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editorial

Since the postwar period, many changes and improvements in education have been introduced which have benefited both individual and national development. One of the major changes in Singapore has been the provision of education to all its citizens. Besides this change, the curriculum has been radically altered to meet the needs of a developing nation. Recently, more emphasis has been placed on bilingualism and providing a more appropriate and diversified curriculum for our pupils.

While parents and the authorities may accept the importance of education, it is recognized that there are still many problems and consequences of schooling for which there are no easy and straightforward answers. Parents for instance have to make difficult decisions concerning language or their children's choice of subjects. Teachers, the educational authorities and teacher educators have to search for the right procedures and effective means for the objectives defined and may come up with different and conflicting answers.

What we hope to achieve through the **Singapore Journal of Education** is to promote thinking on topics and issues in education and to encourage our readers to raise and air their doubts or perplexities about education, or suggest answers and alternatives. It is from this context of questioning and search, a willingness to learn, and open and flexible minds that we believe will come forth enlightened and informed practice for some of the difficult issues in education. We hope that the Journal will enable our readers to become better acquainted about developments and issues in education and, at the same time, provide a channel for expression, thinking and research on matters relating to education.

COMMON CAUSES OF MALADJUSTMENT IN OUR SCHOOL PUPILS¹

Wong Sze Tai, Head, Child Psychiatric Clinic

In the past few years, there has been a tremendous upsurge of interest in children with emotional and behavioural problems. New units, clinics and agencies have been set up by the government and by the statutory bodies and voluntary organisations in the community to help these children overcome their problems. Much publicity has been given to the provision of assessment, counselling and preventive services but so little to how effective these services are. Why is this so? I suspect that there may be problems relating to our capacity to elucidate the causes of the child's problems correctly. Of course there may be problems relating to the competency of the staff in giving the right sort of assistance to the child; but sound treatment must be based on a good understanding of how the child's problems come about in the first place.

A multidisciplinary approach is necessary if we are to understand the complexity and multiplicity of factors involved in the causation of children's emotional and behavioural problems. This would mean the employment of multidisciplinary staff or the training of professional staff to think in a multidisciplinary way.

Terminology Problem

I am not sure if we are using the term 'maladjustment' in the same way. I find that this term is so loosely used nowadays that it often means different things to different people; and worse still, it is frequently used to mean a psychological or medical entity which is very erroneous. 'Maladjustment' is simply a term descriptive of the individual's relationship with the environment. School is one kind of environment. Home is another. A person's behaviour can vary in different types of environments. If he is maladjusted in one environment he need not be maladjusted in another. Even in the same setting as in school, every adolescent adjusts to school life in his/her own unique way. Thus, an obsessional adolescent may be slow in school work, an anxious adolescent may lack confidence in reading or in interaction with others, and a psychotic adolescent may show abnormal or bizarre emotional and behavioural outbursts. All of them can be said to be showing maladjustment in the same setting, but they do not represent the same entity. So we have to define what we mean when we use the term 'maladjustment'. It

would be wrong to regard it as a psychological or medical entity. It is merely an umbrella term covering a wide variety of medical, psychological and social conditions. It is clear therefore that the concept of maladjustment would not help us very much in understanding the nature and causes of behavioural deviance, and therefore cannot effectively help us to plan proper treatment.

Furthermore, it has been found that when the term is applied to children, institutions or services, the result is that a social stigma becomes quickly attached to them. For these reasons, I propose that we drop the term 'maladjustment' in favour of a more scientific and clinical term like 'emotional and behavioural disorder'.

In this paper, the latter term will be used throughout. It is a clinical-diagnostic term defined as follows: it includes abnormalities of behaviour, emotions or relationships which are sufficiently marked and prolonged to cause handicaps and sufferings to the child himself and/or distress to the family or community. The abnormalities have to be assessed in relation to what are considered as normal for children of the same age, sex and culture (Rutter et al, 1970).

Need for Population Surveys

We will not know what the true picture is regarding the common causes of emotional and behavioural disorders in our school pupils until and unless we have carried out a proper epidemiological survey. I cannot overemphasize how important and urgent it is to conduct research studies if we are to obtain accurate data on the causes and causation of these disorders.

It would be wrong to use the data from the Child Psychiatric Clinic as reflecting correctly the common causes of emotional and behavioural disorders in our school pupils. This is because the referrals to the Clinic come mainly from the medical sources and tend to have a higher frequency of underlying or associated medical conditions. Samples seen in the other units, clinics and agencies are not representative either, mainly because their sources of referrals and the types of staff they have will exert a selective effect on the kinds of cases seen or dealt with. With these limitations in mind, I have presented an analysis of all the cases seen at the Child Psychiatric Clinic in the month of September 1977 according to their causative factors (see Appendix).

Although there are no reliable studies which provide the information we want on the common causes

¹ Paper presented at the Seminar on "Helping Children with Problems" organised by the Institute of Education on October 31 1977.

of emotional and behavioural disorders in our school pupils, we can still get a fairly good idea of what the common causes are by sharing our experiences. I shall attempt to give a general coverage of the causes of emotional and behavioural deviances and disorders in children and adolescents of school-going age. I shall make references to children who have been seen at the Child Psychiatric Clinic as we go along.

General Comments

In general, causes which are known to give rise to emotional and behavioural disorders in children in other countries are also found in Singapore. The difference probably lies in the hierarchal structure of the various causes as well as in the mechanisms of causation. This is to be expected as Singapore is a rather unique place with a multiracial, multilingual and multicultural population of which a large proportion lives in high rise housing estates. It is a young country undergoing rapid changes. Nowhere else in the world can we find a comparable situation.

Like anywhere else, emotional and behavioural disorders in Singapore children very often arise as reactions to stress in the environment, particularly that arising from interpersonal relationship problems at home. This often arises because of marital disharmony, personality problems and mental disorder in parents or because of poor discipline, faulty parental attitudes, neglect and frequent quick changes of child caring figures, especially in early childhood. Genetic handicaps or acquired handicaps in the intellectual, physical, temperamental, emotional, social and educational areas also play an important part in the genesis of emotional and behavioural disorders in children. In a highly competitive society like Singapore, demands beyond the child's abilities are frequently encountered. Adverse school factors and adverse influences from peers and the neighbourhood also feature fairly strongly as causative factors. Many emotional and behavioural disorders arise because of physiological anomaly or impairment of brain function. Drug-induced emotional and behavioural disturbances have become more frequent nowadays. In order to be meaningful to anyone interested in helping children overcome their problems, a greater depth of understanding of the various causative factors is necessary. Let us now examine them individually.

Genetic Factors

We now know that many conditions such as in-born errors of metabolism which are associated with mental retardation and abnormal behaviour, degenerative diseases of the brain and insanity are caused by harmful disease-producing genes in the afflicted person. In other conditions such as mongolism, an abnormality of chromosomes is present. In many instances, whether a person with an abnormal or harmful gene eventually manifests the disorder or

not will depend on the effects of interaction with the environment.

Biological Maturation Factor

Normally, different parts of the brain develop at different rates in an orderly fashion. Sometimes the development of one part of the brain may go out of step with the development of the other parts. When this occurs, it results in the person suffering from a developmental disorder. Examples of developmental disorders include developmental clumsiness, speech and language disorders, specific learning disabilities, bedwetting, etc. The genetic factor plays an important part in the development of these disorders as evidenced in the positive family history in many cases.

Acquired Brain Disease or Disorder

The brain requires an adequate supply of oxygen, blood flow and nutrients, e.g. glucose and vitamins, for its proper functioning. Any interference with their supply will naturally cause disturbance of brain functions and produce mental derangement. The effects may be reversible or irreversible. For example, prolonged lack of oxygen will cause death of brain cells which is permanent. The effects of hypoglycaemia, i.e. the lowering of blood sugar level, are often reversible when the intake of sugar is increased.

The brain cannot tolerate very high temperatures. The tolerance varies from individual to individual. High fever can cause drowsiness, confusion, delirium and seizure and may result in permanent brain damage.

Brain functions can be disturbed if there are toxic substances in the blood, e.g. drugs, alcohol, chemicals and harmful metabolic products of the body. Hence abnormal emotion and behaviour are seen in persons who have taken drugs or alcohol beyond a certain critical level and in persons with chemical poisoning, kidney failure, liver failure and other metabolic diseases.

One example of neuro-physiological anomaly is epilepsy. The commonest form of epilepsy is generalised convulsion with loss of consciousness, shaking of limbs, biting of tongue, and frothing at the mouth. The less common type of epilepsy is that of psychomotor seizure of the temporal lobe of the brain. In this type of epilepsy, instead of generalised shaking of limbs and loss of consciousness, there is unprovoked rage accompanied by some purposeless or apparently semi-purposeful and often bizarre behaviour. In yet another type of epilepsy called "petit mal" or "Absence", the afflicted person suddenly stops what he is doing for a few seconds and then carries on as if nothing has happened. Sometimes there are associated movements of the mouth or eyes. If such attacks occur in school, the child's attention and concentration will be greatly affected to the detriment of his scholastic work.

Structural damage of the brain can of course occur as a result of head injury. It can also occur in tumours and degenerative diseases of the brain. The location and the extent of damage are important in determining the resultant behavioural and mental signs and symptoms.

In many instances, the nature or extent of brain damage or brain dysfunction cannot be easily determined. The psychiatric manifestations of brain dysfunction can be very varied. They include over-activity, poor attention span, distractibility, impulsivity, imperistence, quick fluctuations of mood, disorder of speech or language, perceptual-motor difficulties, etc. A hyperkinetic child can easily be mistaken as naughty and lazy. In view of this, it is essential that careful assessment be carried out for every hyperkinetic child.

Physical Handicap

A physical handicap always adds a burden to the child and his family. Examples of physical handicap include physical disfigurement and conditions like blindness, deafness, clumsiness, speech defects, cerebral palsy, epilepsy, brain dysfunction and chronic medical illnesses, e.g. congenital heart disease, diabetes, asthma, etc. Research studies have shown that these children have more psychiatric disorders than children in the general population.

Intellectual Handicap

Recent studies all indicate a strong and important association between intellectual retardation and both behavioural deviance and psychiatric disorder. Although many retarded children present no emotional or behavioural disorder, many do; and overall, the rate of psychiatric disorder in retarded children is well above that in the general population.

The association between low intelligence and psychiatric disorder is a complex one. In the severely retarded child, organic brain dysfunction and deviant temperamental attributes are probably the most important factors leading to psychiatric disorder. In the mildly retarded child, these factors also play a part, but adverse social consequences of educational failure, social rejection, general immaturity and language retardation are just as important. Other factors that may be important in the genesis of psychiatric disorder in the mental retardates include faulty family attitudes, family and social pathology, institutional care and drug side effects.

Reading Handicap – Specific Reading Retardation or the Slow Learner

This is a relatively common condition among children. A child who fails to read (for whatever reasons) and thereby falls behind in his school work, is more likely to rebel against all the values associated with the school when he finds that he cannot succeed there compared with a child who has no such reading

difficulty. He may start to search for alternative sources of satisfaction which run counter to what the school stands for and get involved in antisocial activities and eventually may become a delinquent or drug addict. The nature of the association between reading retardation and maladjustment is complex and not clear. Some recent research findings suggest that delinquency sometimes can arise as a mal-adaptive response to educational failure.

Emotional Handicap

Of late there has been a lot of interest in the effects of maternal deprivation, parental substitutes and frequent changes of child caring figures. You probably have heard or read about the adverse effects of maternal deprivation – viz. retardation in all areas of development and in particular in the intellectual, language and social areas, and the development of personality disorder (the so-called “affectionless character”).

The effects of maternal deprivation have been very well researched. It is now known that maternal deprivation need not be accompanied by bad effects. Whether or not the child will be damaged by maternal deprivation depends on a number of factors, e.g. what went on before, during and after the separation and deprivation. There are some studies which demonstrate that despite severe deprivation, the damage is reversible, given all the care and training the child needs after being rescued from the depriving situation. Of all the factors, the lack of bond formation and the distortion of the bond (not necessarily with the mother) are probably the most important basic factors responsible for damaging the child's development. Brief separation experiences are quite common and form part of the normal growing-up experience of most children. In some instances, such as a very adverse family environment, separation may in fact promote mental health rather than damage it.

Socio-Cultural Handicap

In my practice I have often encountered children who come from very deprived home backgrounds. These disadvantaged children usually come from overcrowded, working class but not necessarily large families. They have experienced family disruption, higher rates of accidents and ill-health, neglect and various deprivations. Their homes are generally bereft of suitable reading materials, too noisy, and lacking in privacy and play space. Children are often found playing in the streets. Discipline in the home tends to be punitive.

