies his methods to suit different individuals. Here are some sure signs of the good teacher:

(a) *Questioning*

The good teacher not only asks many questions at each step of a difficult lesson, he tries to get answers briskly not only from bright children but from children in the large middle group and also from children who are slow to grasp new ideas. The good teacher will quickly find whether most or only a few of the children understand. If only a few, what does the good teacher do? He teaches that point again, using different words, and he asks even more questions.

By the way, would you like to know a test for finding out whether you're not just a good teacher but a very fine teacher? The test is a simple one. If children who do not understand will ask the teacher sensible questions then it is clear evidence that they have a very fine teacher.

(b) *Extra teaching for the slow children*

Did you notice the sentence in (a) above which said 'The good teacher will quickly find whether most or only a few of the children understand'? But did you wonder why it said 'most' and not 'all'? There was a strong reason for saying 'most' instead of 'all'. A few children are so slow to understand anything new and difficult that many children in the class will soon lose interest if the teacher tries to keep on until every child understands.

The good teacher will soon find which children cannot do the sums or write sensible answers. While the other children go on with harder sums or exercises he will get the slow children in a small group and teach them separately. He will be *very patient and very cheerful* in teaching his slow children, so that they enjoy their little special lesson. He will not expect them to do as many, or such hard exercises as the others, but he will try to help the slow children to *get what they do right*.

(c) *Group Work*

In the lessons given by poor teachers, the teacher, (one person) does over 90% of the talking and nearly 100% of the asking. But who *really* needs the practice in talking and in asking questions? In ordinary class work only one child at a time can answer a question, or read aloud, or recite a poem, or practise a language skill aloud. If you divide the class into six groups, six children instead of one child can do some active talking.

An interesting point is that the slow and the shy child will often talk more freely and *even ask questions* when working with a small group of his class mates instead of working with the teacher. One of the happiest things for a teacher to hear is to hear one child in a group ask others in his group, '*But why?*'

Is there any need to say to you that the group work in any class will be about as good as the teacher? What kind of group work will the teacher get who sits lazily in his chair?

(d) *Individual Work*

Think again of the wide range of individual differences to be found in any school class. Let us summarize them once more. Whatever the school task a few will learn very quickly, some fairly quickly, some fairly slowly and a few very slowly. A few, some, some, a few. These are facts and the best way for you to understand them well is to make the experiments suggested in the Section dealing with the ways in which individuals differ.

The aim of the good teacher is to help each child to learn as much and as well as he can. This is why the work in arithmetic, in what is called the New Mathematics, is individualized. Here is a clear example of the contrast between the old-fashioned class teaching method and the individual method. Let us examine the contrast.

In the old-fashioned class teaching method the teacher gave the same kind and the same amount of explanation to the whole class. You know what always happens. It can be stated in the

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same words: a few will understand quickly and well; some, fairly quickly and fairly well; some, not very quickly and not very well; a few, very slowly and almost nothing.

You know, too, the results when a class so taught is given a set of sums to do. It will be just the same: a few will get all the sums right quickly; some . . . ; some . . . ; a few . . .

In the modern teaching of the New Mathematics each child works with his own apparatus *at his own pace*. It is the teacher's job to help each child to do as much work as he can do well. This is a harder job to do than to stand in front of a whole class and talk and talk 'as if the class had one pair of ears'. But one is real teaching; the other is not.

One of the experiments suggested earlier was to find how much each child in a class can remember of eight lines of poetry after you read it from the blackboard twice and the whole class reads it six times. The range of differences in the results might suggest that individual memorizing of any kind of school work is better than class memorizing. With a good teacher, who can tell at a glance which children are working and which are dreaming, this is true. It is true not only for the learning of poetry but for tables and spelling and for any other kind of memorizing.

Summary

The main points in this chapter are:

- that no two children are alike
- that in any school class the range of differences is quite large
- that children differ in many ways, the more important of which are:
 - (a) physical
 - (b) personal (that is, in personality and in character)
 - (c) in school abilities
- that many of these differences can be measured
- that the good teacher can do a great deal to help *each* child in his class.

When you begin teaching you will have just the kind of a class that has so often been discussed in this chapter. Remember: the poor teacher teaches as if he expected all the children to learn the same amount in the same time. They never do. See that you become a good teacher. Look again at the Section headed 'What the Good Teacher Can Do'.

TO THINK ABOUT AND DISCUSS

Now that you have answered the questions at the beginning of the chapter, been through the topic in lecture/discussions, read the chapter (once? twice? three times?), it would be a good idea to get together in small groups (five would be a suitable number). Bring with you your written answers to the early questions at the beginning of this Chapter and discuss them. Also discuss the following questions:

1. Are there any statements, or words, in this chapter that are not clear to you? If you cannot agree on clear meanings what will you do?
2. Are there any statements in this chapter that you feel to be wrong? Say why.
3. Do you feel that an important point has been left out? If so, what is it?
4. Look at your own and each other's answers to the questions at the beginning of the chapter. Are you satisfied with them? If not, will you re-write them?

CHAPTER 5

Intelligence

CASE STUDY

The Headmaster sat in his office watching the school children walking home. Just then the teacher from Standard III knocked on his door. He was one of the best teachers in the school.

'Come in', said the Headmaster. 'Come in and sit down. You look worried.'

'Yes', said the teacher. 'I am worried. We are now almost at the end of the first term and it seems that one of my pupils has learnt nothing at all. Truly, it appears that he has not learnt a single thing. I feel ashamed. What shall I do? I need your advice.'

The Headmaster thought for a moment. Did the child have enough intelligence to learn properly? Was this pupil lazy?

'Well', said the Headmaster, 'what you must do will become clearer once we find out why the child is not learning.'

To Think About

1. 'Truly, it appears that he has not learnt a single thing', said the teacher. Do you think that the child had learnt nothing at all during the term?
2. Can you think of three reasons why this child might not be learning what the teacher thought should be learned?

What is Intelligence?

If we watch two children in the playground we will see that one will tend to be better than the other at doing most things. He will probably be better at playing games, at organizing his group. He will do better school work. He may also be the best pupil to send on a message, for he is less likely to forget the message or get it confused. We would say that he is more intelligent than the other child. He has a general ability to do better in many kinds of activities.

Intelligence is a person's ability to learn and to solve problems. Some people are able to learn quickly and easily, to remember clearly and accurately, and to understand and to solve problems easily. They are more intelligent than those who are slow at learning or who find it difficult to understand and remember.

When we describe intelligence we compare one person's ability with that of a group of people. We want to decide whether the person can learn to solve problems as well as most people, better than most people, or not as well as most people.

Though we often think of intelligence as a general, or over-all ability, we must also think of intelligence as involving a number of particular abilities. We might think of one student as being 'dull' and another as being 'bright'. Yet if we watch carefully we might find that the first student is 'dull' in some ways and 'bright' in others. Similarly the second student might be 'bright' in some ways and 'dull' in others. There are different kinds of intelligence. Some of these are: the ability to understand and use words (verbal ability); the ability to understand and use numbers (numerical ability); the ability to reason; the ability to remember clearly and accurately (memory); and the ability to see similarities and differences between things. People can have high ability on some of these and low ability on others. You will probably have heard a teacher say that a particular child is very good at reading (high verbal ability) but is poor at mathematics (low numerical ability).

The general tendency is for people to have about the same level of ability in all the factors listed above, yet in the case of some people there are quite big differences. Intelligence is both a general ability and a number of specific (or particular) abilities. When we are predicting whether a person will do well at some learning task we must consider his level of general intelligence together with his specific abilities such as verbal ability, reasoning ability and so on.

Intelligence has been defined as 'the ability to profit from experience . . . in order to adjust to new situations.' In this definition

intelligence is first the ability to learn from experience. The intelligent child will learn more from his experiences in life. These experiences will include all that the child does at school, in the playground, with his peers, and at home. Secondly, intelligence is the ability to adjust or to change behaviour so that fewer mistakes will be made in the future. These might be mistakes in spelling, in playing games or dealing with others. It will also include the ability to draw upon past experiences so as to find ways of dealing with new situations. The more intelligent child will find better (or more satisfactory) ways of handling new situations.

Intelligence has an influence on how well the individual will learn and perform in all situations, at school, at home, with peers, and so on. The more intelligent child will usually learn faster and perform better in all aspects of life.

Growth of Intelligence

A child's mental ability will grow from year to year. When a child is two years old he can say a few words. At four years he can speak in sentences. At six he can speak quite well. As his mental ability has grown or matured he has been able to learn to do more difficult things. It has been found on the whole that those who have above average ability as children continue to have above average ability throughout their life when compared with their peers.

Extremes of Intelligence

It has been found that all groups of people tend to have the same proportion (or percentage) of people with average (or normal) ability, with above average ability and with below average ability.

Usually we find proportions like these:

<i>Ability level</i>	<i>Proportion</i>
superior	5%
above average	20%
average	50%
below average	20%
mental defective	5%

Most children with a given ability will achieve at the level indicated. However, some individuals will not. Success at school depends on more than intelligence alone. Personality factors are important. We will find some children of superior ability who fail to be selected for secondary school because they have not bothered to work hard and have done poorly in the primary school. We may find some of average ability who work very hard and go to secondary school and

then perhaps even go to the University. It must be remembered that success at school or at the University demands the determination to succeed, the ability to work hard and to keep on working.

Children who have very little intelligence are said to be mentally deficient and are called mental defectives. Mental deficiency is usually caused by hereditary factors. It can also be caused by brain damage through accident or through disease. Mental defectives are usually born with a very low mental ability. These children find it very difficult to learn, to remember and to understand things. When they are fully grown adults they will have the mental ability of a child. They will behave like children who are from three to ten years old. They might not learn to speak very well and will probably never learn to read or to write. At present we know of no way to improve or increase their intelligence. We can only try to help them to become happy, useful people.

Children who have superior intelligence find it easy to learn, to remember and to understand. Their ability is also largely due to hereditary factors. They have been given this ability by chance. Some will use this ability, some will not. Children who have superior intelligence often do well in later life. They tend to be more successful than those of average ability. They usually become the leaders in their community. They often have the most important and best paid jobs. This happens because they are able to do things more efficiently and thoroughly than people of average ability. In particular, they can do well at the more difficult and complicated jobs. If children of superior intelligence are given a good education and become honest and hard-working, they can do much for their people. Remember, however, that success demands the determination to succeed, the ability to work hard and to keep on working.

It has been found time and time again that teachers tend to concentrate their teaching on the average group of children within their class. They do not spend a lot of time trying to help the duller children to perform as well as those of normal or average ability. Often teachers make no special provision for the less or the more able pupils. Children of superior intelligence learn quickly. They soon become bored if the teacher repeats and repeats things in the hope that the rest of the class learn thoroughly. They learn to work slowly and to be lazy at their school-work, for they are not working to their full ability. Sometimes they find other things to do while the teacher repeats that which they already know. They become classroom nuisances as they begin to talk to other children or play with things on their desk. They do this because they are bored. This is bad. It does not happen if the teacher plans his work so that every child in the class has to work to his own level of ability.

Why Do We Have Intelligence Tests?

Every year Headmasters in our schools have to make decisions about those children who have failed in the year's work. Should the child repeat the year or should he not? If the Headmaster of a secondary school lets a failed first year student stay at school for another year then it is probable that some child who has just completed primary school will not be able to attend the secondary school. Every secondary school has a limited number of places. The Headmaster has to decide whether the child who has failed would pass if he was allowed to repeat the year. Has he the ability to pass?

Perhaps the child is young. He may have had a lot of sickness during the year. Perhaps his father died just before the examinations. There might be many reasons for his failure. The Headmaster has first to decide whether the child has the ability to pass the examination. He must try to find how well this child can learn. If the Headmaster had an accurate measure of the child's ability to learn then he would be able to predict his probable success or failure fairly accurately. Such a measure would help the Headmaster to make correct decisions about his pupils.

For many years intelligence tests have been used to help predict whether or not a child is likely to pass or fail an examination, such as the Intermediate or Leaving Certificate. In general, those children who score well on an intelligence test will pass, while those who score poorly will fail. You must clearly understand that a score on an intelligence test tells us that it is likely or unlikely that a child will pass. It does not tell us that he *will pass* or that he *will fail*. Some children who have above average intelligence do not bother to work hard at their school work and they fail. Similarly some children of below average intelligence work very hard and manage to pass.

How Are Intelligence Tests Made?

We begin by deciding what we want the test to do. What is this test going to measure? For which age group will the test be designed? Once we know exactly what the test is to measure and who is going to do the test we then construct the questions (or items) for the test. These questions should cover the whole range of abilities we want to measure.

The test is given in exactly the same way to each person, that is, instructions will be the same. Each will have exactly the same time to do the test. When this is done we have standardized the way that the test is to be given (or administered) and to be marked. If every person does the same test under the same test conditions, then it is

more likely that any difference between scores on the test will show a difference in ability.

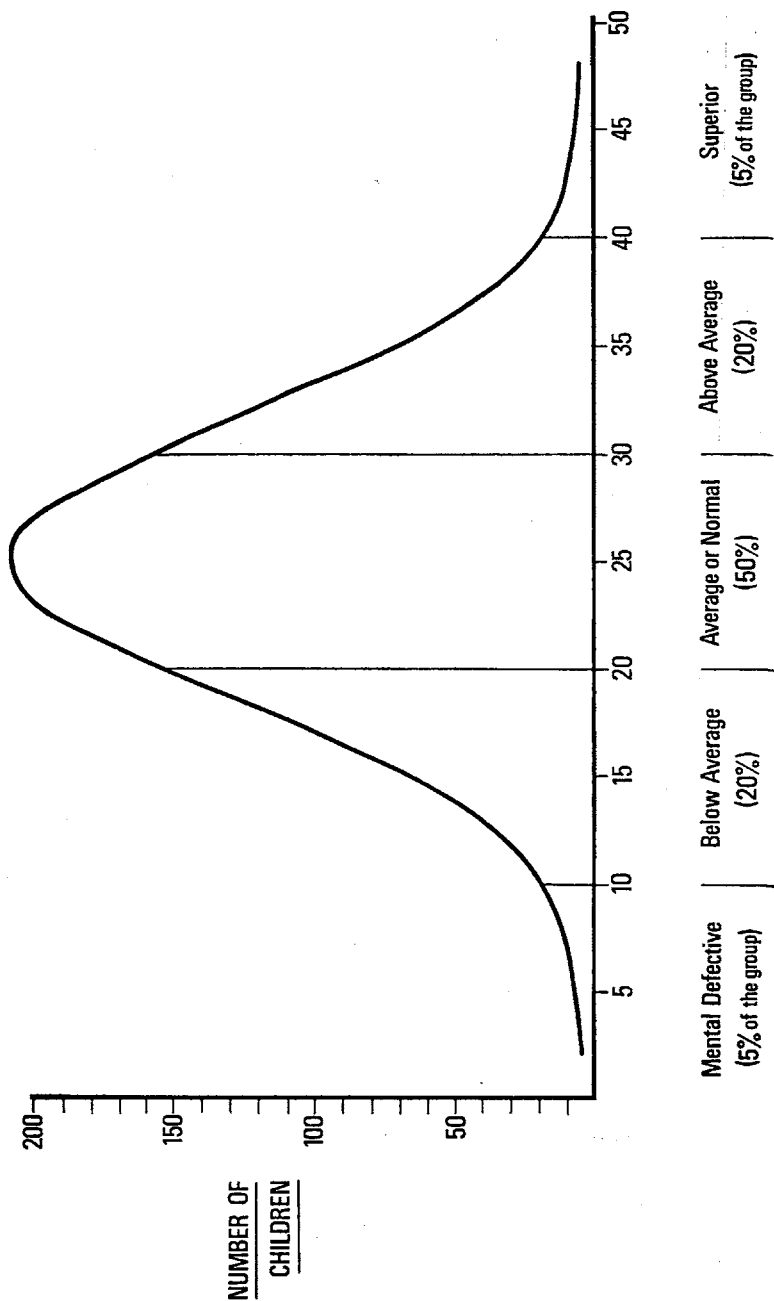
If one student scores 40 and another scores 65 then it is likely that the second has more ability (or intelligence) than the first. If we did not standardize the administration and scoring of the test, then it would be possible that the difference between the scores might have been due to such things as one student having more time to do the test. The difference between scores might be due to differences in ability or it might be due to differences in the way that the test was given. Unless a test has a standardized method of administration and marking, differences in test scores are meaningless. All intelligence tests, then, must be standardized.

Even though we may have followed a standardized administration and scoring for the test, a single score tells us nothing. We know nothing of the intelligence of the student who scored 40 on our test until this score is compared with the scores of other students of his age. If we know that most children scored 25 on the test and that only 8 per cent of them scored 40 or more, then a particular student's score is meaningful. We now know quite a bit about his intelligence. His score of 40 becomes meaningful when we compare it with the scores of others.

The last step in making a test is to look at the test scores and to make up norms (a range of scores against a fixed criterion) so that we can compare any individual score with the scores of the group (or sample). One of the ways we can use to compare scores is by making a graph. On page 50 is the graph of the scores of 1000 children who did an intelligence test.

From the graph you can see that most pupils scored around 25. Only a few scored above 40 or below 10. Children who scored 23, 24, 25, 26 and 27 are of average intelligence. Those who scored 43, 44 or 45 are of superior intelligence. By looking at the graph we can decide how we will divide the group of 1000 children into smaller groups. We might call these Superior, Above Average, Average, Below Average, and Mental Defective. This will help us to interpret individual scores. Our norms for this test would be:

<i>Letter grade</i>	<i>Mark</i>	<i>Description</i>	<i>Percentage of children at this level</i>
A	40 +	superior	5%
B	30-39	above average	20%
C	20-29	average	50%
D	9-19	below average	20%
E	8 & below	mental defective	5%



If a child scores 37 on our test, then we know that he is in the Above Average group. About 20 per cent of children have his level of intelligence, that is, 1 in every 5 children have his ability. He has more intelligence than 75 per cent of all the children in the sample group. We would expect him to do well (above average) at his school-work. He should be good (above average) at games and be able to get along well with his peers.

Let us see if you can use these norms. What would you know about a child who scored 14 on our intelligence test? Would this tell us anything about how well this child will do at school? Would some form of educational guidance be necessary?

What Types of Intelligence Tests are Used?

There are two main types of tests, individual tests and group tests. An individual test is one where a trained tester gives the test to an individual. Individual tests often take about an hour to administer. The trained tester is able to help the person who is doing the test to relax and to do his best. Individual tests are usually thought to be the most accurate way of measuring intelligence. They have the disadvantages of needing a trained tester to give them and that it takes a long time to test one person.

When we want to get a measure of the intelligence of many people (such as that of each person in a class) then a group test is used. These are printed or duplicated tests where the pupil reads the question and writes down his answer. These tests can only be used with people who can read and write. Group tests are fast and cheap. In about 40 minutes one person can test 30 to 40 people.

Can we use Tests from other Countries?

Tests which have been designed for children in other countries will probably not work with our children. Tests are made and used on the understanding (or assumption) that the people who do the test will have had an equal opportunity to learn about the concepts and information needed in order to answer the questions. The assumption of equal educational opportunity means that tests designed to be used in one culture cannot be used in another culture unless the test is revised and new norms made.

Tests especially made to assess the intelligence of children in Hong Kong are usually written in Chinese. These tests would not be suitable in their original form for use in a place like Tonga because few children in Tonga understand Chinese. Similarly, though tests used in Australia are written in English and people in Tonga speak English, they will have cultural influences which make a lot of the questions unsuitable. Look at this question:

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The following words are alike in some way. One is different. Underline the one which is different.

Banana, canoe, pineapple, apple.

An Australian child might think, 'The banana, pineapple and apple are all fruits. They are all grown in Australia. I must underline canoe.' A child from Tonga might think, 'Banana, canoe and pineapple can all be found in Tonga. We do not grow apples, so apple is the one which is different. I must underline apple.'

The influence of culture in any test means that the test will need to be revised and normed again if it is to be used with people in another culture.

The Value of Intelligence Tests

If a teacher has an accurate measure of a child's intelligence, then he can plan his work so that all children are kept working to their level of ability. If a child appears unable to perform at the level indicated by his intelligence test score, then the teacher can look for reasons. Intelligence test results are also useful for Headmasters because they are able to make fairer decisions about pupils if they have an accurate measure of their ability.

Intelligence tests are often used in secondary schools and in the selection of people for employment in the Public Service, Army, and other organizations. Intelligence tests are useful tools for educators but a testing service for schools is expensive to develop and operate.