The parents themselves are likely to have been earlier victims of limited exposure. They develop cognitive styles which differ significantly from those in the larger society. They are often too harassed to attend to the emotional needs of their children, and are largely ignorant of the developmental aspects and abilities of their children. Many of them are inadequate parents.

Children from such backgrounds are faced with multiple handicaps, genetic, medical, psychological, educational, social and cultural, which add to an increased risk of developing psychiatric disorder. By the time they arrive at school, they are already different in their assets and modes of functioning from their counterparts from the middle class. Their poor linguistic abilities lead to difficulties in school and may even lead to retardation in intellectual development. When they grow up, they become inadequate parents themselves, thus perpetuating a vicious cycle of generation after generation of inadequate or disturbed persons.

Marital Discord

When the parents are too embroiled in their marital problems, the care of the children is bound to suffer. Neglect, deprivation and erratic control frequently occur together. Among all the ill-effects shown by the child, the following are probably the most damaging: delinquency, developmental retardation (particularly language retardation) and faulty personality formation.

Rutter in his study on the effects of maternal-child separation (1971) concludes that it is the prolonged marital discord, the lack of warmth and the overt show of hostility that is associated with high delinquency or antisocial behaviour rates.

Faulty Child Care and Discipline

There is no doubt that discipline can shape a person's mental health and growth. It is useful to note the following points based on the research work and review done by Becker(1964).

- (i) Punitive discipline by parents produces aggressive children.
- (ii) The child's aggressiveness need not be expressed in all situations; for example, he may be aggressive at home but not in school or vice versa.
- (iii) Even when there is inhibition of overt aggression, the hostility generated in the child is still detected in the forms of pro-social aggression and self-aggression.
- (iv) When parents are hostile, there is a good chance of generating counter-aggression and hostility in the child.
- (v) Boys respond differently from girls. By and large, boys show aggression more often than girls.
- (vi) Punitive parents are often hostile and less warm. The child's aggression could result from the frustration experience, from modelling on an aggressive parent or possibly because punitive parents actively or unconsciously encourage aggression in their children.
- (vii) Inconsistent discipline apparently contributes to "maladjustment", conflict and aggression in the child.

Psychiatric Ill-health in Parents

Children with emotional or behavioural disorders have a higher proportion of parents who are psychiatrically unstable or ill compared with those children without such disorders. How much of the effect of psychiatrically ill parents on the children is due to genetic factors and how much to environmental effects is not known. Both genetic and environmental factors are important. A number of studies on the association between psychiatrically ill parents and psychiatric disorder in the offspring have shown that parental psychopathy or personality disorder is especially likely to be linked with psychiatric disorders in children. The risk to the child appears greater if both parents are mentally unstable.

Temperament

We have covered a wide spectrum of causative factors of childhood emotional and behavioural disorders. Yet we are still left with the question as to why two persons with the same type of brain dysfunction, or the same kind of epilepsy, or the same level of low intelligence, or the same degree of deprivation, or subjected to the same kind of inconsistent erratic parental handling, or under the same pathological family influences, do not necessarily develop psychiatric disorders. Why does one person develop emotional and behavioural disorder while the other does not? Recent studies on temperament have provided a clear lead to the solution of this question. Most authorities now accept that the temperamental make-up or organisation of the child is important in determining the functioning of the child. In understanding why a child develops a behavioural or emotional disorder, one must consider the whole child—his temperamental characteristics, nervous system, intellectual abilities and physical handicaps — and the environmental influences.

Some children are blessed with an easy-going, friendly, jolly nature. Some children are slow to warm up and take some time to adapt to changes. There are other children who have great difficulties in adjusting and they tend to be negative and react intensely to frustration. Unless the adults understand the temperament of each child, they are liable to exert demands which are inappropriate to the child's temperament thus resulting in emotional or behavioural problems in the child.

As can be seen in the analysis of the Clinic's cases, temperamental traits in children play a major role in the causation of emotional and behavioural problems in a fairly large proportion of the cases.

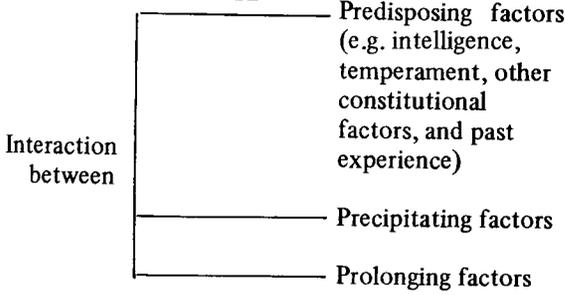
Mechanisms of Causation

It is not sufficient to know what the causes are. It is also necessary to elucidate how the various causal factors operate to produce the emotional and be-

havioural disorder in a child, i.e. the mechanisms of causation. The various models, principles and guidelines used for elucidating the mechanisms of causation are illustrated in the following examples:

EXAMPLE 1:

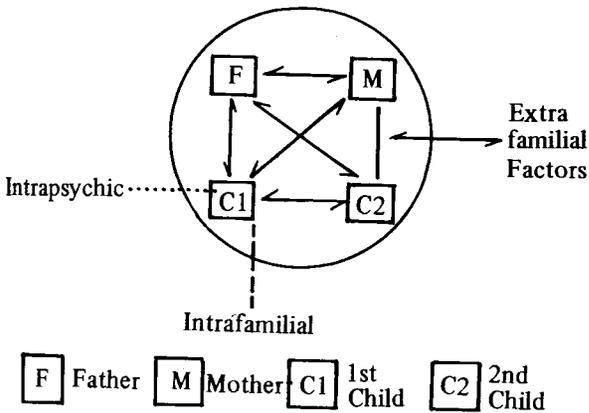
THE 3 P'S PRINCIPLE



Here, biopsychosocial factors are all considered.

EXAMPLE 2:

THE PSYCHODYNAMIC MODEL



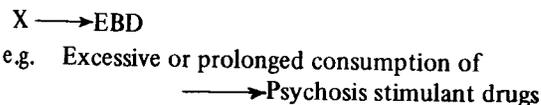
This is a 3-dimensional model

- 1 Along the Vertical axis – Developmental Approach
- 2 Along the Horizontal axis – Here and now matters

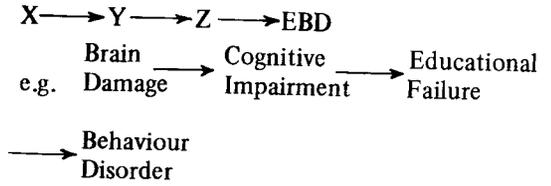
EXAMPLE 3:

DIRECT, INDIRECT, ADDITIVE AND INTERACTIVE EFFECTS:

a) DIRECT EFFECT:

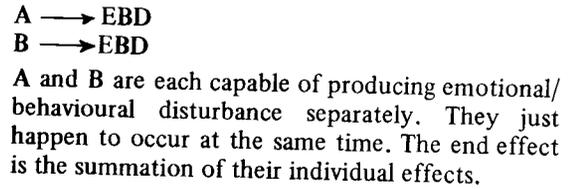


b) INDIRECT EFFECT:

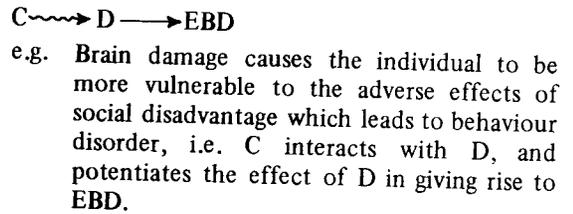


The effect of brain damage here is said to be indirect.

c) ADDITIVE EFFECT:

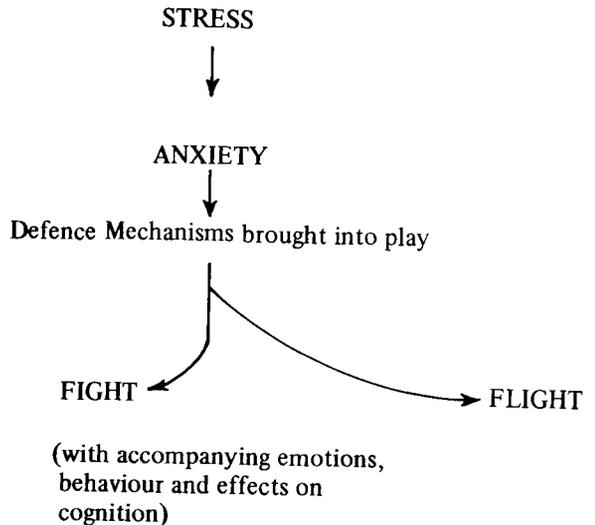


d) INTERACTIVE EFFECT:



EXAMPLE 4

FIGHT OR FLIGHT PRINCIPLE:



APPENDIX

Child Psychiatric Clinic:

Analysis of Causative Factors for Patients seen, in September, 1977

S/No.	Age	Sex	Diagnosis	Genetic	Maturation	Acquired Brain Disease or Disorder	Temperament	Physical Handicap	Cognitive Handicap	Functional Handicap	Social Handicap	Inappropriate demands on child	Mental Ill-health in parents	Personality Problems in parents	Marital Discord	Poor Discipline	Faulty Attitudes of parents	Neglect	Change of Caring figures	School factors	Neighbourhood/Peer influence
1	8	M	Normal Variation																		
2	13	F	Neurotic Disorder																		
3	6	M	Hyperkinetic Syndrome																		
4	1	M	Mental Retardation																		
5	16	F	Schizophrenia																		
6	7	M	Hyperkinetic Syndrome																		
7	15	M	Schizophrenia																		
8	15	M	Adjustment Reaction																		
9	10	F	Habit Disorder																		
10	14	M	Mental Retardation																		
11	6	M	Normal Variation																		
12	4	M	Mental Retardation																		
13	11	M	Minimal Cerebral Dysfunction																		
14	13	M	Developmental Disorder																		
15	9	F	Educational Problem																		
16	12	M	Temporal Lobe Epilepsy																		
17	8	M	Adjustment Reaction																		
18	8	M	Adjustment Reaction																		
19	17	M	Adjustment Reaction																		
20	7	M	Mental Retardation																		
21	13	F	Adjustment Reaction																		
22	11	F	Conduct Disorder																		
23	3	F	Developmental Disorder																		
24	15	F	Anxiety State																		
25	12	F	Developmental Disorder																		
26	13	M	Anxiety State																		
27	4	M	Adjustment Reaction																		
28	4	M	Normal Variation																		
29	6	M	Mental Retardation																		
30	10	M	Anxiety State																		
31	8	M	Normal Variation																		
32	8	M	Mental Retardation																		
33	14	F	Developmental Disorder																		
34	10	F	Conduct Disorder																		
35	10	M	Conduct Disorder																		
36	5	M	Normal Variation																		
37	8	M	Adjustment Reaction																		
38	12	M	Neurotic Disorder																		
39	12	M	Adjustment Reaction																		
40	11	F	Developmental Disorder																		
41	5	M	Mental Retardation																		
42	13	M	Stammering																		

The examples given above bring home two points very clearly:

- 1) Multifactorial causation is the rule; and
- 2) With our present knowledge of this subject, the eclectic approach appears to be the most fruitful one in the elucidation of the mechanisms of causation. Conceptual framework based entirely on the psychoanalytical theory or the learning theory or the social role theory cannot explain the causation of many emotional and behavioural disorders in children satisfactorily.

Treatment plans and prevention measures can be

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Becker, W.C. "Consequences of Different Kinds of Parental Discipline," in *Review of Child Development Research*, Vol. 1, Ed. by M.L. Hoffman and L.W. Hoffman. New York: Russell Sage Foundation, 1964.

clearly formulated only after we know the causes and the mechanisms of causation.

Conclusion

In view of the multiplicity and complexity of factors involved in the causation of emotional and behavioural disorders in children, a multi-disciplinary approach to assessment, investigation, diagnosis and treatment is therefore essential. In practical terms, there is a real and urgent need for collaborative efforts and sharing of knowledge among the professionals in health, education and welfare when it comes to helping school children with problems.

Rutter, T., Tizard, J. and Whitmore, K. *Education, Health, Behaviour*. London: Longman, 1970.

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READING FAILURE AND REMEDIATION¹

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"If children are to become capable of realising their potential in later life, they must acquire the basic tools that a twentieth-century society demands. We have failed if a group of children leaves school without any real knowledge of how to understand and handle these tools. If a child leaves school unable to read or inhibited from reading because of continuous difficulties, he suffers a communication handicap which will sharply affect his choice of career, his earning capacity and his role as a member of a society whose daily bread is the printed word."

("Challenge of Reading Failure," NFER, 1968)

Much has been written about the teaching of reading. In fact, no area of the school curriculum has received as much attention or created an equal amount of controversy. Reading is a complex of abilities and includes visual perception and discrimination, auditory perception and discrimination, association of visual and auditory patterns, linguistic ability and a capacity for the detailed analysis of the sound structure of individual words. Reading is a skill of paramount importance. It may be regarded as a "tool" skill, and although learning competency in the separate content areas certainly fluctuates (the classic example being that some children with reading problems learn arithmetic fundamentals with ease), most children who have trouble in school have trouble with almost all subjects. The acquisition of reading ability opens many doors and reading failure is, therefore, a major factor in educational failure. Reading failure can affect a child's whole attitude to school and in some cases, bring on emotional disturbance.

Literature on the main methods of teaching reading is readily available to those who seek it. Most teachers know that these methods include the alphabetic, phonic, "look and say", "whole word" and sentence methods. These teachers may appreciate the importance, values and aims of each method. They are probably aware that the alphabetic method stresses the name and shapes of letters and that this seems to help in learning letter sequences and left to right word attack; that this method may help spelling ability. They probably realise that the phonic method helps the child to recognise shapes of letters and word parts and that its greatest advantage is in "unlocking" unfamiliar words. They probably appreciate that the "look and say" and "whole word"

method emphasises the patterns of words and that pictures may help the child in learning meaningful words; that this particular method helps the child to learn those words that are phonically irregular. They probably know that the sentence method emphasises the sentence as the unit of meaning and that its main advantage is in helping fluent reading.

However, knowing how to teach reading is often not enough. Teachers of reading also need to know how to deal with those children who are having difficulty with reading. They have to be aware that backwardness may be caused by physical defects in sight or hearing or by emotional disturbance. The teacher should examine these possibilities by obtaining advice from the educational psychologist and using, with care, diagnostic tests and observations. There are many backward readers who, for one reason or another, have just not mastered the difficulties of reading. They have no physical defects to impede their progress in reading and the degree of emotional disturbance does not appear to be sufficient to cause them any insuperable difficulties. To all outward appearances they are just slower children.

The findings of 13 years' research by Morris (NFER, 1966) into reading standards and progress in a group of primary schools in Kent showed that one out of 8 children is unable to read by the age of 8. She found that half of these remained semi-literate until the end of their school days with a resulting occupational handicap which must still be affecting their lives.

The most serious defect that Morris emphasised was that first-year junior teachers were unable to diagnose reading backwardness accurately and provide a remedy. Almost half the children reaching junior school still needed infant teaching, but only one junior teacher out of 4 had received training in infant methods. She also found that teachers in half of the junior schools did not use instructional materials at all because they believed that children considered them "babyish".

Among the many reading deficiencies, I have found the following to be common in the cases referred to our Remedial Reading Clinic: inability to tackle isolated words, insufficient knowledge of the names and sounds of the letters of the alphabet, limited and in some cases no ability in the analysis and synthesis of words in terms of their constituent sounds, lack of directional attack upon words, inattention to the details of words, inadequate capacity to memorise words and reversals. Reasons for back-

¹Paper presented at the Seminar on "Supportive Help for School Pupils with Problems" at the Institute of Education on October 31 1977.

wardness may include the following: the children may not have been sufficiently interested in the content of the reading materials and lessons to want to learn to read; they may not have been compatible with their teacher; some poor readers are the victims of poor teaching; or there may have been any one or more of a number of influences working upon them in such a way as to distract them from reading, e.g., home circumstances where there was a lack of respect for reading. Any one of these factors could have prevented the child from concentrating upon learning to read at a vital stage and thereby he could have missed crucial parts of the instructional programme.

Sound, systematic and organised reading instruction with emphasis on skill-building should be provided for children in at least the first two years of the primary school and this should be regarded as fundamental to their whole future. Part of the school day should include a good deal of reading to children and discussion of what has been read as well as what children have done at home, in outings with the family or what they have seen on television. After all, it is during the first six to seven years of a child's life that physical and mental growth are not only most rapid but also most susceptible to influence by the environment.

Significant differences exist among children, both in learning rate and in learning capacity. These individual differences become more and more pronounced as children move up the academic ladder. The entire reading curriculum of the children within a classroom must be adjusted to their individual reading capacities if the printed page is to become an effective tool of learning and if reading disability is to be prevented. A class made up of 30 to 40 children cannot be taught as though all members of the class had the same interests, desires, intellectual capacities or physical characteristics. Nor can it be taught as though they had reached the same levels of attainment in reading or possess identical instructional needs. A child should be given material that is as nearly suitable to his level of reading growth as is possible. He must be taught by methods compatible with his characteristics and capacities. In an ideal situation, each child would be able to work with his own teacher who would teach the skill at the child's individual level. In practice, however, faced with 30 to 40 children, a teacher seldom has time to confer with individual pupils. This problem may be partially overcome if material is so planned that pupils are allowed to progress in small, logical steps at their own pace. Maximum learning can take place if the material provides the learner with an immediate indication of how he has performed.

For optimum reading achievement, the child needs to develop body awareness, a knowledge of left and right, the ability to hold a pencil or crayon correctly, the ability to perceive similarities and differences, an understanding of concepts and vocabulary denoting spatial position (e.g., in, on, under, beside, behind,

etc.), an understanding of concepts and vocabulary relating to time (before, after, later, etc.), the capacity to recognise and name familiar objects in pictures, comprehension of words and subordinate clauses denoting logical relationships (e.g., because, therefore, etc.), and the capacity to relate familiar objects to their purpose. Preferably, comprehensive programmes of training in motor skills, in visual perception and in language skills will have preceded and will continue to accompany the process of initial reading. If such programmes are instituted, they will prevent many subsequent difficulties in learning to read.

Most non-readers and backward readers in our primary schools are late starters or underachievers. These are the children who create problems for many teachers. They are usually given a programme of "remedial teaching". What is remedial teaching? It is first good teaching or "teaching at its best". Otto and McMenemy (1966) have pointed out that the main difference between remedial teaching and regular classroom teaching is that ". . . in remedial teaching we may more consistently be able to adhere to the principles that we can only verbalise in regular classroom teaching." Adherence to sound principles is feasible in a remedial situation because

- 1) the teacher-pupil ratio is somewhat restricted
- 2) rich and varied supplementary instructional materials are available and used and
- 3) most important of all, the teacher is able to base all instruction upon careful diagnosis and consideration of the needs of individuals rather than on the demands of curriculum guides.

Remedial instruction has traditionally been interpreted as referring to the specialised teaching given to a child whose achievement does not measure up to his potential. Recently, the term has been applied more selectively and is now generally reserved for the "relatively few children who are severely disabled in their ability to achieve in one or more of the basic skill areas and whose disabilities stem from delimiting factors that require individual attention, such as a muscular imbalance that causes poor visual perception and resultant inability to visualise or learn words." The term therefore applies to children who require remedial help to overcome the disability that is inhibiting their progress. In practice, children are given remedial help when their achievement is 2 or more years below their capacity level. But I must emphasise that in a remedial programme, the goal of ultimate achievement is to read at or above grade level. Usually, deep and intensive diagnosis is needed to identify a child in need of remedial teaching. His disability is quite severe and requires treatment which cannot adequately be provided in a regular classroom.

To be effective in remedial work, teachers should have confidence in themselves, a sympathetic understanding of the child and a precise knowledge and understanding of the reading materials available and used at different levels of ability. Then working

out a reading programme, the teacher should consider his or her own personality and approach with the class. If the approach is good and the child can relax, then the atmosphere created will enable the child to take success and failure in his stride.

Rather than lumping all poor readers together, regardless of potential, the trend is towards careful study of individual strengths, weaknesses and possibilities for improvement. Teachers can learn to handle at least 90% of reading defect cases. For the remaining 10%, more expert diagnosis and remediation are called for. These cases should be referred to a reading clinic, and so it is important that teachers recognise them. What is more important, teachers now can and should prevent the development of serious reading disabilities by taking preventive measures before either defective reading habits or personality maladjustments become established.

Children with reading problems can be referred to the Remedial Reading Clinic at the Institute of Education. The three-fold functions of the Clinic are:-

- 1) to help children with learning difficulties and to return each child with an improved sense of self-confidence and achievement to the school which referred him;
- 2) to document such cases for research into root causes of poor learning behaviour;
- 3) to provide information for the training of teachers to cope with specific problems of children in difficulty.

Each child who is referred is tested and a treatment programme is designed, based on the results of the various tests selected to reveal his learning problem. Normally, a new case is given remediation on a one-to-one correspondence. When a child has made enough progress to join a group, he is fitted into a small group of children who have similar learning difficulties, usually no larger than four. These sessions are on a weekly basis – the individual sessions are an hour a week and the group sessions are one and a half hours weekly.

When the children have made sufficient progress, that is to say, if the gap between potential and achievement has narrowed, they will be discharged to the care of their class teachers who will then be briefed to do the follow-up work.

Besides diagnosis and remediation, the Clinic also offers once a year a 60-hour in-service course to qualified teachers entitled "An Approach to Remedial Reading Instruction". There is also an elective course entitled "Teaching Slow Learners To Read" offered every semester to pre-service students.

It is hoped that teachers, on successful completion of these courses, will carry out the remediation of the "90% of the reading defect cases" mentioned earlier in the paper and be able to identify "the remaining 10%" for referral to relevant agencies. In addition, they should also carry out the follow-up work which is so necessary to the newly-discharged cases if regression is to be prevented.

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AN ENGLISH VOCABULARY TEST FOR SECONDARY SCHOOLS

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Rationale

In most subjects of the secondary curriculum there is a specialist vocabulary which is carefully taught as an integral part of learning the subject. However, there is another important set of words which is used during this instruction and which is assumed to be known as a result of general experience in previous years of schooling. This vocabulary test is designed to be sensitive to differences in level of skill of students with the words assumed known in a variety of subject areas.

Several students in the Institute of Education, Singapore, carried out interlinked studies in different subject areas. In each case the student designed items to test understanding of words commonly used in their subject area, but which were not among the technical terms deliberately explained and taught as part of the study of the subject. The vocabulary test presented here is based on the work of three of these students, Chua Yeok Lung (English), Foong Mei Har (Commerce) and Poon Kit Yue (Mathematics), with the writer collating and editing as necessary. The original 90 items were reduced in this manner to the 60 item test to be found in the appendix.

Development of the test

Following the preliminary work of Adams (1976) in Geography, three item types were used. Not all words lend themselves to simple testing in the form of choosing the closest synonym. With the addition of two other forms of question, choosing a word to complete a given sentence and choosing a definition matching a word as used in a sentence, Adams found that all the words selected for testing could be framed as multiple-choice questions. Subsequent experience has supported this view and no additional item forms have been found necessary.

The areas studied in the production of the test presented here were elementary science, mathematics, English and commercial principles. To allow later linking of the studies, all of them included the same set of fifteen items. Most of these were based on words randomly selected from a list of verbs commonly used in scientific material (Swales, 1976). These proved to be rather easy and did not function perfectly as linking items. However, even after dropping out of consideration items which did not prove suitable for linking the studies, there was still sufficient information to allow estimation of

the differences in difficulty level of the various tests and subsequent correction of the differences allowing the preparation of the conversion tables reproduced below.

The test

Separate studies of mathematics (Poon, 1977), English (Chua, 1977) and commercial principles (Foong, 1977) each provided an additional twenty-five items above the common fifteen. Only items found to work fairly well have been retained for the test presented below.

Part 1 of this test contains the scientific and mathematical words. All the science words appear in the Swales list. Table 1 allows the separation of the two sub-areas if desired.

Part 2 of the test is similarly constructed. The words in the English section were used in texts, but were not among those which were considered by the authors to be difficult enough to require explanation. The words in the commercial principles section are also those in common use and are tested in their common meaning rather than in any particular technical sense.

Sections A, B and C are separated merely for convenience.

Table 1 gives information about the items, the subscale to which each belongs, the keyed answers and the difficulty level as calculated by the Wright-Rasch method as explained more fully in the next section. This difficulty information allows scoring tables to be worked out for subsets of items as described by Wright and Douglas (1975) and again by Wright (1977).