Intelligence test scores have to be interpreted very carefully. Remember that there are many reasons why a child may do poorly on one test and well on another. People must be trained to interpret test scores. Intelligence tests can be very useful tools which help us to predict whether a person is likely to succeed or fail at a particular task. It cannot tell us that he *will* succeed or fail. Success or failure will depend on his determination to succeed, his level of intelligence, and on the amount of work which he does. In fact, it will depend partly on his intelligence but also on other personality factors, and also upon his home situation and his health.

Summary

In this chapter we have learnt:

1. Intelligence is the potential ability to learn and to solve problems. Intelligence has been defined as the 'ability to profit from experience . . . in order to adjust to new situations.'
2. Intelligence is thought to be inherited.
3. Intelligence is both a general ability and a number of particular abilities.

4. Children have differing levels of intelligence. The teacher should plan his lessons so that each child works to his level of ability.
5. Intelligence is one part of a child's personality. Success or failure in life will also depend on other personality factors.

TO THINK ABOUT AND DISCUSS

1. How do slow learners behave in the classroom? In the playground? At home?
2. Yesterday a teacher said to me, 'Mary is an intelligent child.' What did he mean? How does an intelligent child behave?
3. What do you think are the most important things to mention when writing a report on a student? Why?

CHAPTER 6

Personality

CASE STUDY

'Opa, surely not! I'm sick of that boy. He has been stealing again. I left two new pencils on my desk this morning and at lunch time I found one of them in a book under his desk. I am so tired of that child. He's always stealing! He must have been born a thief!'

The Headmaster looked at the teacher and slowly shook his head. 'I believe that no child is born a bad child,' he said. 'It's just that some children learn to behave in bad ways.'

To Think About

1. Why do you think Opa steals? Can you give more than three possible reasons?
2. What might the teacher do to stop Opa from stealing?
3. Should the teacher try to teach Opa not to steal? Why?

Personality

Think back to the time when you were at primary school. Think of the teacher you liked best. What was the teacher's name? What sort of a person was this teacher? Kind, strict, friendly, fair? What did his or her voice sound like? What sort of things made your teacher pleased? What made him smile or laugh?

When we think about a person and try to decide how this person is like other people and how he is unlike other people, then we are thinking about personality. When we discuss personality we are discussing the sort of person he or she is.

This is a very important question. Can you think of two people who are exactly alike? They must be exactly the same in physical things, that is, their appearance, the way they write, how fast they can run, how well they can swim or jump, or play sport. It is a fact that no two people are similar. They may like similar things. They may do similar things such as work hard or study carefully, or speak English, or believe in God. No two people, however, are exactly the same. No person has the same personality as another person.

No person in the world has the same personality as you have. This is a very important point for teachers to understand and remember. Every one of the hundreds of children you may teach will have a different personality.

Why do personalities differ? What causes each person to develop a personality which is not identical with any other? There are several important factors and these have been mentioned already in Chapter 2. Briefly, it is because people are born with different abilities and potentials (their heredity) and because they learn to think, feel and behave in different ways (caused by differences in their environment).

Heredity

We know that when we look at the children in a family they do look similar to their parents in some ways, yet each child is different in appearance and personality. Only in the case of identical twins do children look very nearly the same. They never are exactly. Research studies show that in most cases identical twins are born with much the same potential in intelligence, in abilities, and in temperament. But it must be remembered that they might not have exactly the same intelligence, ability or temperament. There may have been, for example, complications at birth or damage through disease.

In all other cases we can be sure that the hereditary factors will differ. When a child is conceived certain things are determined. The colour of the hair, the eyes and the skin is determined. The sex is determined. We believe that the child's potential intelligence is determined. Perhaps some temperamental potentials are also determined.

Hereditary factors seem to set certain possibilities for growth. It will depend on the environment (or learning experiences), as to whether or not the person will make full use of this potential. For example, though a person might be born with very superior intelligence he may never go to the University if there happens to be no school near his village which he can attend. The development of particular skills and abilities will only take place when the environment provides suitable learning situations.

Let us remember then that children are born with different abilities and different natures. Most parents will tell you that each one of their children was very different when a baby. Some babies are quiet and contented. Some cry a lot. Some are demanding, some are active. Heredity then, is the first important reason for differences in personality.

Let us consider the other important reason. Children learn to develop different sorts of personalities. We believe this learning begins once the child is born. Day to day experience teaches children to behave in different ways.

Environment

We adults feel that our personality does not change. We feel that in ten years time we will be the same sort of person as we are now. This is partly true and partly untrue. If you meet an old friend whom you have not seen for some years you will talk for a while and then perhaps think, 'Well, though we have not met for five or six years, he hasn't changed much.' Perhaps he has not changed much but there will be some change in his personality. And his personality will keep on making some changes, year after year. This change is caused by continual learning. He may learn to become lazy, or to become industrious, to become a leader or to avoid responsibility. The important point to remember is that although we remain much the same sort of person year after year (that is, our personality remains fairly constant) we do change because of the experiences we have in our life. This is true whether a person be twenty years old or fifty years old.

The main learning factors which influence the development of our personality are our culture, our family, our friends, our educa-

tion, our occupation, and later our marriage and our new family. We will consider some of these.

Culture

A society is any organized group of people who live and work together. We can think of a society as a big group, for example, the Tolai people of New Britain in New Guinea; or we can think of a society as a smaller group such as a single village. The important point is that each society has its own culture. A culture is the way of life characteristic of a particular society (or group of people). There are many differing cultures, for example, in a place like New Guinea.

The culture (or way of life common to a particular group of people) will include many things. The language of the people is an important part of their culture. It will have words, concepts and ways of expressing thoughts and ideas which are particular to that group of people. The usual manner of dress, for children, men and women will be part of their culture. Polite ways of behaving (or good manners) are part of the culture, as are other customs. The old stories or legends are also part of the culture.

In some cultures there are particular foods that people of certain ages or positions are not allowed to eat. For example, in a village I know of, the unmarried people are not allowed to eat certain types of fish. Once they are married then they may eat them.

Each culture has traditional ways of behaving which are considered proper and correct. These will include the way that children should behave in the home, towards adults, or towards strangers; or the way that unmarried people should behave, and so on. These ways of behaving, which are approved (or thought correct) by the group (or society) are called cultural patterns of behaviour.

If a person wants to be accepted (or liked) by his people (or society) then he must learn to behave in the ways that are considered correct. This will have an important influence on the development of his personality.

In every society some families will be considered to be more important, or to have greater influence, than others. Some families are the traditional leaders. Some families are wealthier than others. Some families are more progressive than others. Again, some occupations have more prestige than others. A village pastor, a soldier, a clerk, a magistrate, an agricultural officer or a patrol officer will have different status. People will consider some of these occupations to be more important than others. This is what is meant when we talk about prestige. The question that I want you to think about is this; what influence will the prestige or status of the family, or of the father's occupation, have on the development of the child's personality?

If a child knows that members of his family are the traditional leaders, then he might try to dominate the children with whom he plays. He might expect to be the leader of his group. On the other hand, if he is a timid or shy child, the other children, or perhaps the adults, might still expect him to be a leader even though he does not want to be the leader. As you can see, the position or status of this child's family might cause his parents and others to expect him to behave in certain ways. What the culture and the parents expect will have an important influence on the development of the child's personality.

The Family

The family has probably the most constant influence on the child's developing personality. The mother and the father are constant teachers. They insist that a child behaves in certain ways. 'Wash your face! You must be clean!' 'Sweep the floor. You must help your mother!' 'If he hits you, then hit him back!'

The parents will indirectly encourage children to behave in certain ways. They show approval or disapproval of the behaviour of other children or adults. 'Hasn't Kila done well at school. He will get a good job!' 'Isn't she a kind woman!' 'Doesn't that silly woman ever stop complaining!' As the child hears his parents and others make remarks like these he begins to develop his own pattern of behaviour for different situations.

Young children try to behave like their parents. They want to be like their father or mother. They see their parents as models. Small boys want to help their father and go fishing and gardening with him. They learn to copy his attitudes and often imitate his manner of speaking or other personal habits. Similarly small girls like to imitate their mother. Children will spend hours playing games in which they pretend to be adults.

Sometimes we find that birth-order has an influence on personality. This means that children who are born first (the eldest child) tend to have a different sort of personality from children who are born in the middle of the family or who are born last (the youngest). The eldest child is often quieter, more careful and less aggressive than the other children in the family. Children who are born after the first child are usually more aggressive and more demanding than first-born children. Perhaps this is because the first-born child, being the biggest of the children, must look after the other children in the family. If the eldest child gets into fights with other children they have no bigger brother or sister to protect them. They tend to become quieter and more careful. Yet the younger children are likely to be 'bossed' by the eldest. He will tend to make all the decisions unless

the younger learn to speak up for themselves. Yet they always expect their bigger brother or sister to help them if they get into trouble so they need not feel afraid if they fight with other children. They have someone to protect them.

Perhaps more important than any of these things is the relationship they have with their mother and father. If children are loved and wanted by their parents then they will probably grow into happy, confident adults. If they are unwanted or not loved by their parents they are likely to become unhappy, suspicious people. Some parents like all their children. Some parents like some of their children. The relationship between the parent and the child will have an influence on the development of the child's personality.

When we are trying to understand why a child behaves in some way we must think about the personality of his parents. We must think about the quality of the relationship between the child and each of the parents. We must think about the things he has learnt in his home.

Peers

When we talk of peers we mean children of about the same age in the same community. Children of the same age usually play together. When a group of children get together they find that some children in the group are good leaders. Some children want to do what everyone else wants to do. These children are called followers. Each child in the group will become friends with some of the children and might dislike others. In a short time each child will learn which of the others in the group he can 'boss around' and which children are likely to 'boss' him around. A prestige system or status system is formed within the group.

As each child plays with the group he learns how the other children react to him. If he wants to be liked and accepted by the others he must learn to get along with them. He learns to co-operate with them. He learns how to win their co-operation. He learns to obey the rules of the games. He learns how to assert himself when necessary.

While playing with his peers he is constantly learning to adjust his behaviour so that he can get along with his peers or age-mates. His experience with his peers will have an important influence on the development of his personality.

Summary

Heredity is important in the development of personality. It sets a potential for growth and development. Environmental experiences enable this growth to take place. The child will learn from his culture,

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his family and his peers. Other factors will also influence his growth. He will learn to behave in certain ways. He will learn certain attitudes, values and beliefs (that is, to think, feel and behave in certain ways).

Because he will face new learning experiences as he moves through life, he will have to adjust or change his personality (or behaviour) from time to time. Learning plays a very big part in shaping or forming personality.

TO THINK ABOUT AND DISCUSS

Is it possible to change personality to any significant degree? If so, how do you think this can be done most effectively?

CHAPTER 7

Discipline

To Think About

1. Do you like pushing people around?
2. Do you like being pushed around?
3. Should you become upset and cross with your students sometimes? If so, under what circumstances?
4. Do pupils deliberately try to upset teachers? If you think so, why do you suppose they behave in this way?
5. Who were the best teachers you had? What made them so good in your opinion?

Do You Know

1. Why children ask so many questions?
2. Whether talking to a class is a very useful method of teaching? Why? Why not?
3. Whether your pupils have a right to become upset with their teacher sometimes? If so, under what circumstances?

You and Your Pupils

A pupil does something he should not do. What is your response—a shout, a smack, a lecture, some extra work after school, or something else?

Have you ever stopped to think—to think about what you do in a situation like this and, much more importantly, why you do it?

Let us think about these and some other questions. We will consider what most people think discipline is and what it *really* is. In doing this we will see:

- that there are many ways of correcting that are not very helpful
- that when we punish we mean to hurt somebody
- that whenever we want to change people in some way we like to think that we are helping them (Are we?)
- that punishment is not always good discipline (Here we might wonder what is!)
- that it is not easy to get students to want to do the things we think they should do
- that the process of helping children to grow up with ways of behaving that are acceptable to other people begins at birth
- that order and control is important but that it is not always someone else's orders that should be obeyed
- that what we should be trying to help our pupils do is control *themselves*. They should be led to see that there are many things they can do and many things they cannot do
- that the best sort of discipline is when children make up their own minds to control their thoughts, speech, actions and general behaviour
- that there are some things that will help us to develop habits of self-control in the classroom.

Some Common Ideas

Do you know how the dictionary defines discipline? Look it up. (Mine explains it this way 'order as maintained in a military organisation, prison or school-room'.) Do you think this is a good definition?

Many people think that discipline means this sort of order and control. Others think it means the same as punishment. We all know that there are many different ways of punishing. We find that we want to punish pupils sometimes and we call this discipline. But is it? Maybe there is something more to it than this.

Negative Correction

These are forms of correction which do not often produce desirable results:

1. *'Don't do that!'* is a common expression. It is likely to be the phrase most frequently used by the teacher. It sometimes becomes a habit and is a negative form of correction. It is not very effective. The reasons for this are fairly easy to see. Firstly, there is great power in an active idea. Secondly, children like to imitate. When a negative way of correction is used this actually brings back to the child's mind the idea of what he is supposed not to do. If this is done often the idea teachers are trying to resist becomes active. The urge to imitate this idea is born and the child acts. Instead of teachers saying 'Don't make a noise,' 'Don't get dirty,' they should say, 'Let us be quiet please,' 'Try to keep clean,' 'This is a quiet class, don't spoil it.'
2. *Nagging* is another form of negative correction. It does not work because it recalls the fault which is to be corrected. It generally results in annoyance and rarely corrects.
3. *Criticism and blame* do not help much either. More often they confuse and lead pupils to give up, to lose the will to make an effort. Flowers do not unfold where there is a strong wind and sometimes pupils, when continually criticized, come to see that fault as something peculiar to them, something it is not much use trying to overcome. By emphasizing the faults and failings of our pupils we sometimes strengthen them.

Punishment—Reasons For And Results

When we punish we mean to hurt somebody. There are many ways of doing this. We can make them feel anxious, afraid or guilty. We can make them feel physical pain. We punish because we want to encourage a change in behaviour and we like to think we are helping. If we had to give a reason why we sometimes punish we would probably use one of the following arguments. We do it:

- to protect other people
- to stop others from doing the same thing
- to retaliate or pay back something that we do not like
- to stop the offender from repeating his offence.

These are often called the protective, the preventive, the retributive and the reformatory theories of punishment. However, punishment should be regarded as only one form of discipline and then not the most important. Certainly punishment is necessary at times. It helps pupils to understand that they cannot always do what they

want to do. What we need to remember is that it can be dangerous if used in the wrong way. We must think about the possible results and punish a particular student in the way that is most likely to change him. All students are different so we should not treat them all in the same way.

We need to know much more about those things that prevent mis-conduct at school. Just what are they? Do students do what they should through fear of the staff, through fear that others will disapprove or through fear of God? Maybe it is a little bit of each or perhaps most people do what they should from habit; it never occurs to them to behave in another way. Forces that restrict and restrain, that prevent us from doing something, are often negative and not very helpful in creating a desirable school atmosphere or spirit. The positive forces that stimulate pupils to do good things are very effective in creating a 'good' school. After all a school's name and reputation is made by what the staff and children *do*, not by what they cannot or do not do.

And we should note here that this includes staff as well as pupils.

Punishment should be based on definite rules or principles, not on the teacher's feelings of the moment. It should consider the motive as well as the offence. Was a pupil's disobedience, for example, caused by forgetfulness or a rebellious spirit? Each pupil is an individual and individuals are different. Any form of discipline in which the offence is of more importance than the offender is likely to fail. If punishment does not help the offender change his ways it is not very useful. Individuals differ widely in personality and character and respond in different ways to the same situation. Each child is a separate problem and our habit of treating all children as if they were the same when it comes to discipline is just as dangerous as our habit of treating them just the same when we want them to learn. There is no general formula which will bring results with all children everywhere.

Punishment as a form of discipline can only be justified if it aims to change the wrong-doer.

Discipline as commonly understood by many teachers is an effort, too often physical, to make a pupil do what you want him to do when he is not interested in doing so. This sort of discipline is largely an indication of our failure, our failure to reach the pupil, to contact him, to communicate with him and to make him enthusiastic. We want something done *our* way. We do not often stop to think what the pupil himself wants and what *his* way might be. This sort of discipline is quite common. It is the sort of discipline that people in positions of authority use to solve problems when there is a conflict between individuals.

Punishment and Freedom

If the idea of punishment is not such a good one, does this mean that the student has freedom to do what he wants?

No, not at all. Freedom is a relative word. It means that some restriction is absent. We may be free to do one thing but not another. We may be free to talk quietly in the class but not to shout. When we say that someone is free we mean that he is free from some thing. Words like 'freedom' and 'liberty' all mean that there are restrictions which *could* be there but are not there. 'Freedom' does not mean the absence of *all* restrictions. It means the absence of some particular restraints which have existed in the past and which may exist in the future.

There is no such thing as absolute freedom. Nature has limited our capacity to do things. Although we can do many things, when we compare them with what we cannot do they are not so many. In addition to the restrictions of nature, there are barriers made by the human society in which we live. These can be changed, but not by us as individuals. We are not free to step off a high building if we want to live nor are we free to drive on the wrong side of the road.

There are many things which we can do and would like to do, but are not allowed to do. We place other restrictions on ourselves by our own sense of right and wrong and by our own ideals. In addition there are many things which we can do, and would like to do, and are allowed to do, but do not do. We accept all these limitations without too much fuss and bother. It is only when someone further limits our activities, without any moral or social reason that we want to accept, that we think our liberty is threatened.

The problem of freedom is simply this; there are two sorts of freedom—inner and outer (internal and external). The less obvious, the internal, is by far the more important of the two and one of the main purposes of education is to develop in each student this inner freedom, this control by oneself of one's own actions.

The Beginnings of Discipline and Positive Correction

In the Home and in the School

Positive training rather than negative correction is needed. This should begin in the home under the direction of the child's parents. Habits of thought and action are being formed from the time a child is born. These shape the character of the child and make the job of the teacher easier or harder.

Character is not developed by chance

When a child is born he has a mind with a capacity to learn and a body to develop. The example and attitude of others

around him will influence him to become a desirable or an undesirable sort of person. It is important then that right influences surround the child leaving impressions that will produce a desirable sort of person.

Teaching Obedience

One of the first things a child must learn is obedience. This can be gained best through kindly firmness, patience, well-controlled sympathy and consistency in little things. If the child is treated in this way he will carry into his later life the attitude of regard for others, unselfishness and kindness that he sees in the example of his parents and teachers.

During his early years the child should be taught that to live happily it is necessary to observe certain laws. Your study of child development will show you that the young child thinks mainly of himself. Gradually he must be led to think of others. He must learn to submit to and to observe the laws of nature, of the home, the school, the community in which he lives and so on. What are some of these? His relation to these laws will be determined mainly by the attitude of his parents and teachers. The child's first lessons are learned from actions—he is what those around him *are*, not what they *say*. He learns more about standards of life and conduct during his early years than most people realize.

First Lessons Learnt by Imitation

It is natural for small children to regard their parents and their teachers, and sometimes all adults, as knowing everything. Usually they imitate all the things they see them do and hear them say. In action, thought and word they become like them. That is why parents and teachers should themselves practise those things they expect their children to observe.

Discipline Essential

Although correction in some form or other is needed by practically all children, it is generally less frequently needed than some people suppose. Correction should be consistent. A child should know what sort of punishment to expect for a certain offence. It should be given in justice and kindness. An angry person is a poor judge, and a poorer disciplinarian.

Correction given at such times is worse than useless since it merely provokes anger. In addition to correction, when required, to be consistent we should have a system of rewards for things done well—a pat on the head, a word of praise or a star on a

pupil's duty chart are as much a part of a consistent programme of discipline as punishment is.

Persistent and Consistent Correction

A teacher must be persistent as well as consistent because it is the connection of a cause with its effect, an action with its result, that teaches a child obedience and makes his world reasonable.

Danger of Threats

It is unwise to threaten children. Threats are generally only a temporary way of gaining control and not a very satisfactory one. Sometimes they are difficult or even impossible to carry out.

To threaten a child with a future punishment which is never given or to scare him into obedience by the sort of threat which says that the policeman is coming is not only insincere, it is unworthy. A child handled in this way soon loses respect for correction of any kind. No threat should ever be made which cannot, or should not, be carried out.

Rules in the classroom and school should be as few as possible. They should be sensible ones and the teacher should make sure that the children understand why the rule was made. Give clear and simple instructions and make sure children hear and understand. Then insist on obedience.