Establishing suitable converted scores

While the Chua values were a convenient basis for the calculation of the comparisons of difficulty levels for the three studies involved, they are not a particularly useful scale for final use. The zero point is merely the average difficulty level of the Chua test items; perhaps a less arbitrary origin could be found. If this was low in the difficulty range, it would be possible to reduce the incidence of negative difficulty values and also negative ability values. The log odds scale is also a little cumbersome as it involves decimals; a simple remedy for this is merely to report all converted scores as 10 times the log odds value, making it easy to convert back, if required, by reinstating the decimal points.

Details of items

Table 1

Test section	Item no.	Subsection	Answer or stem	Alternative	Difficulty
A1	1	S	accompany	A	-16
	2	S	retain	A	- 1
	3	S	convert	A	7
	4	M	observe	B	9
	5	S	illustrate	C	12
	6	S	assume	D	13
	7	M	general	B	14
	8	M	evaluate	C	17
	9	M	construct	C	22
	10	M	respectively	D	30
A2	11	E	interact	A	20
	12	C	accelerate	B	20
	13	C	classify	B	22
	14	E	spacious	B	24
	15	E	revive	A	26
	16	E	condemn	D	29
	17	E	evolved	C	32
	18	C	reconcile	D	33
	19	C	immaterial	C	49
	20	C	intangible	C	53
B1	1	M	problem	D	- 5
	2	M	value	C	- 3
	3	M	proof	C	1
	4	S	compare	B	5
	5	M	examples	D	6
	6	S	yield	D	13
	7	S	lies	A	14
	8	S	arise	D	21
	9	M	computed	A	22
	10	S	give	C	23
B2	11	E	primitive	A	2
	12	C	analysed	B	6
	13	E	refugees	A	7
	14	E	opinion	A	9
	15	E	hastened	B	10
	16	E	ignorant of	C	15
	17	C	replace	D	17
	18	C	balance	B	18
	19	C	potential	D	28
	20	C	salvage	A	29
C1	1	M	correct	B	- 3
	2	S	perform	B	0
	3	S	calculate	A	5
	4	M	suppose	C	9
	5	S	define	B	9

	6	S	examine	D	15
	7	S	suggest	C	16
	8	M	concluded	D	17
	9	M	express	A	21
	10	M	accurate	D	22
C2	11	C	obsolete	C	9
	12	E	precarious	A	13
	13	E	fatal	D	13
	14	C	rectify	A	15
	15	C	disposed of	C	16
	16	E	hesitant	C	18
	17	E	ambition	C	22
	18	C	transact	D	23
	19	E	ingenious	D	35
	20	C	relevant	B	38

A less arbitrary zero point was sought by looking at performances on the simplest of the science words. For this purpose the items testing words among the most common 100 verbs in technical literature as established by Swales were examined. These included the words occur, perform, compare, calculate, convert, define, lies, assume, examine, suggest, evaluate, replace, arise, express, give, consider and denotes. Details of the performance of these items are given in the Appendix. The mean Chua difficulty of these items was -0.195 and the range of item difficulty was 3.66 log odds units. By use of the table taken from Wright and Douglas (1975) the characteristics of a test made up of only these items can be estimated. If a group of examinees with no knowledge of these words attempted such a scale, they would be expected to average a score of 25% correct. Such a score would be equivalent to an ability of 1.4 log

odd units below the mean difficulty of the test items of -0.2 . Thus this very poor performance would be equivalent to a Chua score of -1.6 . If we agree to accept this chance mean as our arbitrary zero point, we can convert Chua scores to the new zero by adding 1.6 to each score.

If we also multiply the score by ten to remove the necessity of using decimal points, we achieve the difficulties listed in Table 1 and subsequently the conversion scales for raw scores to ability scores given as Tables 2, 3 and 4. A person scoring a given ability level will be estimated to have a 50% chance of passing an item with that same difficulty level. This is a basic feature of the Rasch model and gives direct meaning to the converted ability scores, and holds for all of them whether from Table 2, 3 or 4. Thus ability scores on the various subtests may be directly compared.

Score table for separate subject areas

Table 2		Converted score for:			
Raw score	Maths	Science	English	Commerce	
0	<-25	<-30	<-19	<-17	
1	-20	-22	-10	- 8	
2	-12	-15	- 4	- 1	
3	- 5	- 9	2	6	
4	0	- 4	6	11	
5	3	0	10	15	
6	7	4	13	19	
7	10	7	16	23	
8	14	11	20	27	
9	17	14	23	31	
10	21	18	26	35	
11	24	22	30	39	

12	29	27	34	44
13	36	33	40	51
14	44	40	47	58
15	49	48	55	67
Average difficulty	12	9	18	25
Range of difficulty	35	39	33	47

Score table for separate parts

Table 3

Raw score	Converted score on parts:	
	1. (Maths/Science)	2. (English/commerce)
0	<-30	<-20
1	-29	-19
2	-23	-11
3	-18	-7
4	-15	-4
5	-11	0
6	-8	3
7	-6	5
8	-4	8
9	-1	10
10	0	12
11	3	15
12	5	16
13	6	18
14	9	21
15	10	22
16	12	23
17	15	26
18	16	28
19	18	29
20	21	32
21	22	34
22	25	36
23	27	39
24	29	41
25	32	44
26	36	48
27	39	51
28	44	55
29	50	63
> 30	>50	> 65
Average difficulty	10.5	21.7
Range of difficulty	47	51

Score table for total test

Table 4

Raw score	Converted score	Raw score	Converted score
0	-30	30	16
1	-30	31	17
2	-30	32	18
3	-27	33	20
4	-24	34	21
5	-22	35	22
6	-19	36	23
7	-17	37	25
8	-15	38	26
9	-13	39	28
10	-12	40	29
11	-10	41	30
12	- 8	42	31
13	- 6	43	33
14	- 5	44	34
15	- 4	45	36
16	- 2	46	37
17	- 1	47	38
18	1	48	40
19	2	49	42
20	3	50	43
21	4	51	45
22	6	52	47
23	7	53	49
24	9	54	51
25	10	55	54
26	11	56	56
27	12	57	59
28	14	58	62
29	15	59	>65
30	16	60	>65

Average difficulty of test = 16.1

Range of difficulty = 69

Reliability

It is usual testing practice to provide information concerning reliability to give some idea of the accuracy of the measures on the test. With sample free statistics this is done directly by giving the standard error of the various measures. This is complicated to some extent because it is recognised that middling scores are based on more information and are thus more reliable than extreme scores. Naturally scores based on more items are also more reliable. Table 5 presents the standard errors of sufficient points on the score range to give an idea of the accuracy of the converted scores from Tables 2,3 and 4.

Table 5 Standard error of converted scores

Proportion of items correct	Standard error		
	Table 2	Table 3	Table 4
0.10	9	7	4.9
0.20	7	5	4.0
0.30	6	5	3.6
0.40	6	5	3.5
0.50	6	4.5	3.5
0.60	6	5	3.5
0.70	6	5	3.6
0.80	7	5	4.0
0.90	9	7	4.9

Some idea of the test reliabilities typical of these vocabulary items can be gained from the K-R 20 reliabilities obtained by Poon (0.66 for 33 retained items on the maths/science words) and by Chua (0.69 for the 40 items of which some were science words but most in English).

Validity

As this test has only just been developed, little information is available on its validity. However one study contrasting Part 1 and Part 2 showed far better results for those rated good at English by their teachers on both parts, the difference being a little more marked for Part 2. The same study found much more marked differences in the scores of those rated high in mathematics. These students scored very much better on Part 1 than on Part 2. (Poole, 1977).

In brief this study amply demonstrated the power of the test to separate those rated good in English from those rated poor. In addition there was a statistically significant tendency for Parts 1 and 2 to behave differently when applied to children rated high in Mathematics, demonstrating the validity in making the distinction between the two parts for some purposes. As the study included a replication on Secondary 1 (N = 144) as well as Secondary 2 (N = 268) pupils, with the same pattern of results obtained in each case, it was taken as strong evidence of the validity of the vocabulary scale.

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Appendix

VOCABULARY TEST

Section A.1

Choose the meaning that best suits the words in bold print:-

1. **Accompany** means to
 (A) go with (B) combine
 (C) establish a company (D) take care of ()
2. **Retain** means to
 (A) keep back (B) get rid of
 (C) tie down (D) bring back ()
3. **Convert** means to
 (A) change in form (B) contain
 (C) talk in a friendly way (D) cover over ()
4. **Observe** means to
 (A) obey cheerfully (B) watch carefully
 (C) serve unwillingly (D) obtain quickly ()
5. **Illustrate** means to
 (A) rewrite, correcting errors (B) give light to
 (C) explain by pictures (D) copy accurately ()
6. **Assume** means to
 (A) take out (B) ask politely
 (C) answer rudely (D) take as true ()
7. **General** means
 (A) not simple (B) not in detail
 (C) very special (D) difficult to understand ()
8. **Evaluate** means to
 (A) form an estimate (B) work quickly
 (C) decide the value of (D) value highly ()
9. **Construct** means to
 (A) destroy (B) measure
 (C) make (D) plan ()
10. **Respectively** means
 (A) decidedly after careful inspection
 (B) exceedingly politely
 (C) proving what was required to be proved
 (D) separately and in the order mentioned ()

VOCABULARY TEST

Section A.2

Choose the meaning that best suits the words in bold print:-

11. **Interact** means to
(A) act upon each other (B) coincide by accident
(C) combine with the others (D) stand apart from the others ()
12. **Accelerate** means to
(A) pursue (B) quicken
(C) fasten (D) give in ()
13. **Classify** means to
(A) gather (B) arrange
(C) centralize (D) improve ()
14. **Spacious** means
(A) grand (B) roomy
(C) false (D) empty ()
15. **Revive** means to
(A) bring back to life (B) to go over again
(C) to exercise (D) to reverse a decision ()
16. **Condemn** means to
(A) pardon (B) correct
(C) imprison (D) convict ()
17. **Evolved** means
(A) rotated (B) entwined
(C) developed (D) alternated ()
18. **Reconcile** means to
(A) recall (B) gather
(C) retell (D) pacify ()
19. **Immaterial** means
(A) not made of any material
(B) of no useful purpose
(C) of no essential consequence
(D) to put in more material ()
20. **Intangible** means
(A) infinite (B) fragile
(C) not definite (D) not existing ()

Section B.1

Choose the most suitable word(s) to complete these sentences:-

1. This _____ remains unsolved.
(A) answer (B) news
(C) joke (D) problem ()
2. This book will be of great _____ to him in his studies.
(A) thickness (B) price
(C) value (D) stories ()

3. Is there any _____ that the accused man was at the scene of the crime?
(A) fact (B) promise
(C) proof (D) test ()
4. Please _____ your answer with the answer on the board.
(A) show (B) compare
(C) write (D) complete ()
5. The dictionary has many _____ of how verbs are used.
(A) pictures (B) words
(C) pages (D) examples ()
6. The field will _____ a better crop, with an irrigation scheme.
(A) preserve (B) surrender
(C) control (D) yield ()
7. Singapore _____ at the crossroad of trade.
(A) lies (B) profits
(C) lives (D) rises ()
8. If the need should _____ you may consult me.
(A) discover (B) arrive
(C) result (D) arise ()
9. He _____ his losses to be \$50.
(A) computed (B) completed
(C) combated (D) collected ()
10. He will _____ his life to the cause of peace.
(A) leave (B) take
(C) give (D) lose ()

Section B.2

Choose the most suitable word(s) to complete these sentences:-

11. In some parts of Africa, people are still using spears, which are very _____ weapons, to hunt wild animals for food.
(A) primitive (B) brand-new
(C) wonderful (D) powerful ()
12. The contents were sent to the laboratory to be _____ and as a result of this were found to contain traces of poison.
(A) oxidised (B) analysed
(C) synthesised (D) kept ()
13. The _____ fled to the neighbouring countries to escape from the war in their own land.
(A) refugees (B) runners
(C) parasites (D) idlers ()
14. Many teachers have stated their _____ that the new principal is a very strict man.
(A) opinion (B) hope
(C) memory (D) identity ()
15. She _____ to the office when she heard about the robbery.
(A) moved (B) hastened
(C) chased (D) jumped ()

16. Tony pleaded with the magistrate to reduce the fine on the grounds that he was _____ the traffic law at the time he committed the offence.
 (A) mad at (B) informed about
 (C) ignorant of (D) sorry for ()
17. Mr Tan will _____ Mr Lim as president of the company when Mr Lim retires.
 (A) nominate (B) displace
 (C) defeat (D) replace ()

18. Some students find it difficult to strike a _____ in the time spent on academic work and on sports.
 (A) match (B) balance
 (C) success (D) concession ()
19. The salesman hurried forward to greet the well-dressed man who might be a _____ customer.
 (A) late (B) definite
 (C) generous (D) potential ()
20. All that they could _____ at the height of the fire were those pieces of old furniture.
 (A) salvage (B) revive
 (C) remember (D) reassemble ()

Section C.1

Choose the meaning that best suits the words in bold print:-

1. Please come at the **correct** time.
 (A) standard (B) right
 (C) earliest possible (D) mistaken ()
2. What kind of duties do you **perform** as a manager?
 (A) employ (B) carry out
 (C) want (D) prefer ()
3. Astronomers can **calculate** when there will be eclipses of the sun and moon.
 (A) find out by working with numbers
 (B) guess by experience
 (C) tell fortunes from
 (D) give a late answer ()
4. Let us **suppose** that the news is true.
 (A) oppose mildly (B) announce in public
 (C) take it as true (D) support with evidence ()
5. It is very difficult to **define** the word "love".
 (A) disentangle (B) explain
 (C) translate (D) simplify ()
6. The dentist will **examine** our teeth on Tuesday.
 (A) extract (B) fill
 (C) observe (D) inspect ()
7. Are you trying to **suggest** that I am the culprit?
 (A) believe (B) think
 (C) say (D) guess ()
8. The jury **concluded**, from the evidence, that the accused man was guilty.
 (A) argued (B) said sadly
 (C) finished (D) arrived at an opinion ()

9. I find it difficult to **express** my meaning.
 (A) make known (B) give
 (C) arrive at quickly (D) accept ()
10. We are often told to be **accurate** in what we say.
 (A) polite (B) considerate
 (C) acceptable (D) exact ()

Section C.2

Choose the meaning that best suits the words in bold print:-

11. With the coming into the market of the new model, that piece of machinery has now become **obsolete**.
 (A) wasteful (B) observe
 (C) outdated (D) obstructive ()
12. Trading in stocks and shares can become a very **precarious** business in view of the unstable market situation.
 (A) risky (B) hectic
 (C) troublesome (D) uninteresting ()
13. Cancer is one of the **fatal** diseases in Singapore, so early treatment is very important.
 (A) cruel (B) common
 (C) curable (D) deadly ()
14. On discovering the mistake, he tried to **rectify** it but without success.
 (A) correct (B) prove
 (C) destroy (D) hide ()
15. That heap of scrap metal was **disposed of** to make way for the metal sheets just brought in.
 (A) put aside (B) decomposed
 (C) discarded (D) deprived of ()
16. Margaret was **hesitant** about going to her wealthy uncle for help.
 (A) happy (B) determined
 (C) unsure (D) serious ()
17. A person who is filled with **ambition** usually finds life worth living.
 (A) vivid imagination
 (B) lots of luck and courage
 (C) desire to be somebody
 (D) plenty of energy ()
18. It is the company's policy that none of its employees is to **transact** any business without his superior's knowledge.
 (A) transfer (B) turn down
 (C) set up (D) negotiate ()
19. When the first aeroplane was invented, people thought that it was nothing more than an **ingenious** toy.
 (A) clumsy (B) expensive
 (C) fanciful (D) clever ()
20. That paragraph has been struck off as it is not **relevant** to the subject matter.
 (A) important (B) applicable
 (C) useful (D) essential ()

KEEP IT SHORT

Note-taking for learners of English as a first and second language

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Institute of Education

One of the most important and central components of any course on study skills is undoubtedly note-taking. The teaching of note-taking is closely linked to the teaching of listening, reading and writing. Materials for listening comprehension and practice in efficient reading may be used to teach note-taking while note-taking, itself, can be used as a basis for practice in written work. In addition, the teaching of note-taking involves the teaching of such grammatical features as linking, reference, substitution and omission, and thus will include considerable work on connectives, nouns, pronouns, determiners and auxiliaries. A course in note-taking, therefore, is synonymous to a large extent with a comprehensive course in English.

In any attempt to develop note-taking skills, it is useful to identify certain sub-skills of which note-taking is made up. The first of these sub-skills is the ability to listen and understand uninterrupted and spontaneous speech, containing all the many types of so-called redundancies and other features which help the native-speaker but merely put an additional learning load on the foreign learner. Secondly, note-taking requires the ability to select the salient points of a talk or reading passage. The third of the sub-skills is the ability to reduce words and sentences without any consequent loss of meaning. Fourthly, students must be able to perceive the basic relationships between different ideas, states, actions and processes. Finally, it is usually necessary at some stage to read through the notes taken and to put them to some use – namely, for revision, wider reading, or writing.

Let us now examine these sub-skills in greater detail, beginning with the ability to understand long stretches of speech. As spontaneous speech is generally easier for the native-speaker to understand than carefully prepared written material spoken aloud, it is useful to give impromptu talks for listening practice. Short talks given from brief notes rather than from written texts will ensure that students are exposed to the many grammatical inconsistencies, hesitation features, repetition and re-stating of key points in a talk. Although such in-built features of the spoken language help native-speakers to understand and “digest” messages, these devices constitute a major source of difficulty for many foreign learners. For example, students may think that two separate points are being made when one point is simply being re-stated to underline its importance or complexity. Or students may be misled by examples

and personal anecdotes, regarding them as additional points to be noted.

Some teachers, however, find it difficult to give unscripted talks, however short. In such cases, it is NOT advisable to try to introduce hesitation features, etc. deliberately and artificially in a talk given from a prepared script. Such a contrived method of giving “impromptu” talks is much worse than reading the talk from written material. Not only is it just as difficult for the listener but it is also very irritating for him, frequently discouraging him from making the necessary effort to concentrate on the message. Consequently, it is better to use carefully prepared written material if a talk cannot be delivered completely spontaneously. When written material is used in a talk, however, an attempt should be made to adapt it for aural work by (1) re-stating important points and, where necessary, providing examples or some form of amplification and (2) lengthening the pauses at the end of each breath group to compensate for the lack of redundancy.

Talks should be kept short since the overseas student will usually be unaccustomed to intensive listening practice and will experience considerable tension when faced with the tasks required of him. The following “talks” are given here as examples of exercises requiring students to identify certain key points. In each case, the original (written) text has been adapted slightly to make it more suitable as material for listening practice.

(Students hear)

Listen to the short talk which I am going to give and then choose the sentence which you think is correct, according to the information you have been given. Write A, B, C or D.

It is now generally believed that men have lived on the earth for hundreds of thousands of years. Until comparatively recently only a small minority of these human beings ever succeeded in reaching adulthood: the vast majority died in infancy or childhood. Even today the offspring of many primitive tribes die at an early age. Early death has also been the rule rather than the exception for most of the animals in the world. In the lower forms of animal life nature produces hundreds – sometimes even thousands – of young simply to ensure that two or three will survive and live long enough to produce their own young. Generally speaking, however, the more intelligent and more highly developed the animal, the fewer

the offspring and the lower the death rate.

(Students read silently)

- A. In the past most human beings gave birth to more children than nowadays to ensure survival of the species.
- B. Even today most human beings in the world die at an early age.
- C. More highly developed animals give birth to hundreds of young as a means of making sure that a few survive.
- D. More highly developed animals do not generally die at as early an age as less intelligent animals.

(Students hear)

Listen to the following short talk and try to summarise it in a sentence.

We can now state with the utmost degree of certainty that the world's weather would be affected if such vast mountain ranges as the Himalayas, the Andes, or even the Rocky Mountains were suddenly removed from the face of the earth. This is all very interesting, but we have a right to expect much more. What nobody yet knows is precisely the way the weather would be changed by the removal of any of these mountain ranges. It is remarkable how little is yet understood about the way mountains and oceans affect world climate.

When teaching word omission and word compression in notes, the teacher usually finds himself teaching incidentally various grammatical features of English. In order to reduce the length of word groups and sentences in notes, students must learn to recognise structural or form words and their specific function in a particular context. Auxiliary verbs, noun determiners, impersonal subjects, personal pronouns, relative pronouns, prepositions, nouns and noun groups used for purposes of reference are amongst the numerous aspects of English grammar which it will be necessary to teach or revise in a course on note-taking. Examples of exercises in reducing the length of sentences by means of this kind of word omission are:

- (1) (It was possible to take some films of the lunar surface.)
Possible take films lunar surface.
- (2) (Acids are among the most dangerous of chemical substances.)
Acids = v. dangerous chemical substances.
- (3) (When a supersonic airliner is approaching its destination, it will reduce its speed while it is still above 45,000 feet.)
Supersonic airliner approaching destination speed 45,000 ft.

Opportunities for demonstrating various types of ambiguity will now arise. An awareness of possible ambiguity is as important in taking notes as in writing telegrams. The third example in the preceding para-

graph, for instance, is slightly ambiguous. As the notes stand at present, there is no means of determining whether the aircraft reduces speed above, at, or below 45,000 feet or, indeed, whether it begins to reduce speed while flying at a speed of 45,000 feet a minute! Though only too obvious at the time of the talk or lecture, will such notes be as clear six months later?

Another type of ambiguity common in notes results from the omission of the articles and auxiliary verbs:

Official reports ↑ production.
may mean: Official reports have increased production.
or: An official has reported an increase in production.

An awareness of such sources of possible ambiguity will not only improve the student's notes but will also provide him with a deeper insight into the way English functions.

An ability to perceive relationships is essential in note-taking. Since economy is of primary importance in notes, it is advantageous for students to learn how to recognise fundamental relationships and to substitute signs or symbols to denote these relationships. In addition to the speed with which it can be omitted, a particular sign can frequently be used for a number of different words or phrases. The following are given as some examples of commonly used signs, each of which has several verbal equivalents:

- = is, equals, is the same as, is like, is equivalent to, is synonymous with, may be regarded as, consists of, is made up of, is called, represents, is on a par with, etc.
- leads to, causes, results in, becomes, moves towards, passes into, makes, is converted into, is formed into, etc.
- ← comes from, results from, develops from, is a result of, is caused by, is produced from, is made from, is based on, etc.
- ↑ grows, increases, becomes larger, rises, climbs, improves; more, greater, increasing, rising; growth, increase, improvement, etc.
- ↓ decreases, reduces, lessens, shrinks, becomes less/fewer, drops, falls, deteriorates, sinks, goes down, lowers; less, fewer, weaker, decreasing, reducing; decrease, reduction, decline, deterioration, depreciation, etc.
- ∴ therefore, thus, so, then, consequently, with the result that, as a result of that, etc.
- ∵ because (of), as, since, for, as a result of, on account of, owing to, due to, now that, etc.

It should now be increasingly apparent how notes can be used to form an excellent basis for developing writing skills, providing useful practice not only in the use of correct grammatical forms but also in

linking and reference devices. The following notes taken during a short talk on the subject of friction provide an example of a useful writing exercise:

Use the following notes to write two or three short paragraphs on friction:

1. Friction = resistance to sliding or rolling of solid body.
 - a) lighter ↘ friction
 - b) friction ↘ when rolls not slides
2. Man tried ↘ friction → wheel
 - ball bearings in machinery
 - oil (∴ f = problem in mach.)
3. But friction = important: eg tyres.

Differences in the ability to handle the signs contained in the notes and to write good prose are clearly shown by such an exercise. For example, a poor student might write:

“Friction is the resistance to the sliding or rolling of a solid body. Lighter things have less friction, and friction is less when something rolls and does not slide.....”

whereas a more proficient student might write:

“Friction can be defined as the resistance to the sliding or rolling of one solid body on another. The lighter something is, the less friction there is between it and the ground. Moreover, friction is much less when something rolls along the surface instead of sliding on it”

In the following example notes are used to provide practice in the use of connectives in continuous writing, and consequently detailed instructions are given to guide students:

Use the following notes to write a paragraph about T'ai Chi. You should use the following linking signals in place of the sign + :

and (4) not only ... but also (1) also (1)
Moreover, (1) as well as (1)

T'ai Chi makes soft muscles hard + firm
↑ personal appearance
+ ↑ strength of body
+ refreshes body
+ helps relaxation
+ ↑ in rate + force of heartbeat
+ deeper + ↑ rapid breathing.

Clearly note-taking is very personal in many ways and each person will take notes in a different way: for example, the sign → could be used in place of “makes” on the first line of the notes above. Conversely, some of the signs could be replaced by appropriate verbal equivalents for increased clarity. However, the general strategies outlined in this article can be successfully taught to foreign learners of English who have attained a certain minimum level of proficiency.