Order and Control

An important consideration is whether discipline means more than classroom order and control. Order in most organizations is gained through power over individuals, as indicated in the dictionary definition given earlier. This means that if a person in a position of authority asks for something to be done then it is done.

As we have seen this is not always the most effective way to gain control because the person being directed is not the one making the decision. Someone else comes to the conclusion that something should be done. This does not encourage the development of initiative, responsibility or other qualities of leadership.

Leaders do not wait to be told to do something. As soon as they see the need for something they make arrangements for it to be done.

Also, the person being directed may not be convinced that the decision is the right one. Thus a person with authority to command can take advantage of his position to insist on what he

wants. Of course it is not always possible to consult people when a decision is being made. Sometimes quick action is necessary and one person has to make the decision, but generally decisions are best made after discussion with those likely to be concerned.

The important point is that people should understand *what* they are doing and *why* they are doing it. Such understanding is the basis of intelligent action. Even small children can understand the need for order and control if it is explained to them carefully and simply. If children do understand, then many of the problems of order and control that teachers talk so much about will not appear. This sort of order and control means that the person in authority considers those under him as individuals. People like to feel that they have been given an opportunity to have their way.

Order then, is not the main part of discipline although, of course, order is always important in a classroom and a school. The sort of order needed, the sort of control required, is that which encourages learning activities. No one can learn when they feel insecure or frightened.

Backs Straight, Hands Folded!

The next thing to remember is that it is possible for a teacher to insist on his class sitting up straight and keeping quiet most of the time. But is this the sort of order and control most likely to result in learning? It is certainly difficult to gain and maintain unless children are frightened.

Children can learn from each other as well as the teacher. Before we can talk about order and control we need to think about what we want children to learn and the sort of studies and activities we want them to learn from. What we want our pupils to learn is called the content of our teaching and the way we teach it is called the method.

Children are curious and eager and this makes them want to find out all sorts of things and share them with their friends. That is why they ask so many questions. This is why it is difficult to keep them quiet and sitting up straight all the time. They do not need to be quiet all the time. They do not need to sit up straight all the time. In some sorts of lessons they will learn most if allowed to discuss things with other students. At other times they will need to listen carefully to the teacher. You will know the sort of lessons during which the children need to listen carefully and those in which they can move about freely, talking to other students. If you are too much worried about classroom control and discipline you are likely to forget

the purpose of your teaching. This often happens when teachers are new to their job.

Sometimes pupils are concentrating on their work, each on his own, and this needs a quiet classroom in which they can concentrate. If one pupil makes a disturbance this is unfair to the others and this should be explained to him.

If you are a good teacher pupils will come to know that there are different sorts of work to be done. They will be able to decide when it is necessary to be almost completely quiet and when movement, talking and noise are all right. This does not mean to say that the classroom should ever be in confusion—far from it. Remember that there is a lot of hustle and bustle at the market on market days, but things are being done. People are buying and selling. In the classroom situation, teaching is planning and making opportunities for pupils to learn.

If the teacher plans well and provides the right sort of opportunities in the class, the pupils will learn. The teacher cannot learn for the pupils, they must learn for themselves. That is why it is not a good method of teaching for the teacher to talk all the time. Telling is not a very efficient way of teaching because pupils rarely learn from it. In fact, they do not like to listen very much. They would much rather be active. Children who are learning actively do not worry the teacher with problems of discipline.

How Many Rules?

As teachers we often assume that the students who disobey are bad, that their choice is one between good and evil, right and wrong. Most often this is just not true because most choices are between a number of possible things which are neither morally good nor morally bad. It is a choice between this or that. Most of the laws broken by children at school are not moral laws but teacher-made laws. Quite often there are too many of these in a school so that there is little freedom left to the child to make up his own mind. He can only do what he likes when this is what the teacher likes.

It is best to have in the class and school only those rules which are absolutely necessary. Where rules set up limits not found outside the school and restrict the field of a person's voluntary activity, they should be looked at carefully to see whether they are useful. The over-disciplined class or school has a stillness about it which is a reminder of the days when discipline meant silence and obedience, and that was all.

We must admit that many such classrooms and schools are quite attractive to some people. Their atmosphere of order and control, of polite good manners to adults, impresses and makes us feel important. But is the school there for teachers and visitors? As its primary purpose is to develop the minds and bodies of pupils so that they can become useful citizens, this sort of school atmosphere is not good enough. The sort of freedom allowed in the school should prepare children for the range of freedom in the world. However, they do not have to be the same, because the adult knows more and has lived longer than the child and is protected by this knowledge and experience.

Students learn a lot from their own experience but the process is slow. It is not enough to leave pupils without guidance to find out things for themselves. They must be helped to find out things for themselves. Teachers are able to teach because of their greater knowledge and experience. However, they must provide the right sort of opportunities for students to learn. Students need protection as well as freedom and we should remember that freedom does not mean simply taking away prohibitions. Freedom in the class and the school means plenty of opportunities for choice and plenty of encouragement to greater effort. The pupil should not be left entirely free to choose but should be prompted to choose—by the activities available in school. These projects should appeal to his interests and attract him to put forth intellectual labour.

If we do this as teachers we will have put the student on the way to real freedom.

The Best Discipline

We have seen that:

1. Forcing people to do what we want is not the most important thing about discipline. We have seen also that order and control is only part of the matter.
2. Education provides little of practical value unless it helps a person to place on himself those restrictions that he knows—not feels—to be necessary. This is the act of a mature person—and children can be mature. They can be mature children. To be mature is to make decisions, after having considered the facts, and then to have the 'will power' or 'want power' to follow them through to successful action.
3. Good discipline is being able to control one's thoughts, speech, actions and general behaviour. Children can do this. It is the

teacher's job to help them develop the ability. It is possible for individuals of all types and at all stages of development to be mature. This means acting like a normal infant, or a normal primary school pupil, secondary school pupil, college student or adult.

4. This maturity (as self imposed discipline) is best developed in a friendly atmosphere in which the child is regarded as an individual whose wants deserve equal consideration along with his needs and with the wants and needs of others. What *he* wants and needs is just as important to him as what *we* want for him—in fact it is far more important to him. What each child wants is a chance to feel worthwhile, a chance to be a person wanted, respected and accepted as a human being worthy of dignity. I want it, you want it, they want it.

5. This sort of discipline is not easy to develop in pupils. Many adults have not developed it, cannot face reality and are not prepared to do what they know is necessary. It requires a creative and imaginative approach to classroom organization and management. Such an approach will not emphasize order and control of the 'be silent', 'sit up straight' variety as the most important thing. Many people will tell you that such behaviour shows 'good discipline' and that the 'well disciplined' classroom is quiet. We know, however, that good discipline, is self-discipline. It is self control or the ability to do what we know has to be done even when we might not at first want to do it.

6. This sort of self-control is perhaps the most valuable form of training that any teacher can encourage. It is formed by habits and attitudes—in the first place those of the pupil's parents and teachers. Habits and attitudes are formed over a period of time, often quite a long period of time, sometimes painfully and often with much difficulty.

7. It is best developed where the child has respect and affection for his parents and teachers. Then the approval or disapproval of the teacher can be used to discipline the child. This is not possible if the child does not worry whether he pleases his teacher or not. Indeed one of the greatest disciplinary forces that the teacher can use is the love of his pupils.

8. The teacher should endeavour to build up and keep this fund of affection in the class. It cannot last, and will not last, if the teacher uses much physical violence or continually nags and criticizes his students.

9. The world is in a lot of trouble today because nations cannot control themselves. Nations are made up of people, people like you and me. If they had learnt to control themselves maybe the world

would be a better place in which to live. If we do our jobs properly it will be.

10. Discipline, then, at its best, is not external control but internal motivation. For the sake of civilization we must encourage other people to see it this way too. In our schools we must act this way. Then our pupils will see and be more likely to act this way.

Some Suggestions

Even in the best of schools and classes children are sometimes mischievous and get into trouble. Because of this it is useful to consider some matters which will help to prevent or solve problems which might arise.

1. Avoid disturbance and distraction

(a) The best way to do this is to keep the pupils busy all the time. Then there is no time to misbehave.

(b) Another thing for the teacher to remember is not to talk and talk and talk. Many teachers talk too much. The pupils need to be doing things. They are not interested in too much listening.

(c) If we are to keep our pupils busy and interested in their work, we will need to plan carefully what we want them to do and think about how we want them to do it. If we have done this and made sure that the work we want them to do is within their ability and that we are going to teach it in an interesting way, there will be few problems in discipline. Grading your work to the levels of your students is quite important.

2. Develop a class image

Try to get your class to see themselves as being a good class. This can be done in various ways. 'We are a good class, we do things this way . . .' or 'We are good children because we . . .' If you actively and consistently promote the values and attitudes you think your students should have, you will develop a class conscience. They will know that there are certain things they should do and that there are other things they ought not to do.

3. Correct seating of motor and sensory pupils

The physical position of the teacher in the class has a great deal to do with the relationship of the teacher to his pupils and with good class atmosphere. The ideal class formation is a three-sided square or half circle with the teacher in the centre. The most active children are seated to the left and right of the teacher where it is easier to restrain them. Those who are shy

and tricky are placed directly in front of the teacher so that he can see them all the time and the average children take up the other positions. You should keep your reasons for the placing of the children to yourself. Do not, for example, tell the child that he is sly, or only average, and so on.

4. *Give the Disturber something to do*

We all know from experience that being corrected loudly in front of friends makes students 'lose face', and makes the one corrected hostile. Patience and self-control is needed in the teacher and if the disturber is given something to do this will temporarily solve the problem. He may be sent on a short errand or given something helpful to do, such as writing on the black-board, getting something for the teacher, holding up a chart or picture. This gives him time to think and does not make him 'lose face'. Sometimes this is all that is needed to change the atmosphere of a class. The student enjoys his job because it makes him the centre of attention and that is what he wants. However, he cannot disturb anyone while he is out of his seat doing something else, and this is what the teacher wants. There are lots of ways to give the one who has disturbed the class something to do.

As mentioned before, all this will be temporary. It will help the teacher to get through the teaching period that day. Unless he does something more he is likely to have the same trouble again—tomorrow or next week.

There is one other thing that needs to be done and if this is done consistently and persistently it will finally end classroom troubles.

5. *Talk to students personally and get to know them*

Public correction makes a child 'lose face', feel hostile and maybe become defiant (if he feels that the class is behind him). When you talk to him as an individual he has no supporters and the strength is on your side. This is the time and the way to do real correcting. Of course you will need to plan what you are going to say—to scold, to nag, to threaten, to criticize, to blame would not be very useful. You will need to:

(a) *Get on common ground.* It is no use saying, 'When I was a pupil I never did that.' This is enough to make anyone refuse to listen to what else is said. Admit that you also made mistakes at his age. Admit that you were often sorry because of the thoughtless things you did. Then remind the student that he was not 'bawled out' in front of his friends because you know

how embarrassing it would be to lose face. This attitude will make a difference, the beginning of a real difference if you persist. There is no rebellion, no revulsion. The child's heart is touched by sympathy and is open to hear your comments and suggestions.

(b) *Praise that which is good.* The child will expect you to talk about the trouble he caused. The thing to do next is to praise what is good in that child. No one is all bad. Even if you have to think hard, find some good points in the character of the person you are trying to win to the side of self-control. Mention his good points, discuss his ambitions and what he wants to be when he grows up. He will then know that there is some hope that if he listens and acts he can improve.

Help pupils to develop a better self concept, an image of themselves as being students who do the things that we think are worthwhile. If you give a pupil a bad name he will not see much point in trying to do better. Moreover, other people will start to give him a bad name too.

(c) *If a child has a failing show how this failing is spoiling the picture of the person he wants to be.* Do not worry about whether his wishes are what you think would be best for him. Agree that he has talents and abilities that will help him become what he wants to be. Then show him how the fault he displayed could, if not corrected, spoil his plans for himself. Can you imagine a driver who did not know when to go and when to stop? A pilot without self-control? Impossible! This the child will usually see at once.

(d) *Show the benefit of overcoming a fault.* When a child knows that his teacher is interested in helping him become what he wants to be some day, he will want to find some way to overcome his fault. Then you can make some suggestions which the child will be ready and eager to follow. Help him to put 'the screws' on himself and to control himself. Point out that he can be a good example and that others will follow his example in class and that with his help the lessons can become more interesting. If each pupil wants it, his class may become the best class in the school and the effort to make it so will give a feeling of satisfaction that he has not known before.

If you follow these suggestions it is almost certain that you will recognize a change in a pupil—a more willing spirit, and you will be aware that the process of correction has *really* begun. If the pupil shows the same fault again you should have another personal talk

with him. Every time it happens the result should be the same. It is this sort of consistent and persistent approach which will eventually bring results. You should not expect a miracle overnight. The process may be quite a long one since the pupil's habits of thought and action are being formed from the time he is born. It is not easy to change a pattern of behaviour which has taken so long to develop. But it is worth while trying.

I wonder how successful *you* will be?

Summary

Good discipline is something that comes from within us. It is not something that is forced on us by other people. It is being able to control ourselves.

TO THINK ABOUT AND DISCUSS

1. What is the difference between punishment and discipline?
2. Why can order and control not always be regarded as good discipline?
3. Why is the example of the teacher so important?
4. What is discipline?

Creativity

CASE STUDY

In an infant grade children were shown by the teacher how to make a picture of a house using a square piece of paper. The top corners were folded into the centre to form the roof line. The door was made by partially tearing it out from the bottom of the square. When completed the 'house' was pasted onto a larger sheet of paper.

Some years later the same children were asked to make group pictures in which houses were to be shown. The materials given to them were paper squares, large sheets of paper and paste. Those children whose task was to make the houses followed the method they had been given in the infant grade, with the result that each house in every group picture was identical.

To Think About

1. What reasons could be given to explain what happened?
2. What do you think the teacher could do to make sure that the children expressed their own ideas and used their own methods of construction?

Creativity

In every society people are ever ready to express themselves in some way or other. This expression might take the form of spontaneous dancing or movement to music. It could be in the form of drama of some kind—expressing the feelings of a story or myth. It could be in the making of some special and significant piece of carving or it could be in the composing of a new song for a special occasion. There are many ways, then, to express oneself. This expression can be imitative (copying something) or creative.

Creativity (which comes from the verb 'to create') means the capacity to make something new. Creativity begins with the imaginative play of the young child. This imaginative play is the child's way of expressing himself. He very seldom plays a game the same way twice. There is no need to. He plays how he feels at that particular time. If a child is angry then his play is forceful (sometimes cruel) and if he is happy and contented then his play is usually quiet and peaceful. The child expresses himself through play.

There are games, though, where children cannot create something new; that is, there is little evidence of creativity. Some card games, or games of chance ('ludo', 'snakes and ladders' and others) have fixed rules which leave little to the child's imaginative thinking. If a six is thrown on the dice then one automatically moves six places. How dull these games can get if you play them too often! You cannot change the rules to suit yourself. These games are controlled by strict rules.

We have said, so far, that to be creative you must make something new (original) or at least unusual. It is original because it is personal expression. We have also used the words 'imagination', 'automatically', and 'imitative'. A creative person has great imagination. He is able to see new things and see ways of doing them in his mind. He seldom works 'automatically' for he likes to try different ways of doing things before he comes up with a finished product. Above all, he likes to explore things by looking, feeling, smelling and using all his senses. He is seldom imitative. To imitate is to copy. To create is to make something new.

Before we discuss how important a child's environment is in developing the power of creativity, we should discuss this ability a child has to explore through his senses a little more. A child, for example, better understands fur when he can see it and touch it. Something is hot only when he touches it or can feel heat. A lemon is bitter only when it is tasted. These turn into very real experiences

for the child because he has experienced certain sensations. A child really knows an animal when he can touch it, feel or see it and when he learns its habits.

Now we can talk about a child's environment. All the things that happen to a child are communicated to him through his senses of seeing, feeling, hearing, smelling and tasting. The more opportunities we can give a child to experience things, by becoming aware of these senses of his, then the more he will learn and be able to use what he has learnt.

A child's home environment is important in the development of creativity too. His immediate family and circle of friends teach him so much of his early learning. He strives to copy actions of his elders and so experiences success and frustration. A key word here is *interaction*. The child interacts (mixes with) things and people in his environment. The happier and more stimulating his environment, the greater will be his ability to create.

Where does the school fit into this? The school is part of the child's environment and often a very big part. As teachers, then, we must give the child the opportunity to create—be it creative writing (in the form of a composition), or story-telling, or dancing, or through music, or through art or craft.

There is a book called *Teacher* written by Sylvia Ashton-Warner which you should read. This is a story of the author's experiences in New Zealand teaching Maori children. She is a creative teacher getting highly individual and stimulating work from her children. Read it! You can teach this way too.

We could summarize our discussion so far by saying that all children are born with the urge to create. It is what happens to them in their home, their school and their social environment that determines whether this creativity will be developed or neglected. In some countries many societies have developed where parents do not have over-possessive or over-emotional contact with their children. These children are left free to make things, do things, play games, dance and so on in their own way. Such activities are more creative than those of children too closely controlled by their elders.

The teacher must allow the child freedom to explore and discover for himself. He must help the child to develop confidence in his own ability and judgements and feel free to use his imagination, ideas, intuition and impulses.

The Development of Creativity through Art and Craft

In the visual arts, especially drawing, painting and constructing, the opportunity to develop creative talent is ever present. Other expressive arts require the learning of basic skills (for example playing a musical

instrument). Art and craft provide experiences in creativity at all stages of growth from about the age of three years onwards.

Child art, as with all art, is symbolic in that it represents something. It is not merely imitative. Children usually approach their art work eagerly and use their personal experiences, their imagination and their intuition. Children are motivated because of this urge to create—to explain their feelings by action. They are not really interested in presenting a piece of highly finished work.

Young children should be given as many different kinds of material as possible to use in creating something. This applies to both art and craft activities. The separation of art and craft into two areas is not valid since the children are only working with different media, not pursuing different activities.

Some points to watch in art and craft lessons:

1. Be careful that children are not imitating already existing models. 'Craftwork' should never be dominated by the making of set models where specific instructions are given. Many so-called craft activities encourage this imitation. They do not encourage creativity.
2. Children should always start 'craft' activities by exploring the materials themselves. This helps them to make decisions—what to make and how to go about it. It makes them responsible for their own work.
3. Enjoyment while creating is the main aim. Rewards and punishments as motivation do not help creativity. If you praise one particular child's piece of work, then this could lead to imitation by other children who feel that their efforts have not been worthwhile. One child's work should never be praised above another's. Every honest effort, no matter how primitive it may seem, should be given equal attention.
4. It is not good art to produce exact copies of anything. It should be the expression of the child's experiences he has had with that thing (object or happening). As each child is an individual and experiences things differently, he must create in his own way.
5. Avoid any imitative exercises or problems such as colouring-in pre-drawn shapes (templates). This destroys, rather than assists, creativity. It is mechanical, not creative.

What is the Role of the Teacher in Art and Craft?

His role is that of fostering (developing) creativity. The following points will help you become a creative teacher:

1. Establish a creative atmosphere where children feel free to make their own decisions without fear of being punished or being ridiculed.

If the child is in fear of the teacher he will quickly revert to imitation and conformity—for it is safe!

2. To develop a skill there must be much personal experience. The child must be allowed to perceive—to see, rather than merely look at, his environment. Aristotle once said: ‘When mind and imagination are at work, the whole person is engaged in the chosen activity.’
3. The child’s imagination must be stimulated. The teacher must bring his imagination and outlook to the level of the child so that he can fully appreciate what the child is trying to portray. Imagination, inquiry and sympathy are all important ‘helpers’ in creativity.
4. To assist creativity a teacher must himself be creative. As a child’s mind and ideas are flexible, so too must a teacher be flexible to change.
5. Children should be allowed to arrange their own working environment where possible. This could include letting them decorate the room and display their own pictures.
6. Teachers must cater for individual differences in their pupil’s activities. There should be equipment and activities ready for the more able child and for the child who has ‘problems’. Equipment and resource material should be available for spare-time work.
7. Teachers should be aware of changes that occur in awareness and interpretation of the child. This should be studied as part of child growth and development. He should not be surprised by unusual approaches or forms of expression. The more freely a child can talk about his work, the more likely it is that what he has done is personally expressive and therefore creative.
8. The teacher should be a constant source of inspiration, but he must never force his own ideas upon the child.

Traditional Art and Craft

Much has been written about preserving traditional art and craft forms. Care must be taken that attempts to preserve traditional forms are not merely imitation of the work of others. Copying traditional patterns has no more merit than copying other art forms and usually results in sterility (nothing new being created).