THE ART CURRICULUM FROM AN ART EDUCATOR'S VIEWPOINT¹

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At the first art seminar held in 1965, a number of art topics was discussed and there were practical sessions featuring demonstrations by local artists and craftsmen. Unfortunately the findings of that seminar were never published although much work was put into the writing of the report. However, one happy outcome did result and that was the founding of the Singapore Art and Crafts Education Society which together with the Ministry of Education is responsible for the present art seminar. The SACES has been very active doing its bit enthusiastically since its inception to arouse interest in art amongst school children, parents and teachers. Its annual Spot Art competition has become a regular feature on the local art calendar.

1965 is past history. Since then there has been no major art activity except for the annual Singapore Youth Festival Art Exhibitions and the Spot Art contests. With major issues of science, mathematics, languages and technology occupying the centre stage of our education drama, art was pushed further back into the background. Teachers of art worked in isolation despite efforts made by the Ministry to organise regular discussion groups at district level. The time has come for a gathering of all those interested in art and art education to meet and exchange ideas and viewpoints. It is to the credit of SACES that this seminar was initiated. An event of this nature cannot but do good even if it were only to focus attention on what was done in the past and what is being done at present. Reviewing past performances and pausing to take a look at present practices will hopefully guide us to see our way to charter the direction that our future art education should take.

At this point I would like to mention that the views expressed in this paper are my own and are not necessarily those of the Institute of Education. They were formulated from personal observations and feedback from students and colleagues. There was no research carried out. My comments were made in the same spirit and for the same purpose as my classroom questioning, and that is to provoke thinking on the subject. They should not be taken as criticism and if they should be proved erroneous or inaccurate, I stand ready to be corrected.

The curriculum is basic to the successful implementation of any programme. Art is no exception to the rule. The curriculum oversees the programme as a whole, taking into consideration many other aspects that are not normally dealt with in a school syllabus. A curriculum spells out the kind of training that is desired and the broad principles underlying the formulation of syllabuses. It looks into the philosophy, the methodology and the learning processes of students in the subject in relation to other fields of study. An art curriculum would therefore view the development of the child in art from the broad perspective of his involvement in other school subjects. The school syllabus gives details of the content of study based on the guidelines given in the curriculum.

Art in our schools is taught according to the criteria of the Primary School Art and Crafts Syllabus and the Secondary School Art and Crafts Syllabus. It is often a segmented approach dependent on the degree of importance principals give to the subject, their willingness to release funds for an active art programme, the availability of space and personnel in a school, and the amount of time that can be spared from other subjects. Officially both time and money have been allocated but their usage is very much under the control of the school principal who, because of constraints of an overcrowded syllabus, may curtail his school's art activities. The picture that emerges is that some form of art is practised in all schools but that the subject is looked upon more as diversion rather than education. A cohesive art programme starting from the child's early years in school and seeing him through to the completion of his secondary education remains a remote possibility. This is not unexpected as it happens even in the advanced countries. The question is, "Are we going to do something about it, and if so, how?"

Perhaps a look into our past and present practices might furnish us with some indications as to how we can go about the problem. Organised art activities in Singapore schools could be said to have started in 1923 with the appointment of Richard Walker as Art Master, Government English Schools. His task was to organise the art work of the Primary Department and to train teachers to help students who were preparing for the art papers in the Cambridge Junior and Senior Examinations. It was a formidable undertaking because no school at that time had any suitable room or equipment for art teaching. There were very few teachers who had sufficient training in the

¹Paper presented at the National Art Education Seminar organised by the Singapore Art and Craft Education Society in conjunction with the Ministry of Education on August 31 1977.

subject. Many schools did not even have art on the time-table in classes above Standard I. No colour or imaginative work was being practised and only in one aided school was water-colour used for pattern making. The main aim of education was to produce clerks for government offices and business houses, nurses for hospitals and teachers for the English schools. The future of the pupils depended entirely on their performances at examinations. It was small wonder that the overriding criterion for art teaching was to help students to pass examinations. Undaunted, Walker rose to the challenge. He formulated a set of criteria for the teaching of art and he had this widely circulated to all schools. On his circular he listed the following aims:

- (i) the correlation of art lessons with other school subjects
- (ii) the training of observation and the building up of a retentive memory
- (iii) the stimulation of imagination
- (iv) the cultivation of taste, a form of judgement based on knowledge of colour and the right use of tools in design and craftsmanship
- (v) the use of artistic handwork in which mind and hand could work in harmony.

It was envisaged that if these were properly followed it could lead naturally to a specialist education in art. Walker's concept of an art education was far from a mere preoccupation with examinations and he did not just formulate aims for others to carry out. He applied himself enthusiastically and energetically to the task on hand by giving lectures to explain his ideas and demonstrations to the schools that requested these. Those who had the good fortune to study under him had their interest in art stimulated for life. This is one success story that art educators in Singapore can do well to emulate.

Richard Walker's approach to art teaching remained with us until the early sixties when a group of returned art educators joined the Art and Crafts Department of the Teachers' Training College. This group brought with them an art school type of training which was aimed at stimulating interest in the art lessons through experiments and personal involvement with various media and materials. Problem solving was no longer done on a formal basis. The training of observation and the building up of a retentive memory were not necessarily accomplished through set exercises. They were more the outcome of the students' participation in the various informal art activities. The emphasis on working towards an examination-oriented syllabus was played down. Trainee teachers were given a broad background of art and crafts activities in their first year of training and encouraged to specialise in one or more areas if they chose art as a major subject. The freer approach soon caught on in the schools and discipline was relaxed, sometimes to such an extent that anything goes as art under the guise of experiments. Enthusiasm was abundant but unfortunately knowledge of

art was confined to a search for variety and novel ideas and techniques. This was clearly evident when teachers came back for in-service courses. Many of them clamoured for new ways of doing things rather than concentrate on an in-depth study of an area that they were familiar with. At times the Art and Crafts Department of the former Teachers' Training College was nothing more than an idea-generating centre. These ideas were picked up and passed on to schools even before they were properly understood. Any attempt to go deeper into a subject area resulted in absenteeism. The demand was for a flow of 'new' ideas and art lecturers were expected to provide them. The students were ink blotters that soaked up what the lecturers had to offer. Thus the fragmentation of the art programme came about. What a child should get out of his art work was given little attention. All the time the concern was for the sustaining of interest from lesson to lesson and the production of exhibition pieces. It is true that the more enlightened methods of approaching art work have stimulated great interest in art lessons. It is also true that the new-found freedom has been responsible for much slipshod work that passed for art. Every art lesson was a practical lesson. Students were not given much opportunity to think or talk about their own ideas, let alone those of others. A situation has thus arisen where a student could be fairly proficient in executing an art piece but when confronted with a similar type of work was unable to convey his own responses and judgement. The time has come when the whole purpose of art education has to be reviewed and examined on the basis of national needs. Art for art's sake is not applicable at this stage of our development. Neither is an examination-oriented curriculum desirable. An effort has to be made to come to terms with national aspirations if the art programme is to serve the need of the country. Advocates of pure art will shudder at this suggestion. To them the very idea of art serving the state is unthinkable and should not even be mentioned.

Art with a political intent is far from what I have in mind. I am thinking of the more down-to-earth effort of correlating art with the other subjects to achieve national objectives. After all, we have to accept the fact that there are priorities to be met and art is not on the list. A quick look at our educational policy shows that the move is towards the promotion of bilingualism, the cultivation of positive work attitudes, the development to the full of the student's own potential at whatever skills or area of study that he is good at and the inculcation of desirable individual characteristics that will enhance the image of the Republic.

The areas of need having thus been identified, it is not too difficult to see where art can fit in. Much of what has gone on before has significant relevance in the scheme of things as it exists to-day. Where we have erred is more in the areas of emphasis rather

than in the curriculum itself. For this reason the present Standing Committee for the Art and Crafts Syllabus has retained much of the content of previous art syllabuses for both the primary and secondary schools. The interpretation of content due to a change in objectives is what we need to look into. We seem to be able to see our way clearly in the primary school where there is already a ready acceptance of art as therapy. By this I mean that art is recognised as an emotional outlet for young children and that it is used extensively to bring about a balanced personal development which would include the cultivation of positive work attitudes and the nurturing of desirable individual traits mentioned earlier on. When it comes to the secondary school, the form that art education should take is not so clear. Should it adopt the continuing function of primary school art where the playway approach is constantly stressed and skills are picked up more by accident than by design? Or should it take on a serious attitude and students are to be given an art school type of training? In practice there is a compromise with the lower secondary classes being treated as an extension of primary school art work and the upper secondary classes as preparation for the GCE 'O' Level Examination. The exhibits at

the current Singapore Youth Festival art exhibitions seem to favour a predominant play-way approach with schools trying to outdo one another in coming up with 'new' techniques and 'new' media. If these exhibitions are indications of what is happening in our schools, there is cause for alarm. In their effort to be 'one up' on other schools there is an obsession with the novel and the unusual. Creativity is sacrificed and the artist is in danger of being replaced by the conjuror. Many of the exhibits could be described as 'clever' or 'ambitious' without their revealing any trace of the artist's sensibility. In my opinion schools are overreacting to exhibitions and are forgetting the original intention of an art education; it is time they are reminded.

Finally it must be pointed out that method in the teaching of art will always be an individual matter. Whatever the curriculum or syllabus, the teacher will be guided by his own philosophy and particular art strengths. For this reason standardization, especially for the secondary school, is difficult. Hopefully this seminar can help to resolve some of the problems posed. If by the end of it all we are still not conclusive in our deliberations, we can still consider ourselves better off for having aired our views and knowing where we stand.

FIELDWORK IN GEOGRAPHY

—Importance, Objectives And Scope

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As a subject concerned with the study of human activities in relation to the physical environment, geography should have a strong appeal to young people. Yet in many instances the subject evokes little interest and has even to justify its place in the curriculum. It is regrettable but true that in many of our schools geography is still largely taught as a compendium of facts about the world. Although more enlightened approaches are available, many teachers still cling to the traditional method for putting the subject across and emphasize learning of facts rather than understanding of principles. How can teachers avoid burdening the minds of children with mere factual information and make Geography more realistic, meaningful and intellectually challenging?

Firstly geography has to be emphasized as a practical subject the teaching of which is best carried out by methods which involve the pupils in the learning process. Secondly the teacher should seek a sense of reality in the minds of the pupils through direct observation of natural phenomena and linking this experience with lessons in the class. Both in the classroom and in the field, the teaching of geography must be directed to the solution of problems and understanding of relationships rather than to the acquisition of facts.

Objectives of Fieldwork

According to Wooldrige, as cited by Wheeler (1970), fieldwork is "the art of seeing and using accessible local ground as a laboratory for teaching." Hutchins (1962) defined fieldwork as a means of acquiring knowledge through the observation and exploration of our terrestrial environment.

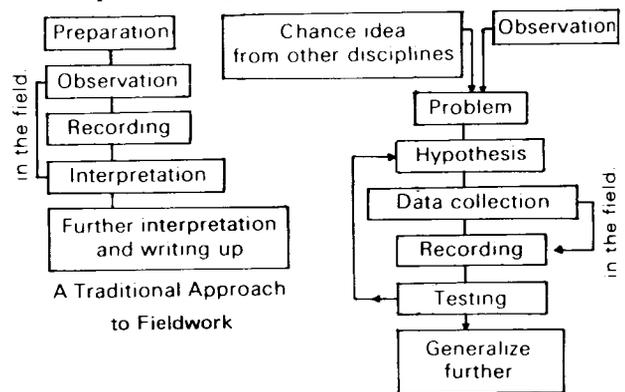
On the basis of these definitions, fieldwork in Geography has the following objectives:

- 1 To develop skills in the study of landscape through observation, analysis and problem solving
- 2 To give reality to concepts learnt in the classroom
- 3 To foster the spirit of inquiry
- 4 To give pupils direct experience with the environment
- 5 To heighten interest in learning

Approaches to Fieldwork

There appears to be two main approaches to fieldwork in school Geography. The first and more tradi-

tional approach stresses the twin processes of observation and recording. By this approach a number of points in the field is selected and at each of these points the pupils are taught how to analyse the features on the ground, to measure and to record the results. The second approach is more modern. It is aimed more specifically at testing a hypothesis or solving a problem by the collection and interpretation of data. These two approaches may be illustrated as simple flow diagrams.



A Field Research Approach
Source: J. Everson, Fieldwork in School Geography

Scope for Fieldwork

Although the ideas behind fieldwork were formulated more than a century ago and are now widely practised in British and American schools as well as those in Australia and New Zealand, the importance of fieldwork is not yet realized in Singapore. So few of our teachers are aware of the advantages or have been trained to make use of them.