Rather, traditional works should be used for inspiration and appreciation.

Summary

Art and craft lessons provide very real scope for the development of a creative approach to learning. A child is able to use his experience, his insights, his imagination and his love of exploration. He

does not need to acquire specialized skills first. What he does need is a wealth of personal experiences at each stage of his development.

Creativity can be carried through to all other subjects. The aim of fostering creativity in art is to develop the child's creativeness in other aspects of living. A history lesson can become creative if the child identifies himself with the people, the action and the event. He could record his impressions, feelings and thoughts in a mural or diorama. Whatever his activity, it is essential that the child identifies himself with whatever he is doing. The child explores his own understanding and feelings while the teacher gains an insight into the understanding of the child. There must always be personal experience, perception and creativity if our teaching is to become alive for the child.

TO THINK ABOUT AND DISCUSS

1. Recall some of the things you have learnt at school and decide how you learnt them.

- Were you always shown or told what to do?
- Did you always ask for advice and assistance when you had to find out something, make something or solve a problem?
- Did you ever discover something by looking and thinking on your own?
- Did you ever feel that you could have found out an answer for yourself if you had not been shown?
- Did you like people making suggestions about how to do something when you had already decided on a method that you knew would work?

2. In the introduction to this book the question is asked: How can schools best prepare pupils for the sort of life they will have to live in the future?

The future will bring many changes, so another question must be asked: What kind of people do you think are needed to cope with these changes?

3. Professor Jean Piaget, a Swiss psychologist, has written:

‘The principal goal of education is to create men who are capable of doing new things, not simply repeating what other generations have done—men who are creative, inventors and discoverers.’

Many of the words used by Piaget—‘create’, ‘new’, ‘inventors’ and ‘discoverers’—have connected meanings.

How can they be connected with the words ‘change’ and ‘future’? What can the school do to assist in the education of children who will become, ‘Men who are creative, inventors and discoverers’?

Measuring Education

TO THINK ABOUT

You can measure the length of a piece of timber or cloth, the area of your garden, a period of time, the speed of movement of a vehicle, the weight of a bag of rice, the volume of water in a bucket, the amount of money in your pay envelope and the temperature of the atmosphere.

Is it possible to measure education in this way?

You can judge whether a piece of food is good or bad, a new house built or only half finished, a garden tidy or untidy, a person helpful or lazy, the weather wet or dry.

Can you judge whether education is good or bad, better or worse, finished or half finished, successful or unsuccessful?

A driver usually knows where he wants to go, how to get there, whether he has the right kind of vehicle, how much fuel he will need, how to change the tyre if he gets a flat one and when he has arrived.

Do all teachers know what they are trying to do, what equipment and materials they need, how to change their programme when the pupils seem to have had enough and whether they have succeeded in their work?

SOME CASE STUDIES

A long time ago there was a king who had many gardens and many servants. One day the king called seven of his servants and said, 'Seven of my gardens need a new fence to keep the animals out. Each of you will work on the fence around one garden and you will finish by the end of ten days!'

At the end of ten days the king visited each of the seven gardens to check the work.

Case Number 1

The king was very cross with the first servant. 'What have you been doing all this time?' he asked. 'Why have you not finished the job?'

'But master,' said the servant, 'I did exactly what you told me. I have worked every day building the fence. Each morning I found that the work I had done the previous day had been stolen, but I didn't think you would mind so long as I kept working as you had told me.'

'Foolish fellow,' growled the king, 'leave my kingdom at once.'

. . .

The first servant thought of his job as a kind of ritual, an end in itself, which he performed because someone had told him to. It is possible for some pupils to sit in school year after year without making any educational progress at all. The teacher 'gives lessons' but does not know why he is doing it. He does not try to measure the education which is supposed to be going on in his classroom.

Case Number 2

The second servant had built an unusual kind of fence. The king had a puzzled look on his face as he came to inspect it. 'Why have you left these nine large gaps in the fence?' he asked.

'Well,' said the servant, 'I am not very quick at making fences. I knew I had only ten days to finish the job so I divided the distance into ten equal lengths. I could not finish a tenth in one day but each day I started on a new tenth to make sure I would finish the fence.'

The king was speechless.

. . .

The second servant was determined to get his job 'finished.' He was like the teacher who feels that he *must* 'cover the work' or

'finish the programme', even if the pupils are not ready for some of it. This kind of teacher thinks he is measuring education, but all he looks at are the clock, the calendar, the syllabus and the programme. None of these can measure how much the pupils have learnt, or whether they are ready for new work.

Case Number 3

The third servant also had built a strange kind of fence.

'What's this all about?' asked the king. 'Why have you built four fences along one side of the garden instead of one fence right around?'

'I liked working on this side of the garden,' said the servant, 'and I wanted to make sure I was making a really good fence.'

The king was astonished.

. . .

The third servant was a bit like the first one, perhaps even more foolish. He is similar to the teacher who starts off teaching quite well but even when some pupils, or all of them, know the work, he doesn't teach them anything new. They repeat the same lessons month after month. The teacher does not try to measure how much the pupils have learnt.

Case Number 4

The fourth servant was embarrassed as the king approached for he had been having a sleep every afternoon. 'Why have you not finished?' asked the king.

'I'm sorry, sir,' said the servant. 'I'm afraid I didn't realize how much there was to do and only when it was too late I found that I had been going too slow.'

'Stupid fellow,' said the king. 'You knew you had ten days to complete the job. Why didn't you measure your progress at the end of each day?'

The servant was too ashamed to reply.

. . .

The fourth servant understood what he had to do but he didn't concentrate on completing his programme of work. In some ways he was opposite to the second servant who looked at his programme and the calendar all the time.

The second servant was like a teacher who tries to measure his progress but uses the wrong measuring instruments. The fourth servant was like a teacher who is too lazy to measure anything at all.

Case Number 5

The fifth servant also had not quite finished and he, too, was embarrassed when the king approached. 'Why have you not finished?' asked the king.

'I really don't know,' replied the servant. 'I measured the whole perimeter of the garden when I started and found that it was 600 lengths of a stick. Then each day I built 60 stick-lengths of fence, but I still haven't finished.'

'Did you use the same stick each day?' asked the king.

'Oh no,' said the servant. 'I used any stick I could find. Why do you ask?'

'Why!' the king shouted. 'How can you make reliable measurements if you use a different kind of measure every time?'

The servant realized how foolish he had been and burst into tears.

...

The fifth servant tried hard but he did not understand how to measure. But before we condemn him let us think about our own ideas as teachers. Have you ever seen the following happen?

1. A teacher gave a spelling test last term and the average score for the class was 14. He gave a different test this term and the average score was 11. He was cross with the class for being 'worse' at spelling than they used to be. What other reason may have caused the lower score? Perhaps the second test was more difficult—a different 'measuring stick'!

2. A teacher gave an arithmetic test last term and a different one this term. The average scores for the class were 8 and 12. The teacher proudly told the inspector that his class had improved by 50 per cent. Would you have said the same thing?

3. A teacher made up five tests for his class at the end of term. The average percentage scores were: spelling 68; arithmetic 70; reading 65; social studies 79; art 82. The teacher wrote in his term report that the class was 'best' at art and 'worst' at reading. How did he know? Were all the 'sticks' the same length?

If your penfriend in another country tells you that he is 5 feet 3 inches tall and weighs 120 pounds you know exactly what that means. Feet, inches and pounds are *standard* measures; they have the same meaning for all of us. But if your friend tells you that his garden is 100 sticks long and 200 sticks wide you do not know what this means, unless you know how long the stick is. If he tells you that he scored 91 in English, 80 in maths, 62 in art and 145 in science at his last exam, you wouldn't know whether these were high scores,

low scores or just average. You would not even know whether he did better at science or art, unless he told you more about the tests themselves.

Then *how can* we measure the educational progress of pupils? How can we compare one pupil with another? How can we tell whether a pupil is best at maths, language or social studies?

We will discuss these problems later but first let us finish our Case Studies.

Case Number 6

The king moved to the sixth garden. The servant was quite sure he had done an excellent job and was waiting for the king to say so. 'I don't think any pigs will get through that fence,' said the servant, hopefully.

'Pigs!' roared the king. 'There are no pigs here. The only animals we have here are rabbits. You can't test a *rabbit* fence by seeing if a *pig* can get through it.'

The poor servant had just arrived from another country where there were only pigs and he expected that the same kind of fence would be needed.

. . .

The sixth servant did a thorough job but it was the *wrong* job. The king needed a rabbit fence, not a pig fence. Teachers also should make sure that their pupils are learning the things that are important to them.

The sixth servant used the wrong *criterion* in judging his fence. A *criterion* is a standard by which you judge something. The servant thought the fence had to be pig-proof and so he thought it was a 'good' fence. The king wanted it to be rabbit-proof, so the fence was 'no good'—the rabbits could get through it. The two judges used different criteria or standards.

Whenever we say that a pupil is clever, bright, or dull, or that he has done well or poorly, or that he has passed or failed, we always need a *criterion* to give meaning to these words. By 'clever' we probably mean cleverer than most pupils in the class, or of the same age. And what does 'failed' mean? Less than 50 per cent in an exam? We could set an easier exam and let them all 'pass', or a harder exam and let them all 'fail'. What does 'fail' mean? What is our criterion? Failed to do what?

We could say that the sixth servant used a test that was not *valid*. He built a reliable fence—it would not fall over and it was strong—but it was not rabbit-proof. Sometimes we try to measure education with tests that are not *valid*. We will use the word 'valid' again later.

Case Number 7

The seventh servant was just tying the last bit of wire when the king arrived. He was sure the king would be pleased.

'Well done!' said the king. 'How did you manage such a fine job?'

The servant could hardly speak he was so excited by the king's words. 'I knew that rabbits were the main problem here,' said the servant, 'so I knew what kind of fence was needed. As for timing the job,' he added, 'I simply measured the perimeter of the garden and built one tenth of the fence each day.'

'Good,' said the king. 'And it's quite clear that you measured the distances with a reliable measuring instrument because you have finished the work exactly on time!'

. . .

The seventh servant is something like a successful teacher. A good teacher:

1. Teaches what the children need to know.
2. Uses valid criteria to judge his work; valid tests to measure educational progress.
3. Understands his measuring instruments so that he does not draw wrong conclusions about his pupils and about his own work.

MORE ABOUT MEASURING

When you want to measure something you choose a measuring instrument that is *valid* for that particular job.

When we say that a test is *valid*, this simply means that it measures what we want it to measure. If you are trying to choose the best football players in the school it will not help very much to give all the pupils a spelling test.

Perhaps this is not a good example. Who would give a spelling test to help pick a football team? But sometimes it is not easy to see whether a test is *valid* for the measuring job we want it to do. Let us look at some measuring problems that we meet in education.

Problem Number 1

Teacher would like to measure pupils' *understanding* of social studies taught during the year. What sort of test would be valid?

1. Ask oral questions privately to pupils one at a time?
2. Set a paper with a few questions and let pupils write compositions or essays about each topic?
3. Set a printed paper with long passages to read before answering the questions?
4. Use maps and diagrams and lots of questions which need only short answers?

A clever examiner may be able to use any of these methods to make a valid test of social studies understanding but there are dangers in each of them. The first may be partly a test of social studies but largely a test of pupils' ability to hold a conversation, or of how frightened they are of the examiner. The second may be more valid as a test of ability in written expression than as a test of social studies, unless the examiner is skilled and careful at marking the papers. The third may have high validity as a reading test and little validity as a test of social studies understanding. The fourth may test pupils' knowledge of bits of information but not be a valid test of *understanding* of important ideas.

You must think very carefully about what you really want to measure and remember the dangers. You can also find some helpful suggestions in the books listed at the end of this chapter.

Problem Number 2

For some measuring jobs you need to be careful about the *difficulty* of the questions otherwise your test will not be valid.

There are forty-five pupils in grade 5 and twenty-five in grade 4. The Headmaster decides that ten of the grade 5 pupils should repeat grade 4. Some of them are not doing well in grade 5, and this will give the same number of pupils to each teacher. The Headmaster decides to make up a test. What does he need to remember about *difficulty*?

He is looking for the weakest 10 pupils:

1. If the test is *very* hard, he might find that more than 10 pupils get everything wrong so he will not know which are the weakest 10.
2. If the test is *very* easy even the weakest 10 might get everything right. The Headmaster would still not know who they are.
3. If the test is valid (just right for that particular measuring job), it will have some questions that only the best in the class will get right, some that perhaps only the weakest pupil will get wrong, and others at various difficulty levels in between. This should result in all the pupils getting different scores and it will be easy to see which are the lowest 10.

Problem Number 3

A good, valid test is *reliable*. It has high *reliability*. What is such a test?

A reliable test is one that 'tells the truth'; at least, it tells the same story if you give it to the same pupils a second time.

Think about a spelling test. You may want to rank (put in order) all your grade 4 pupils according to their spelling ability. Would you make a test of *all* the words they might know? That might be a few thousand words, far too many. Many of these would be so easy that all the pupils would get them right, so they would be wasted in a test. You need to find words of the right difficulty level, some of which would be fairly easy for grade 4 pupils and some fairly hard (see Problem Number 2). But there are probably still hundreds of words at the right difficulty level. How many should you put in the test?

Out of all the words that are the right difficulty level for a grade 4 test, you have to choose a *sample*. A sample must *represent* all the words from which it is chosen. If we use a small sample, say five words, no matter how carefully we select them this test is likely to be unreliable. Those particular words may be 'unfair'—hard for some good spellers and easy for some weak spellers. But if we use a sample of fifty words, carefully selected for the level of pupils we are testing, this will be a more reliable test—the best spellers will get the highest scores and the others will come in approximately the same order each time we give the test to the same group of pupils.

For a test to be reliable it must *sample* the subject fairly, and to do this it must not be too short.

Problem Number 4

Not all tests are for grading or ranking pupils and not all tests are supposed to sample a whole subject such as spelling, maths or social studies. Some tests are to find out whether pupils have learnt a particular thing or a small group of things. In this kind of test the teacher sets questions or test items based on one or a few particular curriculum objectives.

If one of your objectives for this week is to get pupils to spell a short list of ten difficult words, at the end of the week you will test those ten words. You hope that all the pupils will spell all the words correctly. You are not worried about reliability of the test because you are testing not just a sample but *all ten* words.

Spelling is one of the easiest subjects to test. It is sometimes not as easy to make up tests in other subjects. However, every teacher wants to know, somehow, whether his work is successful and he can only know this if he knows what the pupils are learning.

Problem Number 5

Some teachers know their pupils so well that they always notice:

1. Which pupils need special help, and what kind of help they need.
2. Which ones are ready for harder or different work.
3. Which ones are doing quite well but still need more practice on the same kind of work.

Sometimes we use tests to help *diagnose* difficulties. When you feel sick and go to a doctor the first thing the doctor usually does is to *diagnose* your trouble, or find out what kind of sickness you have.

Suppose some of your pupils are having trouble with subtraction in arithmetic but you don't know why they are going wrong. You could make up a *diagnostic test*. A diagnostic test consists of many items of one type, say ordinary subtraction, starting from the very easiest sum and introducing one new step at a time. If a pupil gets the first three steps right and then gets the fourth kind wrong, you can probably tell where he is having trouble. If your *diagnosis* is correct you will be able to give the pupil just the help that he needs.

Problem Number 6

The fifth servant (see Case Number 5) had trouble because he used a different measuring instrument each day. If you want to com-

pare pupils with one another in the same class, in different classes, in different schools, in different districts, in different countries, you *must* use the same measuring instrument.

For this purpose many education authorities have produced *standardized* tests. Probably the most common type of standardized test is used in reading but there are also many others used for maths, science, spelling, word knowledge and various other abilities and skills important for education.

A standardized test is carefully produced to make sure it is reliable and valid. If it is designed to test reading at upper primary grades it will be valid only for that purpose. You cannot use it at upper secondary level or as a test of mathematics. You must follow the instructions and use the test for its proper purpose, otherwise it will not be much use to you.

The handbook or instruction book for a standardized test tells you how to use the scores. It tells what *population* the scores refer to, for example: upper primary pupils in the Central District of Papua, 1970; or Form 4 students in South Australian high schools, 1967; or, first year high school students in New Zealand, 1961. If you can find, or buy, a standardized test that is suitable for the pupils in your school, you can use it to find out how they compare with the population described in the handbook.

There are various ways of expressing the scores. A score of '32' in the test may be equal to the average grade 5 boy in the fourth month of the school year or the average girl aged ten years nine months *in the population on which the test has been standardized*. This sort of information is given in tables in the handbook. If the test was standardized in another school system, these *grade norms* and *age norms* (norms are average scores) may not be the same for your school system. You can still use the test so long as you are careful about the conclusions you draw from the results.

If the test seems to be a good one, your education department may decide to give it to a large sample of pupils in your area to obtain *local norms* for grade or age. The test will then be quite valid for you to use and to compare your pupils with others in neighbouring schools.

Problem Number 7

One of our most familiar measurement problems is the *public examination*.

Public examinations are 'public' because they are usually held at important terminal points in the education system and certificates are issued so that the public knows the candidates' results. Employers advertise employment positions requiring public exam 'passes'.

Universities and colleges use public exam results to select their students.

Public examination papers are usually set by public organizations such as the Department of Education or a University.

They are said to have two main purposes:

1. They tell everyone (the public) how well students have succeeded in their schoolwork. This is useful for employers and those engaged in selection for higher education. If we do not select on the basis of school achievement the way is open for 'important' or rich people to get their children employed or selected ahead of 'unimportant' or poor people. And if we simply ask teachers to assess their pupils without a public exam they will all judge their pupils on different criteria; a 'good' pupil in one school may be weaker than a 'weak' pupil in another school.
2. If the exam papers are carefully and skilfully made each year so as to be valid tests of the school syllabus, this can encourage teachers to teach things which may be otherwise neglected. Most teachers want to see their pupils get good results in the exams.

However it is very difficult to test *everything* in a written examination; there are many things such as music, sport, art and other kinds of expression which are difficult to test but very important for the full personal development of pupils. These tend to be neglected when too much importance is attached to the exam subjects. Also, by making teachers 'cover the course' by exam time, are we not encouraging the 'second servant' kind of teaching? Not only that, but some teachers work so hard with the 'bright' pupils, who will do well in the exam and bring a good name to the school and perhaps to the teacher, that they forget about the weaker ones who have just as much need of real education. Do we put too much faith in tests and exams? Is the pupil who scores 70 marks better than the pupil who scores 68 marks? And is a short written test really a valid measure of how well students have succeeded in several years of school work?

Many people are worried about these examinations. Teachers and pupils become so anxious to score good marks and pupils become so afraid of 'failing' (where this kind of assessment is used) that they do not enjoy school work any more, especially near exam time. Teachers are afraid to experiment or try different programmes or methods of teaching because they might weaken the pupils' preparation for the exam. On the one hand teachers are told to use their professional skills to meet the needs of all pupils; on the other hand they feel tied to the examinations.

Most education authorities are looking for ways of reducing this

'exam pressure'. Can we do without public exams? If we *must* have them can we improve them? What do you think?

Problem Number 8

There are many more measuring problems that we could think about but here is the last one we will consider. What is the *main* difference between measuring in education and measuring in carpentry?

Perhaps it is this:

1. In carpentry you can see the piece of timber; you put the measuring instrument (ruler) against it and when you say how long it is someone else can check your measurement.
2. In education the things you are really trying to measure are invisible—ability, knowledge, skill, understanding, intelligence. You cannot see them and you cannot measure them directly.

We cannot see what is going on in a person's mind. All we can see is what people *do at a particular time*; answer the questions, write properly, make things, and from this we *infer* that they 'know', or 'understand', or are 'intelligent', or are 'interested' in something.

This is why it is often a tricky business making up tests that are both reliable and valid.

Measuring Education—Conclusion

There is much more that could be said. We have only tried to introduce you to this subject. New books are being published every year about tests, evaluation, using tests to help in better teaching and so on.

In this chapter we have thought about several kinds of teachers. Which kind are you? Which kind are you going to be?

Perhaps the main purpose of this chapter will be to help you *think* about your work. Are the pupils really learning what you think they are, and what you want them to? And when you *test* your pupils are you drawing valid conclusions from the scores?

TO THINK ABOUT AND DISCUSS

1. What do you consider to be the most effective ways of finding out whether students are learning?
2. Do students learn most of the things we hope to teach them? How do you know?