It is often lamented that there is little that one can do by way of fieldwork because the country is small and there are no significant physical features comparable to those of the United States or the British Isles. Yet another complaint is that teachers do not have the know-how but this should not be a problem as the amount of literature on fieldwork is now substantial and easily available. What is wanting is initiative, confidence and a willingness to try.

Within Singapore interesting studies can be made of a tropical rain forest (Bukit Timah Nature Reserve), soil erosion (Clementi gullies), fluvial processes and other aspects of physical geography as well as human geography. As an example of what geography teachers can do with school children, the procedure for a half-day field study of coastal processes and features for upper secondary classes is outlined below.

A Field study of Coastal Processes and Landforms at Tg. Rhu, Ponggol and Changi

Objectives

- 1 To study the processes of wave erosion, transportation and the features they give rise to
- 2 To develop skills in:
 - (a) observation, recording and analysis of data
 - (b) the use of instruments: the abney level
- 3 To construct a beach profile using the Emery method (Appendix I)
- 4 To locate, identify and plot coastal features on a map
- 5 To establish a relationship between grain size and beach gradient

Instructional Activities

Tanjong Rhu

- 1 Using some simple surveying method, draw a plan of the bay between the breakwaters.
- 2 On it mark and name:
 - (a) tombolo (b) beach (c) berm (d) scarp (e) swash line.
- 3 Indicate on your plan the direction from which the wave fronts are approaching and explain what happens as the wave fronts approach the shore.
- 4 Estimate (a) height of waves (b) wave period. Would you say that this is a low or high energy environment?
- 5 a) Using the Emery method measure the beach profile.
Record the information on the record sheet provided.
b) On your finished profile indicate:
 - i) scarp
 - ii) beach face
 - iii) limit and type of vegetation
 - iv) berm
 - v) step
- 6 a) Using the abney level measure the gradient of the beach.
b) Is the beach steep or gently sloping?
c) Is the material coarse or fine?
d) Do you think there is a relationship between the size of material and the gradient of the beach?
- 7 Collect a sample of beach sand from the foreshore. Determine the average size by comparing with samples of pre-determined grain sizes.
- 8 Postulate the sequence of coastal changes from fill material along the breakwaters to the formation of bay and beach between the breakwaters.

Ponggol Peninsula

- 1 a) What evidences of coastal erosion do you find here?
b) What steps have been taken to stop this erosion?

- 2 Draw a profile of the beach from the foot of the cliff to the shoreline. On the profile drawn, mark and name:
 - i) cliff
 - ii) notch
 - iii) scree
- 3 a) Estimate the height of these cliffs.
b) How can you tell whether they are stable or receding?
- 4 a) How does the gradient of this beach compare with that of the beach of Tg. Rhu?
b) Is there any similarity or difference in grain size?
- 5 What natural changes would you expect to see here in the next five to ten years?

Changi

- 1 What factors have helped in the formation of this spit?
- 2 a) Where does the material for this spit come from?
b) What processes help in the transport of the material?
- 3 If the spit should succeed in growing across the mouth of the Sungai Changi, what feature would be formed?
- 4 a) What types of natural vegetation do you find on the spit?
b) How have these contributed to the development of the Changi spit?

The final event in any fieldwork is to draw all the threads together into a complete whole. The synthesis may simply take the form of a discussion based on the observations made and supported by maps and sketches done in the field or a written report to be presented before the class.

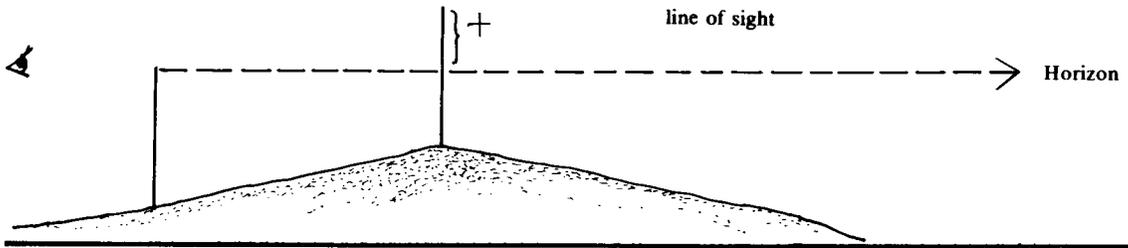
Conclusion

Fieldwork is not just the acquisition of geographical knowledge. It is a process of learning and a method of teaching by which geography can be made real and interesting. It can awaken the spirit of inquiry which is so often stifled in boring classroom situations. It may be argued that fieldwork does not necessarily lead to significant improvement in academic performance but it cannot be denied that fieldwork can be a highly effective vehicle for concept formation in geography. It can lead to considerable improvement in attitude and this constitutes an important requisite to learning. As an instructional technique it merits serious consideration for adoption and use. Geography taught in this way will be far more meaningful and stimulating to the intellect.

Appendix I

The Emery Method

This is a simple and rapid method of determining height differences between two points along a slope with reference to the horizon which acts as the datum.



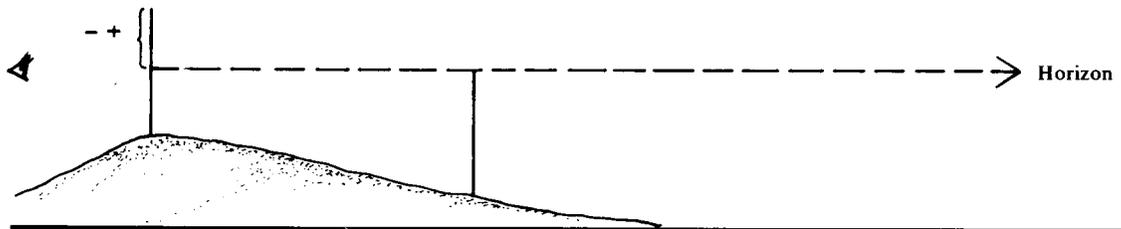
Two graduated sticks of equal length (say 5 ft.) are used. They are placed along significant points along a profile (crest, troughs) to be measured. The difference in height is computed by sighting forward to the horizon.

- 1) If the land is rising, the forward stick is higher than the rear stick and the line of sight is from the top of the rear stick to the horizon, cutting the forward stick at a certain value. This value is recorded as a positive value.

- 2) If the land is sloping downhill, the forward stick is lower than the rear stick and the line of sight should begin from a point along the rear stick cutting the top of the forward stick to the horizon.

The value is recorded as a negative value.

Through moving the sticks alternatively along the profile the positive and negative values are recorded for various distances along the profile. These values are then connected cumulatively for plotting the profile. (Appendix 2)



Appendix 2

Profile Recording Sheet

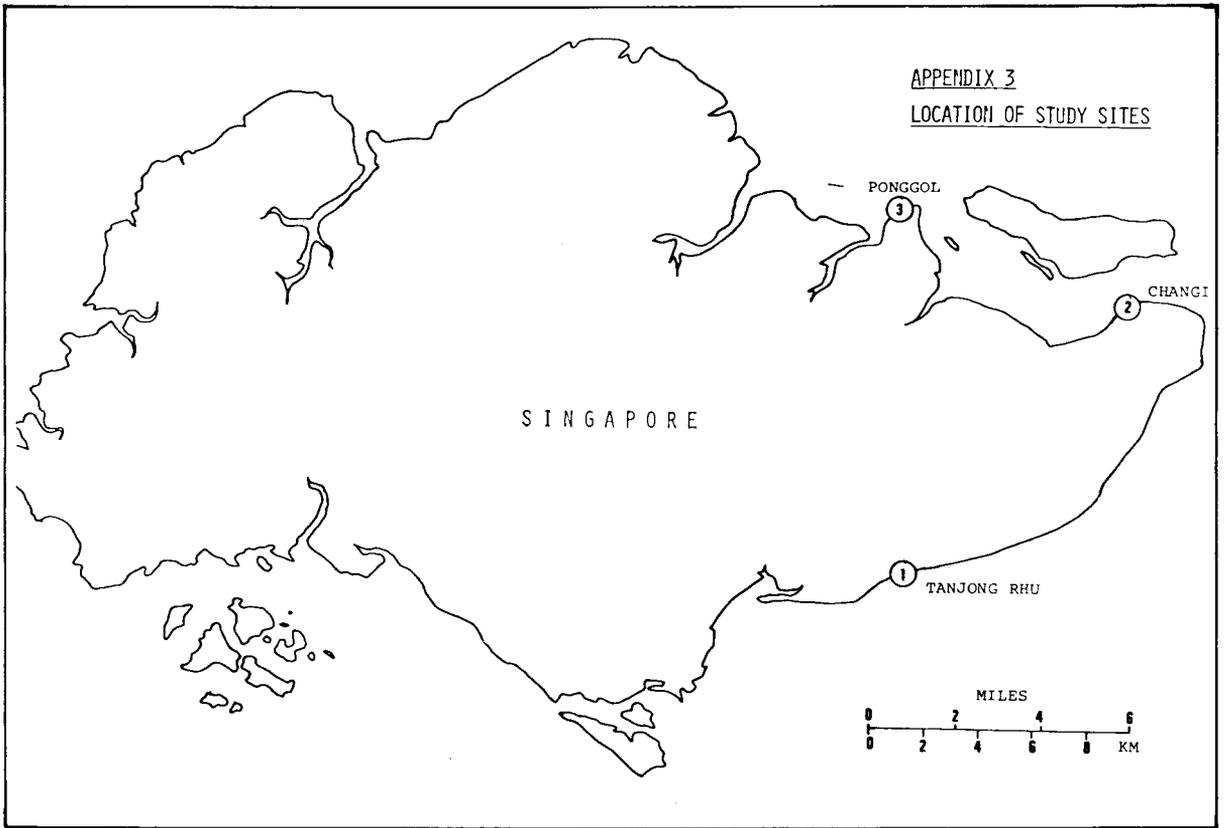
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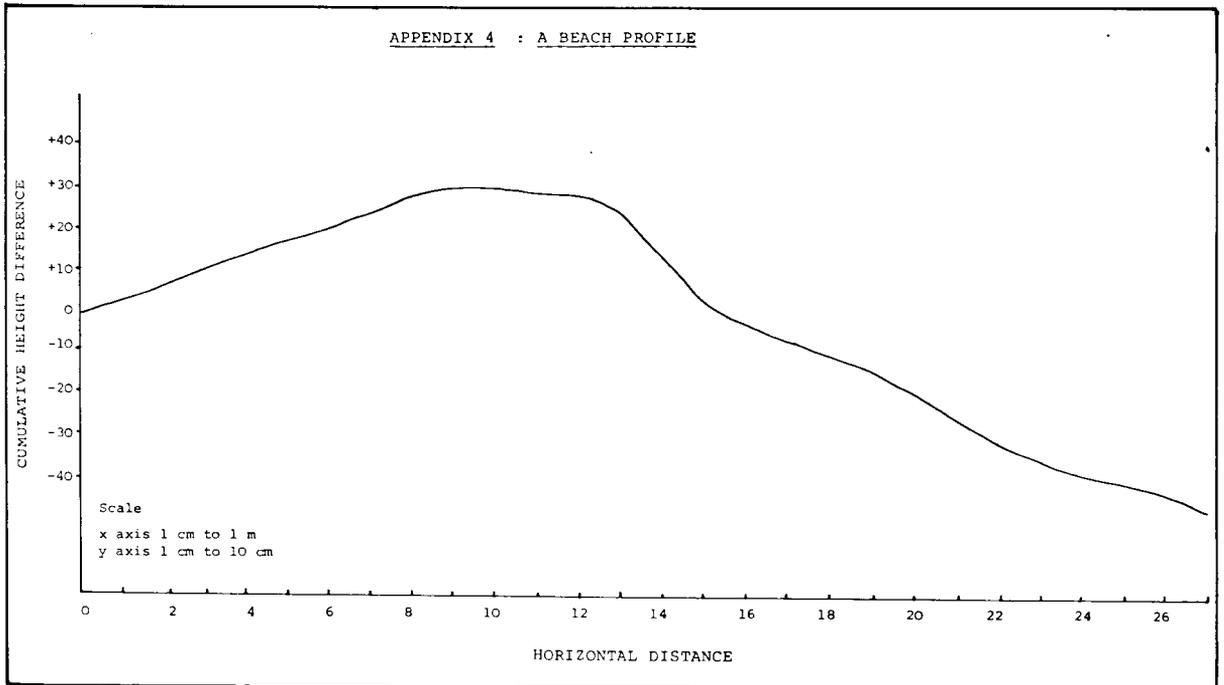
ABBREV. NAME:

DISTANCE	HT DIFF.	CUM. HT. DIFF.	REMARKS
2.5m	+ 8.6cm	+ 8.6cm	Berm, poor grass growth
5.0	+ 6.5	+15.1	
8.0	+ 5.8	+20.9	
12.3	- 0.6	+20.3	
14.3	-10.5	+ 9.8	Beach face
18.0	-20.2	-10.4	Coarse Sand
22.5	-12.5	-22.9	
26.4	-18.9	-4.8	Step

APPENDIX 3
LOCATION OF STUDY SITES



APPENDIX 4 : A BEACH PROFILE



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EDUCATION IN CHINA TODAY¹

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With a population of approximately 850 million living in an area of 9.6 million square kilometres, or the size of the United States of America or Europe, China's efforts to provide mass education since 1949 can only be described as impressive. Whether it is formal education or non-formal education, as educators in non-communist countries categorize education systems, China's education of the masses must be seen in the light of its role of "social reconstruction". The vital role of education in accelerating economic growth is only a means to bring about reconstruction, not an end in itself as in other developing countries.