Further Reading

There are many books on this subject, but some that you may find especially useful are:

94 *Education and the Child*

Green, J. A. *Teacher-Made Tests*, Harper & Row, 1963

Australian Council for Education Research, (A.C.E.R.) 1967:
Making the Classroom Test

Dunn, S. S. *Testing in the Primary School*, A.C.E.R., 1962

Dunn, S. S. *Measurement & Evaluation in the Secondary School*,
A.C.E.R., 1967

CHAPTER 10

Guidance

Case Study

John was not the same happy boy he had been two years ago. His teacher had even noticed a big difference in his work and behaviour over the past few months. He had recently turned twelve and it seemed that as he got older he became sadder too.

When he was ten years old he was much the same at school as the other boys. He enjoyed playing games with his classmates and liked talking to his teachers. He always had a smile on his face. He was never at the top of his class when tests were given and was sometimes slow to understand new ideas but he always managed to cope and seemed to enjoy his work.

Of course his schoolwork was more difficult this year but his results on all tests were very poor. He never joined in any discussions in class or attempted to answer questions. In fact, he seemed quite withdrawn both in the classroom and in the playground. He did not play much and often just sat by himself, apparently thinking about nothing.

His older brother Simon, whom he liked very much, had finished primary school last year with excellent results and was now living away from home at a secondary boarding school. His parents were very proud of Simon and talked about him often. They hoped John would be just as successful as his brother.

TO THINK ABOUT

1. Do you think that John needed help? If so, what sort of help?
2. What do you think might have been some of the causes of his problem?
3. If you were John's teacher what would you do to try and help him?
4. Would you want to know anything, apart from what is mentioned in the Case Study, before you tried to help John?
5. Do you think any other people might assist you in trying to help John? Who? How?

Making Decisions

When children are growing up they seldom decide how much effort to put into their work or the things they like to do in their free time. They know how to behave, how they should act if they want other people to accept and respect them. They do not make many *decisions* when the word is used to mean:

- to make a clear choice after consideration
- to take a stand.

Older children become involved in educational decisions such as how long to stay at school and what courses to study. Children need to be helped to make decisions.

Adults make decisions for themselves based on their past experience and their knowledge of the world around them. Children have to learn to make decisions for themselves, but when they are young they have not had a lot of experience to base decisions on. Usually it is not until a child reaches the age of fourteen or fifteen that he can really begin to understand why he behaves in a certain way or what will happen as a result of his actions. He has not developed what is called *insight*.

What is Guidance?

Young children have to rely on the help and advice of adults who have had more experience. This help and advice is called *guidance*. Giving children guidance does not necessarily mean just telling them things. You can give guidance by example. How do you treat children? How do you try to control their behaviour? How do you expect them to behave towards you and towards one another? All of these are important when you try to set an example.

Who Gives Guidance?

Children get guidance of one kind or another from all the people with whom they come in contact. There are their parents, their teachers and specially trained people like guidance officers, medical officers and social welfare workers. We must keep in mind, too, how much help children get from one another.

Parents, more than anyone else, are concerned with bringing up children. Children spend most of their time with their families, so parents have the biggest job of guidance. However, few parents even in Western countries can do the whole job. Usually they do not know enough about education in schools. They do not know a great deal

about their own child's ability and how well his schoolwork compares with work of other children of the same age. In most cases they do not really know what their child is capable of doing (his potentialities). They may not understand what opportunities are available to their children when they leave school.

The teacher is able to help by getting to know his pupils well. He can then give information to the parents in his community so that they can give good advice to their children. Sometimes the teacher feels he cannot give sound advice to all his pupils. He needs extra information or some assistance in helping a pupil with a special problem. He then gets advice from his head teacher or from a specialist such as a guidance officer. These specialist officers are usually in short supply in developing countries, so most guidance work has to be done by the school staff. Teachers should remember to find out all the family details about children in their care. This will help in many ways.

The Teacher's Role in Guidance

All teachers are really guidance officers. If you are going to be a good teacher you must get to know each child in your class. You must also get to know as much about his family and his community as possible, so that you understand his behaviour. All children are different. They look different and they are different as we have already seen in Chapter 4; some are fat, some are thin, some are tall, some are short. They learn differently; some are fast, some are slow, some remember well, some forget quickly. They behave differently; some are shy, some are bold, some have lots of friends, some have few.

If you are going to help each child in your class, you have to know all these things about him. You have to keep good records of your pupils; about how well they do their schoolwork, about how well they join in lessons and about their conduct. Then you can begin to work out why they behave in the way they do and you can decide what is the best way to help each pupil.

I want to talk about four different ways teachers can give guidance to their pupils:

1. Educational Guidance. All children differ in their ability to understand school work. You will remember when you were at school that some pupils performed well and continued to be successful at school, while others had difficulty in understanding. You will also remember that some pupils completed set work quickly while others needed extra time.

A good teacher makes assessments of his pupils' abilities. He

watches his pupils while they work and makes records about which pupils are slow and which pupils always get their work correct and answer questions correctly. He can then begin to help individuals. He can arrange his timetable so that he can spend more time explaining to pupils who have difficulty in understanding. He can give extra or more advanced work to pupils who understand easily and can work on their own.

Keeping records on pupils is a waste of time unless the information on pupil record cards is useful and unless the cards are consulted regularly. The information on a record card must be accurate, up to date and objective. Teachers should write comments about their pupils regularly. Each comment should be dated because children's performance and behaviour change and it is important to know whether a comment describes something recent or something that occurred several years earlier.

Make sure that what you write is as clear as possible and will have meaning to other teachers or specialists who read your comments. For example, it is more meaningful to write, 'This pupil often spends his time drawing instead of doing the work set by the teacher', than to write, 'Doesn't pay attention'.

Children in serious difficulties with their schoolwork do not become problems overnight. Well kept records give the story of how a problem develops. Teachers should re-read their pupils' record cards often. In this way they will be aware of the children who are likely to have problems and can take steps to overcome them. Indeed, the best use of the individual school record is to help the teacher to help the child *before* his difficulties become serious. This is the real test of whether a teacher is a professional educator or a well-meaning muddler.

When a new teacher takes over a class he can get much useful information to help him plan his work with the class by studying the record cards of his pupils. Guidance officers and other specialists always refer to record cards if they are called in to assist with a special problem. They will not be able to give the maximum amount of help if the record cards are not well kept.

Pupil record cards should be kept strictly confidential so that a teacher can write honestly about his pupils, knowing that the only people who will consult the records will be other professional people concerned with children's education.

2. Social Guidance. In any classroom, a teacher will find pupils who seem to be very popular and others who seem shy and withdrawn. He may find some who are bullies or who are selfish and rude. He can think of ways of helping pupils who seem to need help in

getting along with others. Often, people who are shy do not have a lot of confidence. If a teacher can find out things a shy pupil can do well, he can get him to show such things to the class and to talk about his interests. This helps to build confidence and makes it easier for shy pupils to join in class activities. If a child receives praise for something he does well, this helps to give him confidence.

Often bullies are unsure of themselves. They do not understand the best ways to behave in order to be popular and accepted. Often, if they are given responsibility for some jobs and find approval when they do the jobs well, they will learn this is the best way to be accepted by others. A selfish, rude child may not think enough about other children and their feelings. If he can be taught to share experiences with others, for instance in project work in the school or in the community, he will learn the satisfaction of contributing instead of only receiving.

3. Emotional Guidance. Children who have emotional or behaviour problems are often the most difficult ones to help. They do not develop such problems overnight. Some children become aggressive and behave badly towards other children. Some children become so shy or frightened they keep to themselves and do not make friends. Some children seem to be always in trouble, in school and out of school. If children behave like this there is a reason. If you can find the reason you can begin to help overcome the problem and correct the behaviour. This usually involves talking to the child and his parents. Sometimes the help of a specialist needs to be sought.

The important thing is that a teacher who is prepared to know and understand his pupils is likely to begin to be able to help them. The teacher who thinks of all his pupils as being much the same, without many differences between them, does not know his children and is unlikely to be able to help or guide them.

4. Vocational Guidance. Because people have different abilities and interests and some people are prepared to work and study harder than others, they are suited for different kinds of jobs. A radio announcer has to be able to understand and write English very well. A teacher or social worker must be interested in working with people. An engineer must be good at mathematics and science. A farmer enjoys working outdoors and is interested in cultivating the soil. So when a student is considering what he wants to do he needs to be helped to answer the following questions. What sorts of things do I like to do? Do I find school work easy? For how many years am I prepared to study? Would I rather play than work? How much responsibility do I want when I start working?

These are difficult questions for the child to answer and a teacher can help a pupil to understand himself better if he has taken an interest in him and knows about his interests and abilities. Not all children will go on to a secondary education. Often parents find this difficult to understand. The teacher can help by explaining the differences between children to parents. He can also explain that children who will benefit most from going to secondary school are those who are performing best at primary school. He can help even more by knowing the particular abilities and skills of his pupils and showing parents and other villagers how they can be used in the community.

Examples of Good Guidance

I would like to tell you some stories about teachers who understood their pupils and were able to help them.

The first is about a teacher who noticed that he had some pupils who always performed well on tests, who nearly always answered questions in class and another group whose performance was poor, who did not seem to understand and who sometimes misbehaved. He said to himself, 'Is this group of children just naughty, or is there something I can do to help them?' He decided he would try to find out.

He began to set work for his more able students to do by themselves and he spent more time with the small group he was worried about. He found they did not understand him easily so he explained things very simply to them, worked with them slowly and praised them when they were successful. He found they were not shy to answer questions in a small group when the pupils 'who were always right' weren't listening. They began to be more interested and to make some progress. He had discovered that all children do not learn at the same rate.

The second story is about a teacher who noticed that he had children in his class who did not seem to belong to any group. They seemed shy and played alone or sat alone. He wondered what he could do to help them. He began to take notice of his pupils, of the way they behaved towards one another in the class and of the groups they formed in the playground.

He decided that for special lessons he would split the class into groups. He made the groups small and placed children where he felt they would be accepted and helped. He tried to put a shy, lonely child in a group where there was a very friendly child. He let the groups work together and play together sometimes. He found that his 'problem' children began to join in class activities more because they became accepted by their own small group.

The third story is about a teacher who became worried because many of her pupils seemed very tired by the middle of the morning and were unable to do their school work well. She began to wonder whether she was a very boring teacher or whether there was another reason for their sleepiness. She noticed that some of her brighter pupils were among the group who became tired.

She thought to herself that it would be worthwhile to check if her pupils were in good health. She arranged for the local medical officer to come to the school and examine her class. The examination showed that many of the children had hookworm and other diseases. Treatment was given and the class became much more lively for the whole of the school day.

These three teachers were good guidance officers. They observed their pupils carefully, they understood that help was needed and they did what they could to overcome problems. Their whole teaching programme became much more effective because they were aware of their pupils as individuals and were prepared to experiment in order to help them.

Guidance to the Community

There are three special guidance problems, which affect the relationship between the school and the community.

1. Sometimes parents' lack understanding of the job the school is trying to do. Many parents send their children to school so that they will get a job which pays good money and helps support the family. They do not really understand that education is useful to everyone, even if they do not end up in a well-paying job. A teacher who knows his pupils and their particular interests and skills well, can help to show parents how their education can be useful in the village.
2. Sometimes there is poor communication between the school and community. This problem is associated with the first one. Many parents do not visit schools to get any ideas of what their children are learning, so they do not understand. If teachers encourage parents to visit schools and they themselves visit the homes of the students and if the school becomes involved in the community by joining in community project work, both children and their parents can begin to realize the value of education to the local community.
3. Sometimes there is not sufficient employment for primary school leavers. Many of the children who complete primary school cannot go on to further education. Parents, children and teachers are all concerned about the future of children who do

not proceed further. Teachers can give guidance on this matter. A teacher who knows his community well can survey local employment possibilities to help with the local placement of some school leavers. He will be aware of the tasks a child will be required to do when he leaves school and the skills he must learn. He can work with the community leaders to establish programmes to teach children local skills which should be preserved and to teach them interesting skills to fill their leisure hours.

Special Guidance Problems

There will be times when a teacher feels he needs assistance with guiding some of his pupils. He can refer problems to guidance, medical or welfare officers. Guidance officers can help by supplying information about careers. They can give advice to schools that are organizing special programmes to help guide their pupils. They can often suggest ways of handling children who behave in a way which is peculiar or different from normal. They can give information about scholarships and opportunities for very bright pupils.

Any children who appear to have physical handicaps, such as poor sight or poor hearing, should be referred to a medical officer. Some children do not do well at school because they cannot hear what the teacher says or because they cannot see work on the blackboard.

Children who are poor school attenders or who seem to have problems at home can be referred to welfare officers who will try to help by visiting the children's families.

A teacher who becomes involved in the kind of guidance work mentioned has a big and time-consuming task. However, he receives his greatest reward when he looks back and sees how he helped in the development of children who have come under his care.

Summary

A good teacher is also a good guidance worker. He will be aware of the needs of children, the attitudes of the community in which he works and the likely futures of the children in his care. If he wants to offer as much help as possible, he will get to know all his pupils well, become aware of their individual differences and strive to cater for them as much as he is able to.

TO THINK ABOUT AND DISCUSS

1. Are there any signs that might show that a particular child needed extra help with some school subjects?
2. In what ways could you arrange your teaching programme to make time to give extra help to individual children?

3. What do you think are the most important types of comments to write on record cards if the cards are to be useful to other teachers?
4. What are some ways in which the school could help parents to become more interested in helping with their children's education?
5. What sort of activities could a teacher arrange that might help to give a very shy child more confidence?

Further Reading

If you want to read more about the matters mentioned in this chapter the following books are recommended: Australian Council of Educational Research (A.C.E.R.) Pamphlets, Primary School Studies Series.

Titles

2. *The Individual Child.*
6. *The Purposes of Teaching.*
8. *Children in Groups.*
9. *Priorities in the Classroom.*

Additional books you might like to look at are:

- Strang, R. & Morris, G. *Guidance in the Classroom*
Macmillan (New York, 1967)
- Bassett, G. W. *Each One is Different*
A.C.E.R. 1965
- Oeser, O. A. (ed.). *Teacher, Pupil and Task*
A.C.E.R. 1960.

Readings Section

Readings on Chapter 1

Reading 1 WHAT IS EDUCATION?

People who have had several years at school may feel that they know a good deal about education. But if we are to get anything like a clear understanding of what education is about, we must make a special study of it. What we remember from our schooling as children will not always help us to understand what education is nor assist us to be good *educators*. That is why we need to work out clear ideas of our own about education. Let us have a look at some meanings of the word itself.

Sometimes we use the word 'education' to mean a subject we can study. Thus we talk about Professors of Education or courses in education such as those we study at Teachers' College. The word 'education' is used, however, in three other ways and it is these which are often confused.

1. Instruction

An old fashioned but still too common meaning given to the word 'education' is 'instruction' (and very little else). The teacher tells the children what he wants them to know; he then tries to get back from them what he has told them. So long as they can give it back he thinks he has taught them something. The teacher shows them what he wants them to do, shows them just how to do it, and makes them practise over and over again. The teacher does most of the talking and all the showing. He is active, but the children are on the whole passive. Their learning is poor because it is largely mechanical. They may memorize, but with little understanding. They may practise the skills of reading and writing and drawing, but be able to make little creative use of them.

This meaning of education is a very narrow one and, unfortunately, is still too common. For people who had, or are having, this poor kind of schooling, it brings memories of boring and perhaps cross teachers, and of tedious lessons. It is unfortunate

that this meaning of education is one which many people who are concerned with education think about when they are doing their work. Some teachers too, think that this is all there is to the meaning of the word 'education'.

2. *Schooling*

A wider meaning can be given to the word 'education' than 'instruction'. Some people think of 'education' as meaning 'schooling'. This refers to all that goes on at school as part of the student's life there. *It includes the relationships between students and teachers and between students and students both inside and outside the classroom; while playing games, attending social functions to do with the school or even while having meals (if it is a boarding school). It includes the influence of the Head, of school rules and the ways used to enforce them; in fact all the activities which are part of the life of many schools. It includes also the physical features of the school such as the sort of building, type and size of classrooms and so on.*

Most people who are professionally interested in schools and students would agree with this meaning of the word 'education'.

3. *Life*

However, the widest meaning of the word 'education' includes more than all this. It refers to the sum or total of all the influences which help to develop the humanness of the individual from birth to death, whether formal or informal, systematic or incidental, in school or out of it. It includes parents, the home, neighbours, the area in which a person lives, what he sees, hears and does, what he reads and many other factors. In this sense education lasts a lifetime.

One philosopher has said: 'Our ideas on education take too narrow and too low a range. There is need for a broader scope and higher aim. True education means more than the pursuit of a certain course of study. It means more than a preparation for a job. It has to do with the whole being and the whole period of existence possible to man. It is the harmonious development of the physical, the mental and the spiritual powers.'

Planning in Education

It is important to notice that in each of these three meanings 'education' has a planned or voluntary part and an unplanned or involuntary part. Moreover, the amount of the unplanned part increases with each of the last two meanings.

In the classroom the planned part is most important: in the school as a whole, although the planned part is still there and very important, the unplanned part is important also. In the third and widest meaning of education the unplanned part is most important. Most of the things which influence people out of school are not, and many could not be, controlled by anyone. Not many people can choose, for example, where they will live or the neighbours they will live next to, or the people they will meet. All these sorts of things are included in the widest meaning of the word 'education' yet they are not planned and it is impossible to say if and when they will happen.

Why is this Distinction between the Planned and the Unplanned Parts in Education Important?

Perhaps an effort should be made to control much of the unplanned parts included in the widest meaning of education. The argument for trying to do so is that if they are not controlled there might be a conflict between what is being planned and done in the school and what is done outside the school.

What is Education?

In trying to find out the meaning of the word 'education' we have found out a little about what education is.

It is partly a planned process organized and conducted by adults to give children or adults certain information, skills of mind and body, ways of behaving and attitudes which are thought desirable. It is partly the person's response to his environment (all the influences and factors affecting him in the world in which he lives). It must always be remembered that the process of education includes these influences and factors outside the individual and also his response to them.

Aims and Purposes

Since education is to some extent a planned process, then educators who think about it, and other people who control it, have to have some aims and purposes in their minds.

This is very difficult because nearly everyone who thinks about education has a different idea as to what it ought to do. In actual fact it is impossible to say what we think education should aim at unless we know what we think firstly, about human nature and secondly, about the destiny of man (what man is like and why he is in this world). We must know something about the people to be educated and the sort of world we believe it would be good for them to live in. Then we can think about aims.

For example:

- (a) In 600 B.C. the *Spartans* thought of man mainly as a soldier. Education was therefore mainly a process of military training.
- (b) In *Athens* at about the same time, people thought of man as an individual as well as a citizen. Education was not compulsory and was aimed at self knowledge and citizenship.
- (c) The *Christian* thinks of man as a fallen creature who needs to be brought back to a likeness of God. Education is a process aimed at restoring man to that relationship with God which he lost at the Fall.

There is little agreement about what the detailed aims of education should be. One reason is that people have different ideas about man and the world he lives in. Another reason is that human nature is complex—we have minds and bodies, emotions and the capacity to appreciate beautiful and spiritual things. Sometimes people think about only one part of our natures and make their aims suit this one part. They tend to forget that there are other parts to human nature.

Each person is an individual with certain abilities to be developed. He is also a citizen, a member of the community (family, neighbourhood, town, sub-district, district, country, island, continent, the whole world). When we think of aims we should not limit ourselves to one aspect of human nature and forget about the rest.

It is difficult to agree about educational aims without some agreement about these wider and deeper issues as to what man is, what he could become, and what kind of life is most worth living.

Perhaps it is possible to agree to some common denominator about aims that most people will believe in.

If what we aim to do in education is worthwhile it must take into account man, society and the universe.

- (a) *The Individual*. What kind of creature is the individual? If the educator knows this, it will help him to decide his aims and his methods. Are human beings bodies, or bodies and minds, or bodies, minds and spirits? If more than one, which is most important?
- (b) *The Society* or national community to which an individual belongs may have many different sorts of social organization (tribal, totalitarian, democratic etc). Each has its own way of life, beliefs etc. An educator must think about this before he can decide what his aims are.
- (c) *The Whole World* of reality—birth and death, space and time, the physical environment, and the moral, spiritual and other

values by which we live—influences the individuals and societies that exist within it.

No one can live very effectively unless he has some ideas about the nature of this world of reality and his own relationship to it. For example, does consciousness survive death, does God exist and if so what is He like, is beauty real or not. Many of the daily choices of our lives and our ideas as to what is right and wrong depend on having thought about this. Whether we decide to ignore these things or not they should be of real concern to any man. Moreover, the educator must think about such things if he is to do his job properly. His answers to these questions will influence the sort of education he thinks children should have and the way he thinks they should be educated. It is difficult if not impossible to answer questions about the individual or society without thinking about man and the universe.

It is obvious by now that it is difficult to say what the aim of education is. But not too difficult. In fact there is not one aim but many—some important immediately, some in the long-run. Some appear to conflict for it is not easy to decide which is the most important at any time. There must be a balance between aims, for example, between the development of the individual and the wishes of society, between scholarship and sports, between arts and science, between the needs of boys and girls, between vocational training and culture and so on.

Definition of Aims

It would be widely agreed that education should aim at helping children to develop in a way that is personally and socially satisfying. It will provide the environment and opportunities, the stimuli and guidance that will satisfy both the needs of the growing individual and the needs of the changing society in which he lives.

This includes the well-being of the child and the well-being of society. They are interwoven and inseparable.

The *child* as an individual has certain abilities and possesses the power of growth and of responding to his environment. The educator will supply suitable conditions to help the child grow normally and develop his abilities and desirable attitudes. This is what is meant by *child-centredness* and by saying that children must receive education according to age, ability and aptitude. But the child cannot live apart from *society*—the group of people of which he is one member. Children, then, must be trained to live in the society in which they will spend their lives and must be trained to help preserve and advance this society. An individual's happiness depends on being able to live effectively in society.

Just what are some of these things that education must do?:

- It must prepare the young to live in their environment now and later. Children will need to learn skills that will help them to live well. They learn by watching, listening and doing.
- It must teach language, manners and values leading to unity and friendly living in the community.
- It must help to encourage a readiness and an ability to keep on learning. This is very important indeed in any changing culture. No one can know very much—even the most well-educated people. Our attitude towards the unknown is very important.

This is all very well, but it is not so easy to decide what to do in the classroom when all we have before us is a number of general aims. Moreover, there are important and immediate needs of villagers which teachers should do something about. The work of the teacher is not limited to students in the classrooms although most of his time will be spent helping them. Young villagers today need:*

- the ability to communicate in a common national language
- basic reading, writing, and computational skills
- a smattering of 'that stuff you learn in school'—partly for the information itself, partly as an experience shared in common with all children in the dominant society—including local, national and world geography, government and politics and elementary school science
- familiarity with standard written English and a standard dialect of spoken English
- knowledge of how to conduct business in formal meetings (such as those conducted by representatives of the government)
- opportunity to satisfy educational pre-requisites for higher grades or special training
- knowledge of the use of public transportation and communication facilities
- knowledge of an increased range of available leisure-time activities
- specific information regarding the most important type of work in the area
- knowledge of the nature of the work, and the formal pre-requisites, for certain occupations with which villagers have some contact but about which their information is incomplete,

* This list is from Chapter 7 of *A Kwakiutl Village and School* by Harry F. Wolcott. Copyright © 1967 by Holt, Rinehart and Winston Inc. (New York). Reprinted by permission of the Publishers.

such as teacher, minister, nurse, policeman, mechanic, clerk, or secretary

- health information specific to such problems as to how a too-selective adoption of the white man's diet is related to certain chronic health problems, or of available methods of birth control
- instruction in specific skills such as swimming that are related to accident prevention
- familiarity with a wider variety of models of drinking behaviour in order to establish a precedent for patterns of 'social drinking' as alternatives to 'going haywire'
- accurate information in indigenous rights and benefits, including such specifics as enfranchisement, voting, grievance procedures, welfare rights, and the present legal status of traditional customs.

Many of these needs can be dealt with in the classroom although teachers may not know much more than the villagers about some of them. Sometimes the kind of information the teacher has may just be general knowledge about a subject that is too abstract to be practically useful.

Summary

The word 'education' means different things to different people. It includes planned and unplanned parts. Before any planning can be done, it is necessary to think about aims and purposes in educating people. Before we can do this thinking we need to consider the individual, the individual as a member of society and the universe.

Education has two jobs to do. It has to preserve what is worth keeping in what people believe and do and it has to prepare them for what will happen in the future. (These are its conservative and progressive roles.) The amount of each which has to be done will vary from place to place and time to time according to the aims and values of society. This is because education is always carried out in a specific place and each group of people has a different background of ideas, beliefs and ways of living and doing things. It is not the purpose of education to provide people with a job.

Education brings about changes and this often causes confusion, problems, and conflict. This is because traditional ideas, beliefs, ways of living and doing things are questioned and begin to give way.

What do You Think?

1. Should any of the abilities or potentialities in a child (physical, mental, social, aesthetic, spiritual) be developed in preference to others?

2. What kind of society should individuals be educated to live in?

Your answers to these questions will depend on the thinking you have done about what is said in this Reading.

Reading 2 WHAT IS DEVELOPMENT?

Development is a process of change, of change from one form to another, but generally change into a more advanced form or state. Babies grow and develop into infants, infants into small children, small children into young people and young people into adults. Plants grow and develop.

Societies (groups of people) also change. This change can be small and take quite a long while or it can be fairly rapid. All societies are changing as they adjust their ways of living to the things happening around them. Thus there is a continuous process of change in the ways people live, in their beliefs and in their attitudes.

This process sometimes moves forward very rapidly, particularly when there is much contact with different people who have different beliefs, attitudes and ways of living and doing things. It brings new experiences and these new experiences are part of the process of education. The term education is here used in its widest sense. A village man recruited to work on a plantation in a different district has many new experiences. He learns from these experiences many things that he could not have learned if he had stayed at home.

Nowadays the countries of the world are often divided up into groups according to their stage of development. Some are called developed countries, others are called underdeveloped or partly developed. 'Development' used in this sense means different things to different people—to some it means independence both political and economic. To others it means an opportunity to gain an education or to carry out large constructions such as dams and big buildings, or to make many goods such as cars, radios, foodstuffs and so on. To yet others it means a chance to move from the country to the town.

Development is a combination of many of these things and of others as well. It is the process by which a country becomes more modern; a process of modernization. Modernization is generally seen as becoming more like the Western nations—like the U.S.A., England, Canada, Australia, and the countries of Europe. It means:

- Changing social institutions (the way society is organized, its customs, beliefs, attitudes, laws and practices)
- Changing political institutions (the way people are governed)

- Becoming interested in economic growth (the productivity of a country and the way savings and investment can be made to produce more growth and a higher national income)
- A desire for status, prestige, recognition.

Two important questions are:

- How can a country become developed?
- What are the barriers to progress?

We need to consider these. Before we do, it would be helpful to study in a little more detail just what primitive or folk societies are like and some of the characteristics of underdeveloped countries.

What Do You Think?

1. Is what most people call development really development? If so, in what way?
2. What are those things which are most likely to prevent progress in a country like ours?

Reading 3 THE FOLK SOCIETY*

An understanding of society in general and of the modern urbanized society in particular (that we seem to be most interested to live in) can best be gained through thinking about the societies least like them: the primitive, or folk, societies. (Primitive means having a simple, uncomplicated technology. It does *not* mean unintelligent.) All societies are alike in some respects, and each differs from others in other respects. Folk societies have certain features in common which enable us to think of them as a type—a type which is different from and contrasts with the society of the modern city.

- The folk society is a small society. There are no more people in it than can come to know each other well, and they remain in long association with each other. The members of the folk society have a strong sense of belonging together.
- The folk society is an isolated society. It is made up of people who have little communication with outsiders.
- Members of the folk society communicate only by word of mouth. Therefore the communication upon which understanding is built is only that which takes place among neighbours, within the little society itself. Knowledge of what has gone before reaches no further back than folk myths and legends, than memory and speech between old and young can make it go.

* This Reading is adapted from an article by R. Redfield in *The American Journal of Sociology*, Vol. LII, January, 1947.

- As individuals the members of a folk society differ very much from each other, but one big difference between the folk society and the quickly developing society is that in the former old people find young people doing, as they grow up, what the old people did at the same age, and what they have come to think right and proper. This is another way of saying that in such a society there is little change.
- The aims of a folk society are taken as given. They are not questioned.
- There is not much division of labour in the folk society except between men's work and women's work. What one person does is what another does. True, some men make better canoes than others but this is not all that they do. So all men share much the same interests and have in general much the same experience of life.
- We may imagine also the ideal folk society as a group economically independent of all others; the people produce what they consume and consume what they produce.

Thus we may say that a folk society is small, isolated, non-literate, only slowly changing, self-sufficient or nearly so and has a strong sense of group solidarity.

The folk society is a little world by itself, a world in which many needs and problems of life are met by all its members in much the same way. The ways in which the members of the society meet these problems are traditional. They are the result of long experience within the group in the face of these problems and these traditional ways have become so connected with each other that they form an effective and harmonious way of living. Such a way (or system) is what we mean in saying that the folk society is characterized by 'a culture'. A culture is a way of life characteristic of a particular society or group of people. It is based on those understandings that everyone agrees on. It is, as well as the beliefs and attitudes, the acts and the objects, in so far as they represent what is characteristic of that society. These acts express common understandings and help to preserve them. Ways of behaving are connected in thought and in action with one another, so that one action tends to lead to others and does not conflict with them. (You will remember that a society is a more or less well organized group of people who live and work together more or less closely.)

The folk society more nearly approaches a unified whole. Although small, it is a self-contained or nearly self-contained system which provides for all the common needs of the individual from birth to death and of the society through the seasons and the years. The

folk society is to be described, and distinguished from others, largely by these characteristics.

What Do You Think?

1. What is tribalism?
2. What forms does it take?
3. Is it good or bad?

Reading 4 UNDERDEVELOPED COUNTRIES

What are the realities of underdeveloped countries?

A careful look at underdeveloped countries will be very useful because it will help us to understand some of the things that may need to be changed. It is then possible to work towards changing these things and making our country the sort of place we want it to become.

1. Political Development

- Some countries have been independent for a long time.
- Others have only recently become independent or are in the process of becoming so.
- There is no wide sharing by the majority of people in political life.

2. Economic Structure

- They are rural countries which depend on products from the land. In New Guinea, for example, which is one such country, these are such products as copra, cocoa, plywood, coconut oil, rubber.
- Most people are busy with subsistence activities.
- The G.N.P. (gross national product) per head is low. This means that the income of the country, when divided by the number of people in the country, is only a small amount per person.
- There is generally little or no large scale industrialization with big factories and modern machines.
- Economic growth depends upon the development of agriculture, livestock, forestry, fishing and minerals.
- For producers of primary products the future depends on world prices for agricultural products and raw materials as much as efforts to increase and expand production.
- Most of the agricultural products on which these countries depend for development are already over-produced on a world market.

3. Manpower Resources

- Most people work at traditional rural subsistence activities.
- Most people have little contact with the modern sectors of the country.
- The employed labour force is a small proportion of the total population.
- There is a shortage of all classes of skilled and experienced manpower (professional and sub-professional) administrative and clerical workers, teachers, supervisors, and senior craftsmen.
- About two thirds or even more of the high-level manpower is expatriate.
- Most of the important technical positions in the public service, private industry and commerce and education are held by expatriates.
- Expatriates own most of the plantations which produce agricultural produce for sale overseas.
- The population is not stable. It is increasing because of the expansion of health services and the control of diseases. Some areas are already over-populated with far too many people trying to live in the area. Moreover, the expansion of education to rural areas and easier communication has encouraged a movement to the larger towns and cities. In these urban areas we notice over-crowding and unemployment. All this leads to demands for more education and better living conditions.

4. Development of Employed Manpower

- There are few opportunities for on-the-job training.
- There are few opportunities for the in-service development of talent and ability.
- Promotion and transfers are often based on political considerations and personal connections rather than ability and skill.
- There are too few programmes of realistic adult education in subjects such as community development, fundamental education, literacy improvements and agricultural extension.

5. Incentives and Employment

- Educated people are scarce.
- They can, therefore, choose from a variety of available positions.
- They tend, however, to choose from a small range of positions although these are not always those best suited to the country's needs. For example, often too many people want to be lawyers.

- Most prefer administrative and professional jobs to technical jobs. Why do you think this is so?
- These jobs tend to be in the more highly settled urban areas.
- The more important needs are generally in the rural areas (community development, teaching, agricultural extension, public health).
- High salaries may hinder development.
- Rapid localization can become a problem (the promotion of local people above others more qualified and better at their jobs causes waste of talent, low morale and inefficiency).

6. Education

- It is underdeveloped at every level.
- Only a small fraction of the population are reached.
- Wastage rates are high at the primary level.
- Its quality is low.
- Few places are available at high schools.
- The education system cannot meet needs for indigenous high-level manpower.

By now you may have decided that our country is a fairly poor, undeveloped, agricultural economy. It is likely to have a rural economy for a long time. Since it is in the country areas that most people live and work, it is in these areas that life must be improved so that people are able to find happiness and satisfaction.

This will not be easy to achieve. Progress may not be rapid but if the two great resources of most countries—their land and their people—are used to the best advantage, then improvements in village life will result.

What Do You Think?

1. Are there any danger points in the process of development?
2. If so, what are they likely to be?
3. What can be done about them?

Reading 5 EDUCATIONAL PROBLEMS IN AN UNDERDEVELOPED COUNTRY

The General Problem

By now you will have some idea of the sort of problems being faced in a country like ours. This will include the special problems of education. It is time to think about them in more detail.

The general educational problem facing the Government is to

design and provide a system of education which will enable the people to take their full place in the modern world.

The task is no simple one. Instead of being able to start with a brand new system, the government has to deal with a somewhat confused pattern of methods and ideas introduced from outside and more or less interwoven with well-established traditional ways of training children. Moreover, the educational system will be a failure to the degree that it does not provide training to meet both immediate and long-term goals. Immediate goals are usually related to an individual's continuing existence whilst the most important long-term skills for successful adaptation in any community, as we have seen already, are the social skills. These are developed skills of responsibility by and within social groups such as training in the making of group decisions and in leadership behaviour. Technical and technological skills, industrial and agricultural skills, as well as commercial and fiscal skills are important too, because they provide a basis for economic development.

General Aims

The broad objectives of educational policy are likely to be somewhat as follows:

- the political, economic, social and educational advancement of the people
(‘economic’ here is meant to include the technical and technological, the industrial and the agricultural as well as the commercial and the fiscal)
- a blending of cultures.

To attain these objectives it is necessary to:

- achieve mass literacy in a common language
- stimulate interest in, and assist progress towards, a higher standard of living and a civilized mode of life. (How can this best be done?)
- teach what is necessary to enable the people to cope with political, economic and social changes. (What do you think is necessary?)
- blend the best features of indigenous culture with those of civilization. (What are they?)
- provide a full range of primary, secondary, tertiary, technical and adult education for all classes of the community. (What type or types of education will best suit our country?)

Education then, must do as follows:

- Help children to grow up and develop into mature persons able

to play their part in society. In a world of conflicting currents from the old and new, schools must help them to make adjustments

- Help to create a modern sense of citizenship, which is often difficult to achieve where tribal loyalties are strong and different racial groups are living side by side. The contact of cultures causes tensions and these are increased when one race is politically dominant. These tensions are intensified by economic and social difficulties such as differences in economic and social status
- Impress on students the need to produce goods as well as services
- Help to develop a sense of responsibility for good government. Schools should introduce modern ideas and ways of living whilst at the same time preserving social continuity and stability. This is not easy to do.

To what extent are these aims being consciously followed and how effectively?

What is necessary, particularly at class and school level, to achieve all this?

Educational Aims In Our Country

Many rapidly developing countries are now passing through a difficult stage in which many changes in the way people think and do things are taking place—a passing stage between traditional and modern or Western civilization. Change and development is all around us.

For this reason there is no better time than the present to make sure that educational activities are, in fact, doing what we want them to do now and providing the basis for future development. Are they?

Reading 6 **EDUCATIONAL NEEDS**

The Needs Of The Individual

The needs of the individual are fundamental educational needs of all children no matter what their country. Their fulfilment assists the individual to attain personal satisfaction and happiness both in early and later life. These needs include the opportunity: to develop the skills, aptitudes and habits which come through sharing in the life of a good community; to master a useful language spoken in the child's country and also simple arithmetic; to gain a knowledge of the country's history and geography in relation to the outside world; to understand the fundamental rules of health and social

conduct; and to practise art and handicrafts. In addition, the individual needs opportunities, if his parents wish it, to practise religion. All these needs are as true of children in the schooled society as in the non-schooled (non-literate, tribal, folk) society.

The Needs of Society

However, universal educational needs are influenced by the needs of the society in which the children live. These will contribute to the stability and advancement of that society as a whole. Each country must develop its system of education according to its own special circumstances and stage of growth, with the proper emphasis on its particular requirements. At present there are four main needs in an underdeveloped country like, for example, New Guinea:

1. *Character Training*, including a real understanding that education is more than a collection of skills and knowledge in preparation for a government or clerical job and consists also of *values*, which need to be used (lived) whether a person is doing a professional or a manual job, skilled or unskilled.
2. A knowledge of the practice and principles of good agriculture by those who work on the land since development and prosperity is largely a matter of agricultural improvement. *Realistic rural education* is a specific need related to the economy of the country.
3. Equally important, for a minority, is training in the *technical skills* necessary for local industries, commerce and government services.
4. In a country divided by tribal loyalties, one of the most important needs is the promotion of knowledge and qualities necessary to the achievement of *national unity*.

How do you think these aims can best be achieved?

Readings on Chapter 2

Reading 1 THE SIX YEAR OLD

'Physical Characteristics

'6 years—very active; in almost constant motion. Activity is sometimes clumsy as he overdoes his actions and falls in a tumble.

Body is in active balance as he swings, plays active games with singing or skips to music.

He is often found wrestling, tumbling, crawling on all fours, and pawing at another child, and playing tag. Large clocks and furniture are pushed and pulled around as he makes houses and climbs on and in them.

Balls are bounced and tossed and sometimes successfully caught. He tries skates, running broad jump and stunts on bars. Some boys spend much time digging.¹

This is written about an American child, but, apart from a few things, like playing on skates and bars, it is applicable to a child in any society.

'Eyes and Hands

In many of his performances he makes a good start but needs some assistance and direction to complete. He is now more deliberate and sometimes clumsy.

Handles and attempts to utilize tools and material.

Cuts and pastes paper making books, boxes; and likes to use tape to fix things.

Hammers vigorously but often holds the hammer near head. Can join boards and make simple structures.

Is beginning to use pencil crayons as well as wax crayons for colouring and drawing.

Can print capital letters which he commonly reverses. Likes to write on blackboard as well as to use crayons and pencils. Attempts to sew using a large needle and makes large stitches.²

¹ This extract is taken from page 233 of *The Child From Five to Ten* by A. Gesell and F. L. Ilg. Copyright © 1964 by Hamish Hamilton, London. Reprinted by permission of the publishers.

² op. cit. page 236

Again you will notice that there are some things that a child in our country might not do because the materials are not available in his environment.

'Emotional Expression

Highly emotional. Marked disequilibrium between child and others.

Expansive and undifferentiated. Good or bad; sweet or horrid; adoring or cruel.

He knows 'everything'; boasts, brags. Likes praise and approval; resents correction and is easily hurt by a cross word.

Loves or hates mother.

Rapidly explosive with crying; strikes out physically or verbally, or has temper tantrums.

Quarrelsome, argumentative, explosive, rebellious, rude, 'fresh', stubborn, brash.

Noisy, boisterous and easily excitable.

Silly, giggling, grimacing, showing-off.

Resents direction, but is also over-conforming.

Domineers, blames and criticizes others, alibis.

Glowers and glows; has fire or a twinkle in his eye.

At times angelic, generous, companionable.

Jealous of possessions of other children.

May not be too responsive to humour at this age.

Uses language aggressively; calls names, threatens, contradicts, argues, uses mild profanity.³

'Teacher-Child

Child related to teacher through materials and activities.

Likes to conform to teacher's demands.

May even like discipline.

Usually likes teacher, and likes to please him/her.

Wants and likes to be commended.

Wants praise, attention and help from the teacher.

In awe of teacher. His/her word is law.

May need teacher to sit next to him and work closely with him for a period.

Apt not to know when to ask for help from teacher.

Likes teacher to talk with him about what he is doing.

Looks for teacher immediately on arrival, wants to be reassured that he/she is there. Brings things to school for him/her.

Does not like to have teacher laugh at him.⁴

³ op. cit. page 290

⁴ op. cit. page 353

Readings on Chapter 3

Reading 1 FACTORS IN READINESS

What is Readiness?

Teachers once thought that readiness was simply a matter of maturation—that is, a process of growth. They thought that if they waited long enough the child would grow and eventually be ready to learn.

Now it is realized that more than physical growth is involved. A child's previous experience, often called experiential background, is a vital consideration also. The child learns through his experience and this interacts (acts together) with the physical growth process.

There is another factor which must be considered with physical growth and experience. It is the child's *desire*, his motivation. Teachers know how important motivation is in learning. When the child is developing a readiness skill, he usually shows some interest in what he is doing, some deep-seated desire, some feeling of want which needs to be satisfied.

The last factor to consider when assessing readiness is the type of opportunity provided. For a child to achieve the state of being ready for learning, stimulating experiences which provide the right kind of opportunities for learning and practice are essential.

For example, it is physically impossible for a child four months old to learn to walk. It would be difficult to even predict at what age he would walk. This would depend on maturation, experience, opportunities and motivation. Maturation is the state of physical growth; experience comes from the example, encouragement and help given by adults; opportunity, in this case, is the freedom of movement; and motivation comes from the inner urge to move towards something he seeks, and to win the approval of his perhaps over-eager parents.

When should a child begin to learn a task?

Evidence shows that there is nothing to be gained by starting children on a learning task before they are ready. Children are

individuals and because of this they develop differently. As teachers we cannot and should not attempt to state that a child will be ready to do a certain task at a certain age. We must study each child individually. Spectacular results can be achieved in particular cases. For example, some children as young as three years have been taught to read. However, on the whole it is doubtful if these early learners will be any better off in the long-run than if they had begun to learn to read at about the usual mental age of six to six and a half.

Often these spectacular results are answers to *set* questions in the *unchanging* situations. If the task is altered a little, the child may be unable to do it. He may be able to read one particular book but not much the same words in a different book. In such cases his learning has been only mechanical. The very young child cannot really use the skill, that is, apply the knowledge (concept), in a variety of situations. Therefore, he has not fully learnt its meaning. On the other hand, if a teacher delays a learning experience for too long the best time for its introduction could be lost. There is a *best* time. Teachers must find out just when this best time is and make the most use of the opportunity.

We will consider now, in more detail, these factors of readiness.

Maturation

The term 'maturation' will be used here to refer to the natural physical growth and development of the child. It is that part of the growth process which continues even when opportunities to learn are limited. This is illustrated in the example of the child learning to walk, mentioned earlier. Until the child has sufficient muscular (physical) development no amount of training can make him walk. A baby's body has not developed the necessary muscular co-ordination to allow him to walk. However, as the child grows older and provided that his muscles develop and strengthen, he will be able to walk. A child's muscles do not develop and strengthen to the point where they can be used for walking just by the process of simple and 'abstract' growth. Environmental factors such as the quality and quantity of food, exercise and the example of others are important.

A child who was totally motionless and who never saw anyone else walk would not, by the age of two, three, five or ten, just 'mature' into the ability to walk.

Teachers must remember that no two children grow at the same pace in every respect or in quite the same way and they must allow for individual variation when assessing physical development.

Initially, the concept of readiness, as stated earlier, was restricted

to maturation. Studies have shown, however, that more than physical maturation is involved and that experiential background plays a big role.

Experiential background

When considering this factor we must look firstly at the child's home environment and the type of experiences it provides:

- What kind of village does he live in?
- Who are his parents? (Are they foster parents?)
- How many are there in the family?
- Do the parents care for him properly?

The home environment plays an important role in providing learning situations. In his very early years the child learns from his mother and father. Later he learns from the children with whom he plays in the village.

Teachers need to use their knowledge of the child's background when deciding *what* and *when* to teach. For example, in first reading lessons the teacher should use words from the child's background. These words could be: mother, father, baby, pig, house. It would be useless to introduce words which had no meaning for the child. The words will not be learnt if they lack meaning. Indeed, they will not really be words. Experiential background, then, is another factor that teachers must consider in the assessment of readiness along with growth, motivation and opportunities.

Opportunities

The question here is what sort of opportunity is necessary in order to promote readiness. The best type of opportunity is where the child is faced with a stimulating and challenging experience. Then learning will take place.

Practice is important when talking about opportunity. The child needs many opportunities of various kinds to practise a skill so that he will be able to apply it. This practice should not remain at the level of repeating over and over again what has been said or done (rote practice). Nor should it be forced on the child so that it becomes rather boring and uninteresting and meaningless. Instead, it should be through the provision of exciting activities which lead the child through discovery to new learning experiences. An example of this is modern mathematics, where, through spontaneous play with mathematics material, the child has many opportunities for practice and at the same time makes his own discoveries and corrects his own mistakes. In this way, the child is moving at his own pace and is rewarded by his success. It needs to be remembered, however,

that children spontaneously enter upon rote practice and learn much by it, for example, by sound-making leading to talking or body movements leading to the acquisition of skills.

If a child has sufficient physical development and has had the right type of experiential background, the third essential for developing a readiness skill is, as we have seen, opportunity. Next we will consider the fourth factor, motivation.

Motivation

The problem of motivation is more fully covered in the next reading. It should, however, be considered when studying readiness.

Children are by nature exceedingly active, curious and enthusiastic. Each of these words indicates motivation in operation. Motivation is essential in developing readiness. Although a child can be physically mature and have many opportunities to learn a task he will not learn it unless motivated to do so.

A boy of ten may have achieved the necessary muscular co-ordination to ride a bicycle but has little opportunity to do so if he does not possess a bicycle. He may have a strong wish to learn and even a strong incentive, or motivation, if he sees his friends riding bicycles and going around on them doing things which he cannot share. However, another boy of eight who has been given a bicycle may have a strong desire to ride it, although lacking in physical co-ordination. The desire may be strong enough to accelerate this co-ordination so that he is able to perform the task of riding.

Readiness can be influenced then, by motivation. If the desire to succeed at a task is strong enough, then the state of readiness can be accelerated. If, on the other hand, the desire to succeed is lacking, then the state of readiness is likely to be delayed.

An Example—Reading Readiness

The following factors of readiness have been discussed: maturation, experiential background, opportunities and motivation. Let us consider these factors in a specific subject—reading in English. We will see how some of them combine (interact) in a learning situation.

A question which concerns most infant teachers is, 'When is the child ready to begin formal reading?' In order to consider this question we will look into the problem of *reading readiness* and see how the factors we have talked about interact.

Two basic factors are maturation and experiential background. It would be just as well, however, to remember that it is unsafe to think of mental development as occurring by a process of simple 'maturation'. Neural (physical) maturation may occur, up to a point, independently from experience, but mental development does not. In

the same way the *mechanisms* for aural and visual discrimination may 'mature' up to a point, without experience, but the *abilities* for visual and aural discrimination will not.

We will need to consider:

- Mental development
- Visual and aural discrimination (because both are important)
- Opportunity
- Motivation.

(a) *Mental Development*

Success in learning to read can be related to the child's mental age when he begins formal reading. The term 'mental age' refers to the *level of mental growth* that has been achieved. For example, an *average* six year old will have a mental age of six. If a six year old obtains a score in a mental age test that is equal to the average score for all eight year olds, he is said to have a mental age of eight years. His rate of intellectual development has been faster than that of the average six year old. It is useful to keep in mind that a score on a 'mental' test does not measure something called *innate ability*, that is, ability which has developed by simple maturation. The child's mental age is a function of whatever it was that was innate (what he was born with); of its maturation; and of his experiences, opportunities and motivations.

A mental age of six and a half years has been suggested by some research workers as the best age for beginning formal reading. However, statements concerning the necessary mental age for beginning formal reading are meaningless unless considered together with the child's interests, attitudes and experiential background. Many children are mentally and experientially ready for beginning reading at an early age—that is before the chronological age of six and a half years. For others, the teaching of reading must be delayed for a time since too early an introduction could lead to failure and discouragement.

The Australian Council for Education Research says, 'To ensure that children will not fail in reading when they come to school, there has been a growing recognition that we should not press them and that for many, normal teaching of reading must be postponed until they are mentally and experientially ready for it.'¹

¹ *The Approach of Reading*, Australian Council of Educational Research, 1957.

It can be said then, that it is not possible to state a definite minimum mental age for beginning formal reading because other factors are involved—experiential background, opportunities and motivation. Teachers must consider each child individually and plan a reading readiness programme which will allow for individual development of readiness skills. The slow, immature child will need a greater overall development before beginning formal reading. On the other hand, the bright, mature child needs special consideration too, since he will soon become bored and frustrated if the work is not sufficiently challenging.

(b) *Auditory and Visual Discrimination*

Before commencing formal reading the child must be able to hear accurately and discriminate between sounds. This is called *aural discrimination* (the ability to *hear* differences and likenesses).

The child must be able to use his eyes correctly. He must be able to control their movement from left to right along the same level of print and be able to discriminate between words. This is known as *visual discrimination* (the ability to *see* differences and likenesses).

The above-mentioned skills can be improved by training and should be included in a reading readiness programme. Such a programme would take into consideration the following activities.

Visual Discrimination Activities: initial activities include sorting shells, sticks and stones and lead later on to more complex exercises where the children find differences or likenesses in letters, words and phrases. For example:

Put a ring around the ones that are the same as the first:

m m m a m

Put a ring around the ones that are the same as the first:

house pig house pig house

Auditory Discrimination Activities: early activities include singing of rhymes and songs to develop a sense of sound, clapping or tapping back simple rhythms, identifying obvious sounds—drums, bamboo sticks etc. and playing listening games to identify children's voices, animal sounds, etc.

These activities lead to more difficult ones where children isolate initial sounds in words. For example,

What sound can you hear at the beginning of these words?

mother man market mango

Visual and aural discrimination can be improved by these and many other types of activities. Teachers should remember that children learn more quickly if they have opportunity for much practice and that skills must be exercised fully for development of these two types of discrimination.

The improvement of a readiness skill seems to depend on the amount and type of practice provided. With the introduction of 'modern mathematics' into schools, there is likely to be some overlapping in the fields of reading and mathematics. Many of the early sorting activities previously confined to pre-reading now occur in mathematical work. Owing to this increased practice, many children could be expected to advance more quickly and be able to progress more rapidly to difficult discriminatory activities.

Before the child commences formal reading he must have achieved sufficient ability in visual and aural discrimination.

(c) & (d) *Experiential Background, Opportunity, Motivation*

A stimulating home environment can provide experiences which promote readiness.

Education in some countries is handicapped by a foreign language background and cannot rely on the home for developing the child's English vocabulary. The number of English words that can be used will generally be limited to what the child learns in school.

The teacher must bridge the gap from home to school by providing many varied language experiences. Examples of these include free and directed discussion, knowledge of sentence patterns, story-telling and listening activities.

Many children who have not had picture books to handle are at a disadvantage. They have not reached that, 'What does it say?' stage, for they have not developed any interest in print. It is not necessary for children at this stage to recognize words, but rather to develop the idea that the printed word is meaningful.

Pictures in story books are a factor in developing readiness. Modern books for teaching reading make great use of pictures. The more a child is advanced in interpreting pictures, the more help he will receive from them in initial reading lessons.

In summing up experiential background for reading readiness, we can say that the child who hears English at home, has picture books to handle and interest provided by parents and others, is likely to be better prepared for reading. If the home

environment is lacking in any of these experiences, and this will be evident in many village situations, then the teacher must provide the best environment possible.

In some countries teachers must be aware of the foreign language problem and ensure that children have the necessary prior experience before beginning formal reading. The children must be able to speak English before being required to read it.

Summary

What should teachers remember about readiness?

1. The child is ready to learn when he has developed physically, has the right experiential background, and when opportunities and motivation are present.
2. It can be harmful to force a child to learn before he is ready. Little, if anything, will be gained and in fact the child may develop a poor attitude towards learning.
3. If the child is ready for a learning situation, he should be allowed to attempt it and progress at his own individual rate.
4. The teacher can provide stimulating experiences which will help to promote and develop readiness.

For administrative reasons it is common for children to begin school about the same age. This does not mean, however, that they are all ready to begin learning at the same age.

There is a best time for each individual to begin learning and this depends on his maturation and experiential background and his desire and opportunities for learning.

Some growth will take place without the teacher. Experiential background is provided firstly in the home and only later by the school. Opportunities for learning, provided in a stimulating way by the teacher, will arouse the child's desire for learning.

Readiness is not limited to early learning experiences. The same factors of maturation, experiential background, opportunities and motivation apply to a baby learning to walk or a high school student learning concepts of algebra.

An understanding of readiness is essential for all teachers.

Reading 2 MOTIVATION

Have you ever watched a mosquito search for a suitable place to land on your arm or leg so that it could begin to feed on your blood? It is very persistent. Have you watched ants busily preparing their nest when it is obvious that rain is not far away?

What is it which urges living things to do certain things?

Motivation comes from the noun *motive*. A dictionary meaning of motive is, 'a moving or impelling power'. It is then, a movement—a power—a strong urge to do something. If we understand his then we understand something of the power of motivation.

Any living being has its own basic needs which are peculiar to itself. They can be called 'primary' motives, and are sometimes known as *instincts*. A motive is a moving or impelling power which causes any organism to act. A 'primary' motive is a moving or impelling power which is biological in nature and provides for the survival of that living object. The roots of a plant, for example, will automatically move towards water, for without water the plant will die. In a similar way, a man will struggle violently for air if he has the sensation of choking. He needs air in order to live.

As teachers, though, we are more interested in what are called 'secondary' motives. These are modified or learned motives (primary motives which have been changed in the course of individual experience, changed in complexity and in richness). These 'secondary' motives cause a person to act in the way he does. Man has an urge to do things and an urge to be.

These urges call forth his energies and direct them towards the achievement of the goal. The greater the urge then the more freely will the energies be released. Teachers can call forth those energies simply by interesting the child in what they want to teach him. Interest stimulates motivation. These energies can be tapped and then directed.

The good teacher is one who can most effectively arouse the interest of the child in the task itself. When the child's energies are freely given to the learning task (be it spelling or a problem in arithmetic), then the child's work is much more effective and is carried on in the spirit of play. That is, his whole person is thrown into the task just as his whole person is actively engaged when he is playing.

A teacher can nearly always *make* a child work at his school tasks even if the child is not interested. Yet he cannot force him to be interested in the task. The child might be 'persuaded' to work hard at arithmetic by the teacher who has a stick in his hand. Does this make him love arithmetic? Is this likely to form a lifelong interest in mathematics in him? Is it likely to help him understand arithmetic?

The teacher might make use of the competitive urge, the urge to be first. A child may strive to do his best because he wants to be first in his class or because he does not want to fail and be considered a failure. However, unless the child is also interested in arithmetic he is not likely to maintain his interest in the subject when the stimulus of competition is no longer there.

Some teachers give gold stars or good work stamps. These, while far better than the fear of being beaten, either in a competition or by the stick in the teacher's hand, are not the best type of stimulus for effective learning. The child will work most effectively and the results will last longer when he works from an interest in the task itself. The child who is really interested in a subject is likely to retain that interest and to add to his knowledge of it, perhaps for the rest of his life. The child who has only 'learned' a subject to avoid being punished or kept in, is, on the other hand, not likely to remember it or to develop any interest in it later in life.

The examples stated above are all of a motivation external to the task itself. That is, the energies of the child are called forth and sustained not so much by the task itself but by something outside the task. Psychologists call this kind of motivation *extrinsic*. It usually has only short-term value and, unless it is replaced by a different kind of interest, is likely to get in the way of real learning.

It is only sensible to realize that as primary school children sit in the one classroom for lesson after lesson in a day the teacher will often make use of some device to arouse the students out of their drowsiness (lethargy, boredom). There is only one real test of the value of such a device—does it lead to an active, genuine interest in the task?

When the child is motivated to work at arithmetic because he wants to understand what he is doing, he is eager to set out the steps logically and to get the right answer. He is, in fact, stretching his own mind against the task. This type of motivation is of the best kind. Psychologists call it *intrinsic* motivation.

Let us take as an example the child who does not really want to do the four sums the teacher has set to be done in half an hour. The child's attention wanders, he makes errors. He is likely to stop working if he feels the teacher is no longer looking at him. Now consider the same boy who works at 'modern mathematics' and is involved in concept formation through working at interesting games and exercises. These interesting games and exercises have captured his attention and, because he is actively involved in concrete operations, he can see more clearly his successes and his failures. The important thing here is that he is able to see where his mistakes have been and will be able to attempt their correction. There is no question which learning task will have lasting benefit. Another example is a boy who is eager to make a model boat. He works at a plan, gathering information as to the type of tools he needs, what materials are required and so on. He puts in many hours preparing and making his model boat. He works hard and long because he is very interested in his task.

As said earlier in this chapter, the good teacher is one who can most effectively arouse the interests of the child in the task itself. The good teacher is also one who is able to arouse a feeling or urge in the child to do something willingly and with satisfaction. A great deal of our teaching involves the introduction of new material and we can hardly expect every child in our class to be interested in things he probably knows nothing about. We have agreed that learner interest is a vital factor in education. The teacher must try to arouse this interest. He is likely to do this initially by means of *extrinsic* motivation. The big question then arises how to turn extrinsic into intrinsic motivation.

There is no easy way to do this. Teachers can only hope that the methods they use and their own very obvious and apparent interest will enthuse the child to curiosity which, in turn, will lead to a genuine interest in the new material. Interest is then transferred from the teacher to the child.

We have spoken about how a student must gain satisfaction from performing some task. Now we must consider why the teacher should see that each learning situation is able to provide an incentive to the child. This implies that the teacher should set a task at which most students will be able to succeed. In doing this he must consider the problem of individual differences which has been explained in another chapter. If the work at hand is interesting and not beyond the abilities of the students, then the power of motivation can be made to work. We should note carefully the connection between motivation and the catering for individual differences.

Little by Little

How do we feel when we fail at a task? When we fail to reach a goal? Do we tend to 'give up'? Or do we try again? Most of us, at some stage, fail to achieve some goal. A lot depends on how we are trained to succeed in a task. In high jumping, for example, we begin with the cross-bar at a low height and then we gradually increase the height as our ability increases. We eventually reach our maximum height.

Teaching a class is like this. We plan our work according to a graded scale. In this way all of our students can do little bits of work successfully and then move on to the next 'height'. The students experience a number of successes and in doing so gain in confidence. If they happen to find themselves not succeeding in a task, then they still have the confidence built up from earlier successes. They will turn about and try again—for they know that the task is not beyond their ability.

One big problem of motivation in schools in developing countries

is caused by a too rigid syllabus and by teachers who are inflexible in their methods. If the syllabus is a prescribed series of topics (facts previously determined in a rigid sequence) and if the teacher's own method of teaching is mechanical, then the teacher himself and his teaching is the major obstacle to the intrinsic motivation of pupils.

The following extract comes from a book by Morris L. Bigge. He discusses intrinsic motivation in the light of the resolution of tensions. What does he mean by resolution of tensions? Is the inner urge to do something a tension? What would happen if it was never allowed to be resolved because a learning situation of the right kind was never developed at the right time? You should consider these points as you read this extract.

Intrinsic versus Extrinsic Motivation

'Intrinsic motivation is that tendency to activity which arises when the resolution of tension is to be found in mastering the learning task itself; the material learned provides its own reward. If a job is done because doing it is somehow satisfying, if the job carries its own reward, if it is done for its own sake, then we say that motivation is intrinsic. If Johnny washes his neck not because of outside pressures but because he likes the feel of a clean neck, or if he studies the construction of model airplanes diligently so that he can make his own model, he is experiencing intrinsic motivation.

Extrinsic motivation occurs when a person pursues a learning task, but for reasons which lie outside it. If a boy studies model airplanes because he thinks it will please his father, an ex-pilot, rather than because of a personal interest in model planes, he is moved by extrinsic motivation. When a learning goal is extrinsic, it is obvious that once the goal is met there ceases to be any point in remembering the learned material. If certain facts about a gasoline motor are learned only for the purpose of passing a test, as soon as the test is passed the reason for knowing the facts no longer exists. When motivation is wholly extrinsic, no matter how hard the study, we may expect that retention, understanding and transfer will be much less than when material is learned for the sake of the learner.

After making the distinction between intrinsic and extrinsic motivation, it is necessary to point out that in most learning situations motivation cannot be categorized so neatly. It is a function of the total situation and hinges on some blend of personal concern for the work itself and some concern for extrinsic factors. As a practicable working principle, motivation is probably always a function of an interactive situation.

Obviously, both emphases on motivation *work*, in the sense that each leads to learning. However, since the material learned through extrinsic motivation does not in itself serve any purpose of the learner, educational psychologists condemn this type of motivation as undesirable because the learner tends to forget what he has learned as soon as his extrinsic purpose is met. Furthermore, in addition to poor retention of material learned, extrinsic motivation usually leads to careless, inaccurate learning. The

learning task is hurried through as quickly as possible so that the reward may be obtained. If Johnny tries for a B in arithmetic because his father promises him a one-dollar reward, Johnny is not likely to care how he gets the B—copying someone else's answers is as good a way as any. . . .

In spite of the undesirability, on psychological grounds, of an emphasis on extrinsic motivation, in some situations many teachers feel they have no choice but to employ it. When this is the situation, teachers may be undecided as to whether to use rewards or punishments. A number of studies have been conducted in an attempt to determine whether it is more effective to praise students for what they learn or blame them for what they do not learn. A review of these studies indicates that the evidence is so conflicting that no definite conclusion can be drawn. The only conclusion which seems warranted is that either praise or blame is usually more effective in promoting learning than a policy of ignoring the achievement or lack of achievement of students.¹

Summary

There are some things which we do because we have to in order to live, for example, to sleep, eat, breathe. These are called *primary motives*. *Secondary motives* are those motives which are modified or learned in the course of individual experiences. These secondary motives cause a person to act in the way he does. As teachers, we are interested in developing these secondary motives because through them we arouse the interests of the child.

Motivation is what happens when motives (those moving, impelling urges to do something) are in action.

There are two types of motivation which are given the names *intrinsic*—that is, interest and drive coming from within the situation, and *extrinsic*—that is, where the drive or the energy comes from something or somebody outside the task. The best kind of motivation is intrinsic and should be encouraged. As teachers, however, we do attempt to 'motivate' children extrinsically in the course of our teaching. The good teacher is one who is able to turn extrinsic motivation, once pupil interest and enthusiasm is obtained, into intrinsic motivation. The secret of success here is the transferring of interest from the teacher (extrinsic motivator) to the pupil (intrinsic motivation).

¹This extract is taken from pages 290-292 of *Learning Theories For Teachers* by M. L. Bigge. Copyright © 1964 by Harper and Row, New York. Reprinted by permission of the publishers.

Readings on Chapter 6.

Reading 1 OUR CONSCIENCE

Case Study

John picked up twenty cents in the playground. He thought that he would keep it. He could buy something to eat at the store. He put the twenty cents in his pocket and walked off. He felt a little guilty because he knew that the school rule was that all money found had to be handed to the Head Teacher. He looked around. 'I wonder if anyone saw me?' he thought. He felt even more guilty.

To Think About

1. Many people, when they do something wrong, feel guilty and uncomfortable. Why?
2. Do all people feel guilty about the same things?
3. Is it natural to feel guilty or do we learn to feel like this?

Conscience

Our conscience tells us what is right and what is wrong, what is good and what is bad. Our conscience helps us to decide what we should or should not do. Our conscience is the system of values, attitudes and beliefs which we hold to be true. It is learnt.

We begin to develop our conscience when our parents first tell us that we are expected to do some things and not to do others. Parents are constantly telling (or teaching) the child what is right and what is wrong. Mother, father, and even relatives will praise the child when he behaves correctly. They scold or punish him when he does wrong.

Soon the child learns that he is likely to be punished when he does something wrong. Once he clearly understands what he should not do, then he will feel guilty and uncomfortable whenever he is disobedient. He feels guilty because he knows what to do and because he expects to be punished!

These guilt feelings which we learn in childhood are extremely important for they are the main reason why adults behave correctly. They are the main reason why we do not cheat at sport or avoid our responsibilities. Adults who do not have these guilt feelings will steal things, will lie to their friends and cheat their relatives. They may become criminals.

It is most important, especially for young children, that the teachings of the parents are in agreement with what the society believes to be correct. If the teachings of the parents are not the same as the generally accepted beliefs of the society, then the child will be in continual trouble with his society. If a school pupil has not been taught to behave correctly by his parents then it becomes the teacher's responsibility to teach him to behave correctly.

To help each child to become a good citizen is one of the teacher's most important responsibilities.

As mentioned earlier, young children like to imitate their parents. They want to be like mother or father. One of the important things which they imitate are the values, attitudes and beliefs of their parents. If their mother or father says that something is true then it must be true. At this stage they do not question it.

When the child becomes older (about school-age), his understanding of right and wrong broadens as he learns of the opinions and beliefs of his peers and of other adults. The school and his teachers can have a strong influence at this time. Similarly, the Church can have an important influence. It is possible that at this time the child may find that the values of his culture and those of the school or Church do not always agree one with the other.

When we have a country or people experiencing a big and quick change from a centuries-old way of living to a modern way of living there is often confusion as to what is right and what is wrong. The traditional beliefs which have been developed through centuries of living are quite suddenly found to be outdated. There is a danger that people will feel that *all* the old ways are bad and out of date though it is very likely that some of the old ways are good and valuable. Children might be uncertain whether they should believe the old people or whether they should try to follow the new ways. The teacher must be careful to help the child to decide for himself what is right or wrong, good or bad, in both the old and the new cultures.

It is important to remember that a child gradually learns to understand what his parents and others believe to be right or wrong. Once he understands these things he has to learn to do what he ought to do rather than that which he might want to do. A child learns to do this because he is rewarded when he does the right thing

and punished when he does not. If a child does not learn to behave in socially approved ways (that is, if he does not develop a satisfactory conscience) then he will break laws and get into trouble. When a teenager breaks the laws (such as by stealing money or breaking into a house) and is found guilty by a court, he is called a delinquent. He might be sent to jail.

Any child can become a delinquent. Any child can grow up to become a criminal. A child will probably not become a delinquent or a criminal if he develops a sound conscience. Each child must clearly understand what other people believe to be right and wrong. He must obey the laws of his society.

Finally, he should develop his own powers of deciding what is right or wrong and the ways in which he thinks people should behave. If he is to be a mature adult then he should have a personal system of values which he, as an individual, believes to be true and worthwhile.

The development of a satisfactory conscience is a very important task in the education of every child.

Summary

It is important for every child to learn how to behave correctly in his society. The child's knowledge of what is right and what is wrong is called his 'conscience'. As with all other knowledge, the knowledge of right and wrong has to be learned.

When a little child behaves correctly for his parents he is praised and loved. The child usually tries to repeat that behaviour for he would like more praise and affection.

When a child misbehaves he is punished by his parents, his friends, or his teacher. He learns to feel guilty when he does wrong.

Some children do not learn to feel guilty when they do wrong. It is the teacher's responsibility to help his pupils to learn to behave correctly. In school they must learn to obey the school rules, the class rules, and the rules of their games. This will help them to grow into good citizens.

Reading 2 SELF-CONCEPT

Case Study

Puna had been asked to stay in and do some more reading. He sat in his seat and then began to cry. His teacher asked him what was worrying him. He said, 'I can't read properly. I'm no good at reading. I can't do it. I think I'll always be no good.' He kept on crying.

His teacher knew that Puna did not like reading lessons. In fact he was so frightened of reading lessons that often he would just sit

and day-dream. It was very difficult to get him to try. It seemed that he did not really want to learn to read!

To Think About

1. Why do you think Puna behaves like this?
2. What do you think that the teacher could do to help Puna?

Self-Concept

The self-concept is another important part of personality. We are all interested in the question, 'What sort of a person am I?' If I asked you to tell me what sort of a person you really are you could probably give me a long and perhaps accurate description. This would include an assessment of your abilities (both present and potential), of your aims and aspirations (what you want to do, what you want to achieve in your lifetime), and of your ideals (what values you feel are true; why you believe these particular values to be important—to you and to others).

Our self-concept has a strong influence on the way we behave. We usually try to be consistent in our behaviour. For example, if we know we are good at sport, then we will try hard to be good at any new game we learn. If we know that we are good at learning then we will try to learn our work thoroughly and do well in our exams. We expect to do well. Our self-concept will set the level of performance which we expect ourselves to reach.

A good self-concept will encourage a person to behave in constructive, useful ways. A poor self-concept will lead a person constantly to perform below his true level of ability. If a child believes that he is a failure at school and that he cannot learn, then it is likely that he will not learn his work and that he will fail. He expects to fail. Unless the teacher helps the child to change this attitude it is likely that he will continue to fail. He will perform at the level at which he expects to perform. He is being consistent in his behaviour.

How does the self-concept develop? Each child learns about himself and about his skills, abilities and potentials through his interaction (mixing) with other people. He learns 'what sort of a person' he is. His parents, friends, and others tell him. He learns from the way they behave towards him. He learns from the things they expect of him. He learns about himself through his attempts to make others do the things he wants them to do. Each of these learning experiences helps to shape or develop his self-concept.

The beginnings of a good self-concept are made as the child first learns that his parents want him and love him. This is particularly

important during the first two or three years of his life. Children who are well loved by their parents usually grow to have a basic trust in themselves and in others. They feel secure. Children who are not wanted or are not loved by their parents often fail to develop the ability to trust other people. They often find it hard to like and to be liked by other people. Unloved children often grow into suspicious, anxious and lonely people. The self-concept is first shaped by the quality of the parents' relationship with the child.

Children see their parents as models. A boy usually learns how a man should behave by watching his father. If his father is quick-tempered, has a loud voice and works hard then the son is likely to believe that if he wants to be a real man he should be quick-tempered, speak loudly and work hard. The parents, through their day to day behaviour, set their children clear models of desirable and undesirable behaviour. This will have a strong influence on the child's self-concept for it will strongly influence his understanding of the sort of person he would like to become.

If the parents are well educated they might expect the child to work hard and to do well at school. Even before the child has gone to school the parents might have decided that they want him to become a teacher, a mechanic or a pastor. Some parents will have decided opinions on the value of success in school studies. Others will have little interest in their child's progress at school. The education of the parents, and the value they place on school achievement, will have an important influence on the child's level of aspiration.

I have taken a lot of time to explain the influence of the parents and the home on the development of the child's self-concept. These are very important because they are strong, they are constant, and they happen when the child is young and easily impressed. They are remembered for a long time.

Other important influences which have been mentioned earlier are:

Culture. If the child learns to behave in the ways expected by his culture, then he will feel happy and secure, but if he fails to learn these cultural patterns of behaviour, he will feel that he is different and perhaps inferior.

Peers. Through his experience of living and playing with his age-mates the child will learn a lot about himself, his abilities and what others think of him.

Before a child goes to school he can spend most of his time playing with those children he likes best, his friends. There is a big change in his life when he comes to school. He has to spend a lot of time in school. He has to do what the teacher wants him to do

rather than the things he would like to do. He has to learn to get along with the other thirty or forty children in the class. Some may come from other villages or from a different culture.

He begins his formal education. He begins to learn to read, to write and to do mathematics. He learns many new things. His degree of success or failure in learning his school-work, in learning to get along with his peers and in learning to obey the teacher will have an influence on his self-concept. Some children will like school because they will do well. Some children will find that they are poor at learning or are disliked by the others in their class.

Finally, the child will come to make up his own opinion about the sort of person he is. He will think about the sort of person he is and the sort of person he would like to be—both now, and in the future. He will make up his own mind as to what he would like to do in life. The individual has an important influence in determining his self-concept.

Can the teacher help a child who had or has a poor self-concept? Yes! Everyone wants to be loved, to be liked, and to feel important. The teacher can help the child to learn that he can do well at some of his school-work, or that he can make friends, or that he is a worthwhile person. He can help the child to develop a new and more satisfactory self-concept. If the teacher can convince the child that he likes him and that he can do some things well, then the child may begin to believe that he has the ability to do well at his school-work. If the child has no friends, then the teacher might help him to become friendly with some of the other children in the class. The teacher might make him feel important by giving him some responsibility within the class such as to clean the blackboard before school or to look after the sporting equipment. If given help most children can learn to become happy, useful people.

Summary

The self-concept, then, is developed through experience. We learn a lot about our abilities, our potential and our value as a person from the way that people behave towards us. If our parents love us, if we do well at school, if our friends like us, and so on, then we learn that we are competent, effective and worthwhile people. If, however, our parents do not want us, or we find that we cannot make friends, or that we are poor at games or schoolwork, then we are likely to feel that we are inferior, disliked and rather worthless. We are not likely to try very hard to do well at school.

Each person's self-concept is important in understanding his behaviour. Each person tries to be consistent in his behaviour. Self-concept will set the levels at which a person expects to perform.

Reading 3 ADJUSTMENT

Case Study

The teacher was watching Tau. As the teacher asked each question Tau would sit quietly looking at his book. As soon as his friend had written his answer Tau would glance sideways and then copy his answer. 'Cheating again,' thought the teacher. 'Why does Tau keep on cheating? I'm tired of scolding him about this!'

To Think About

1. Have you any suggestions as to why Tau cheats?
2. Why does he keep on cheating even though he knows that it is wrong?
3. What would you do with Tau?

Adjustment

As the child grows he will learn how to behave in different situations. He will learn the culturally accepted ways of managing or dealing with many situations. He will learn that each situation can be managed in a number of ways. He will find that he likes particular ways of doing things better than others. He will use these again and again. They become habits. They become part of his personality.

When he meets a new situation, one which he has not had to deal with earlier, he will have to find a new way of dealing with it. He will have to change or adjust his behaviour to suit the situation. Learning to adjust to new situations is important in the development of personality. Once a child has learnt a particular way of adjusting to new situations, then he is likely to keep on using it, even when he is an adult. It is important that he learns good methods of adjusting to new situations.

As children grow towards adulthood they have to face many new situations. Each new situation will demand an adjustment in the child's behaviour. Each new situation will be a problem, as the child thinks, 'What should I do?'

Children have many problems. Some children find it hard to make friends. Some find it difficult to learn. Some are timid. Some are disliked by others. Children worry about these problems and try to solve them by changing their behaviour. They are trying to adjust to their problems.

If we have a problem and we cannot decide how to solve it, then we worry. We become anxious. Anxiety is very important in understanding adjustment. When we have the feeling of anxiety we feel uncomfortable, unhappy and perhaps helpless. Anxiety is painful. We try to avoid feeling it.

Some children manage to make satisfactory adjustments to their problems. Others make poor adjustments. A satisfactory adjustment would be one where the child faces his problem and finds a solution which gets rid of his anxiety and makes him a happier, more contented person. He accepts responsibility for his behaviour and does something about improving the situation. As a result, he becomes a little more self-reliant, a little more independent, a little more mature. The experience has helped him to grow towards adulthood.

Some children make unsatisfactory adjustments to their problems. Often the solution they find is useful for a short time but does not solve the real problem. Though they can avoid the anxiety for a little while it will soon return. Perhaps the problem will now be even more difficult and the anxiety even stronger.

Here are some unsatisfactory ways of attempting to solve difficult situations. In each case the child is avoiding the real problem. The child may attempt to explain the problem away, or to blame someone else, or to simply forget about it.

Let us consider this situation. Some children were asked to get the paints ready for an art lesson. The teacher heard a noise and went to investigate. A glass of paint had been dropped and had smashed on the floor. Paint had splashed everywhere. Who was to blame? How did it happen? What really happened was that Vagi, Tau and Apa were mixing the paints. Vagi was being silly and started to run around the other two children pretending to pour the paint over them. Tau stood up. As he stood up Vagi bumped into him and dropped the paint onto the floor. Vagi knows that the teacher is angry and that she is likely to be punished. What will she say to the teacher? Here are three ways in which she might try to solve her problem.

1. 'I was walking over towards Tau when the bottle slipped. I couldn't hold it properly because my hand was wet.' Vagi is making up an excuse for dropping the bottle. Her excuse might be partly true but she is not telling the whole truth. She is trying to avoid getting into trouble by making up a fairly convincing excuse.

2. 'I didn't do it. I was standing here when Tau bumped me and made me drop the bottle. Tau did it.' Vagi is trying to avoid getting into trouble by placing the blame on someone else. How do you think Tau will feel about this?

3. 'I wasn't holding the bottle. I didn't drop it. It must have been someone else. No. I didn't do it.' Vagi is telling a lie. What will the other children think of this? Will they believe her later on when she says that she didn't take their pencil? Will they trust her?

Each of the ways suggested is unsatisfactory. Each might work sometimes but if a child makes a habit of telling lies, making excuses, or blaming others, then he will become unpopular and distrusted. Soon he will find that he has difficulty in getting along with his friends. Such behaviour has an influence on the development of his conscience and his self-concept, that is, it has an influence on the development of his personality. A child who uses these methods of solving difficult situations will remain immature. He is not learning to be responsible for his own behaviour. He is not learning to become an adult.

What should Vagi have done? She should have told the truth. She should have admitted her responsibility. 'I'm sorry, but I was being silly. I was running and Tau stood up and when I bumped him I dropped the bottle. I won't be silly again. I will clean up the mess.' If she does this she will continue to be trusted by the teacher and her friends. She is not likely to be punished very severely because she has offered to clean up and has promised to improve her behaviour. She is acting in a responsible manner.

Another common method which is used to deal with difficult or worrying situations is to withdraw and avoid them. If children cannot find a method of solving a problem then they will usually try to avoid it. For example, if a child cannot do his arithmetic then he will probably just sit and day-dream. Instead of trying to understand his work and get it finished, he finds it much easier to sit and do nothing. He is mentally withdrawing from a difficult situation.

Children who find that they are failing most of the time often give up. They will stop trying. If you never try then you never fail. For example, a child might be very poor at reading. Each day when he is asked to read he might feel that he is inferior, that he is a failure. Each day when he is asked to read he is reminded that he is a failure and that he cannot read as well as the other children. He learns to hate reading. After some time he may become so worried and anxious that in order to solve the problem he decides that he does not *want* to learn to read. He refuses to try any more. He has completely withdrawn from the situation.

Another method which children use for dealing with difficult or worrying situations is to 'day-dream'. You will see children doing this when they are in school. They sit and stare into space. They are imagining the things they would like to be able to do or would like to be doing. Instead of solving their problems they are imagining that they have no problem or that they have solved their problem. For example, a child who cannot read might imagine that he can read, that he can read better than anyone in the class. He might

imagine that he is now reading to the class and that they are all amazed at his wonderful ability to read. When the child does this he is getting imaginary satisfaction instead of real satisfaction. Once he stops 'day-dreaming' he finds that his problem is still there, unchanged.

Opu complained to the teacher that he was sick. The teacher felt his forehead. He did not seem to have a temperature. He did not look pale. His teacher told him to go outside and sit under a tree. Ten minutes later all the children went out to recess. As the teacher had his cup of tea in the staff-room he saw that Opu was playing football with the other boys. The teacher realized that he just wanted to avoid doing his schoolwork. Sometimes children are sick. Sometimes they pretend to be sick. Usually we are kind to a sick person. We do not expect them to work. At times children who are worried or who do not feel like working will claim that they are sick. You will notice that the teacher looked carefully at Opu to try to find out just how sick he was.

Withdrawal, 'day-dreaming' and 'sickness' are common ways used by children to avoid worrying situations. They are inadequate methods of adjustment. They do not help the child to grow into a competent, confident adult.

If you interrupt the play of a small child or take something he wants from him or stop him from getting something he wants, then he will probably become very angry. Anger is normal to all people. Yet angry people can be very destructive. We learn to control our anger. If a child cut a hole in a good canoe then we would expect the owner to become angry. Yet it would be wrong, very wrong, if the owner then burnt down the child's house or attacked him with an axe. Though the owner were very angry, we would expect him to control his temper.

Children who are always fighting, kicking or pushing other children are often a problem for the teacher. Why are they aggressive? Why do they get angry or sullen? Perhaps it is because they have not learnt to control their temper. Perhaps it is because they have learnt to get attention (or to feel important) by becoming angry or by bullying other children. Perhaps they have learnt that an outburst of temper helps them to get their own way. Whatever the reason, the child must learn that it is normal to feel angry at times and that he is expected to learn to control his feelings.

Summary

All behaviour is motivated. There is a reason for each of the things that we do. You can be sure that there are reasons for the behaviour of problem children. You must find out why such a child

behaves as he does. Only then can you do something about the real problem.

Teachers can help children to face their problems and to find ways of overcoming them. Yet it is important to remember that the child is unlikely to bring his problem to the teacher. The teacher will have to search out the children in his class who have poor methods of dealing with their problems. He must discover their real problems. Only then can he help them.

What Do You Think?

What do you think? Are some children born bad or do they learn to behave in bad ways?

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