Any visitor to the People's Republic of China will invariably be told of the rationale and justification underlying its education policy — the necessity of massive social reconstruction to abolish poverty after the devastation of twenty-five years of civil war and the Japanese war, and to transform the population into a collectivist society based upon Marxist-Leninist-Maoist doctrines.

Our three-week visit of seven major cities from Canton in the south (near the Tropic of Cancer) to Shenyang in the north (near 42°N latitude) covered some of China's most densely populated, better developed and most fertile areas. Yet all the people we met tried to impress upon us the necessity for massive social reconstruction and the perennial efforts to fulfil Chairman Mao Tze-tung's education aim and policy. The spokesman for every formal or non-formal education institution drew our attention to Chairman Mao's saying:

"Our educational policy must enable the educated to develop morally, intellectually and physically and to become a worker with both socialist consciousness and culture".

我们的教育方针，应该使受教育者，在德育、智育、体育几方面都得到发展，成为有社会主义觉悟有文化的劳动者。

Since political and social objectives are dominant considerations, moral development with emphasis on collective and national aspects is given priority over the intellectual and physical development of children. The education system, methodology and techniques are so organized as to yield maximum

results. Often there is no mention of individual needs for that would be undesirable in a collectivist society but great attention is paid to the collective needs of the labouring people and those of the country.

According to official statistics, there are now 150 million pupils in primary schools which are free and available to all, and 59 million pupils at the secondary level. Lower secondary education is universal in large and middle-sized cities, and upper secondary education is available in larger cities including all the places we visited — Canton, Kweilin, Peking, Dalian, Shenyang, Shanghai and Hangchow.

As for the length of time spent in school, there is no national plan to return to the twelve-year primary and secondary system. It is reported that the Education Ministry in China intends to standardize a ten-year system with five years of primary education and five years of secondary education. At the college level, a three-year undergraduate curriculum adopted after the Cultural Revolution of 1966 has been retained.

The rest of the populace, except those under three years of age, attend induction classes known as 'hsieh-si' sessions, where they discuss and learn Marxist-Leninist-Maoist doctrines from books entitled **Chairman Mao's Sayings**. The most current text is Book Five of **Chairman Mao's Sayings**. These sessions are conducted twice weekly or daily at the communes whether agricultural, industrial or residential. So thoroughly structured is the society into communes that no one is left out in this massive education programme. As a result, the People's Republic boasts of a very high percentage of literacy, in fact, 90 per cent of the population is considered literate, whereas before 1949, 80 per cent of the population was illiterate. Our impression is that there is a socialist consciousness among most of the people as everyone we met gave a standard answer: "I will work wherever the country needs me" or "I will study whatever course the country wants me to."

How did the Chinese manage to effect such tremendous success in exposing everyone to the same socialist message, and getting them to grasp the main points, retain what is learned and change their attitudes and behaviour? The critical factor is not first establishing specific and clear-cut goals, or implementing the right strategy, or constant analysis of effectiveness and evaluation. It is the sum total of the above implemented in a tightly organized and determined fashion. Formal and non-formal education

¹The writer visited China in June 1977 as a member of the Economics Society of Singapore China Study Tour.

programmes are only one focal point. The other is the organization of cultural activities. A large part of the cultural activities including music, drama and sports are offered in schools and colleges as well as in children's palaces (the equivalent of Singapore's ECA centre) under the formal education system. The adults are exposed to songs, operas, films and sports, all of which are directed at communicating collectivist ideals in the communes.

In communicating these educational ideals, the Chinese are extremely skilled in identifying and understanding the basic human needs for food, shelter, recognition, status and love. No matter whether it is in the kindergarten, the schools or university, the farms, factories or residential communes, educational and cultural activities are geared to implement Mao's philosophy.

Mao has always emphasized the role of the workers in effecting socialist transformation. He said:

"To accomplish the proletarian revolution in education it is essential to have working class leadership; the masses of workers must take part in this revolution and, in cooperation with Liberation Army fighters, form a revolutionary three-in-one combination with the activists among the students, teachers and workers in schools and colleges, who are determined to carry the proletarian revolution in education through to the end. The workers' propaganda teams should stay permanently in the schools and colleges, take part there in all the tasks of struggle — criticism and transformation, and always lead these institutions. In the countryside, schools and colleges should be managed by the poor and lower-middle peasant — the most reliable ally of the working class".

(实现无产阶级教育革命，必须有工人阶级领导，必须有工人群众参加……工人宣传队要在学校中长期留下来参加学校中全部斗、批、政任务，并且永远领导学校。)

Thus, in every school or university we visited, we met the chairman or vice-chairman of the propaganda or revolutionary committee as well as teachers and students. But interestingly, none of these revolutionary committee chairmen are "workers" in our understanding of the term. They are simply "working members" of a community. Thus, in Kweilin's Seven Star Kindergarten, the spokesman was the Principal. The chairmen of the revolutionary committees of schools in Shenyang and Shanghai as well as Peking University were either teachers who were communist cadres or Party members themselves. They did not give us the impression that they were "workers" or "the poor and lower peasants" as advocated by Chairman Mao.

The other members of the schools are engaged in literacy as well as vocational education. The pupils

study eight to thirteen subjects depending on the level. They also engage in meaningful labour in a school factory or school farm as part of their school curriculum. In addition, all primary, secondary and tertiary students participate yearly in a month-long labour programme in the farms. In the famous Hangchow Dragon Well Tea Farm, we saw a group of ten-to twelve-year-old boys camping within the tea factory to learn productive labour from the tea growers.

This system of education satisfies the basic needs of food, shelter, recognition and status. The pupils earn their keep while participating in industrial and agricultural production. While they study the traditional three R's, reading both Chinese and English, mathematics and writing, they also study science, military affairs, politics, geography, history, health science, music, art and productive labour. The better students who are also politically conscious and socially cooperative are chosen as "small red soldiers" in primary schools and "red guards" in secondary schools and universities. Their talents and loyalty are identified and recognized, then given some status so to speak. It is also worthwhile to note that recognition and status are not just accorded to the selected few. In most of the classes we visited, at least half of the students wore the distinguishing red scarf of small red soldiers for those under twelve or the red arm bands of the red guards.

Judging by the confident, happy behaviour of the students, it would seem that there is true satisfaction of basic needs, however unnatural or artificially generated the needs may be. Also, peer group influence and opinion are of utmost importance in a collectivist society where the role of the family can be said to have diminished. Group care from the time a child is 57 days old is becoming increasingly important. Maternity leave in China is 56 days, after which the working mother can leave her child in a commune nursery.

For about eleven years after the Cultural Revolution, students at all levels progressed at their own pace without the fear of school leaving or entrance examinations. Students could be promoted from grade to grade by demonstrating socialist consciousness and cooperation in productive labour. This situation, however, was blamed for the lowering of academic standards. The "Gang of Four" championed by Chairman Mao's wife Chiang Ching was discredited and held responsible for China's educational and economic setbacks.

In Shenyang we were told that entrance examinations for secondary schools are being re-introduced. Elsewhere in districts where the demand for places in secondary school is greater than the supply, entrance examinations will also be restored. At the university level, the previous system of tripartite recommendation by peer group, revolutionary committee and teachers will no longer be effective.

In most cases, students with two years' productive labour experience in farms, factories and the army will compete for admission to the colleges and universities by sitting for an entrance examination. The exceptions are students with special aptitudes or training in foreign languages, like our Peking guide, or other training as in sports, fine arts, and certain science subjects. But these would probably comprise no more than ten per cent of the freshman class. Officially, however, it has been said that twenty to thirty per cent of college students will be enrolled from among secondary school graduates. The Education Ministry has also issued a ruling that starting from 1977, all college applicants in science and engineering subjects must have graduated from upper secondary school. Arts applicants must at least have completed lower secondary school.

In order to restore academic standards at university level, theoretical courses and laboratory work will be reintroduced into the curriculum as deemed necessary by lecturers and administrators. Another change is that the productive labour schedule has been reduced to a more modest one-month a year, plus a day every other week devoted to odd jobs on campus. University lecturers are gradually being given more time to do research.

It is interesting to note that there is a new emphasis on showing respect to teachers. This is seen in an article by the Ministry of Education in the December 1977 issue of *Hung Chi Magazine*. It quoted Chairman Mao thus: "Teachers should be respected as teachers. Don't criticize them whenever they say something wrong. Is it possible to be correct all the time?" Hitherto there had been reports of how university lecturers reacted negatively to productive labour in the farms, and how the revolutionary committees of the communes took delight in assigning lecturers and professors to the unpleasant chore of collecting human manure and waste to spread over the cultivated plots.

At the secondary level, a word about science learning is relevant. In Shanghai we were told and in Shenyang we saw that students learn physics and chemistry from text books and occasional demonstrations of scientific experiments. The secondary schools have no science laboratories. The average students are given an elementary review of any scientific topic.

Only the exceptionally bright students with scientific aptitudes are given special training in the children's palaces in the cities. For example, secondary school students go once a week in the afternoon to the Shanghai Children's Palace for subjects such as anatomy, pharmacy, naval art, aeronautics, electronics or special industrial manufacturing skills.

Other students who are selected to take part in the training programme at children's palaces, whether at street, district or city level, learn how to play a Chinese or Western musical instrument, or study ballet, singing, art, handicrafts and embroidery.

There are also all kinds of games and sports including gymnastics and acrobatics.

It is via these scientific and cultural activities that the Maoist ideals of socialism and collectivism are reiterated and reaffirmed. After three weeks in China, every member of our Economic Society Study Group could, almost word for word, recite the Maoist sayings and communist explanations about their political, educational, socialist and economic setups. It is no wonder that children who have been brought up from young to conform to "real life, class struggle and socialist ideals" all speak the same language and give the same answers.

The pictures, stories, songs and dramatic activities for both the young and the adult within or without the formal education system are based upon "social realism" and they reflect not only a deliberate policy to minimise fantasy, imagination and individualism but to encourage sentiments for national leaders, heroes or model communes. The children at Kweilin's Seven Star Kindergarten sang "Our Hearts are linked with Chairman Hua's" and performed dances like "We Learn Farming from Young", "Washing Clothes Dance", "Little Rabbit Plants Carrot" and "I Love Peking's Tien Aun Men". Elsewhere the students as well as professional artistes sang and dramatised sequences glorifying Chairman Mao, Chairman Hua and Prime Minister Chou En-lai as well as national heroes like Luo Feng (雷锋). The model industrial commune Taching (大庆) and agricultural commune Ta Chai (大寨) were glamourised and widely publicised so that they have truly become household words.

Cultural activities, literature and education are thus geared to cultivate socialist feelings and altruism. Not even once did any of the operas and concerts and the films and pictures we saw depict love for parents or love between sexes. The visual and auditory messages from the kindergarten to the public theatre proclaim the "Five Loves": Love of Chairman Mao, Chairman Hua, Chou En-lai and other national heroes; the Chinese Communist Party, the motherland, collective life and physical labour.

On the personal level, even one's health is taken care of in public. Daily mass drill aimed at building up the body takes place in every school early every morning. This habit is carried over into adult life so that everywhere on the road, in the street corners, in front of the house or up in the flats, people do their tai-chi from five to six in the morning.

Another feature is that of daily eye exercises for school children. Twice a day, each time for five minutes, music accompanied by clear oral instruction is piped over the public address system throughout the school. Every other activity is halted in order that children may rub their eyes at four pressure points. These eye exercises are China's own invention. They are so effective, we were told, that the younger generation does not suffer from myopia anymore.

From our observation, it is true that no student in school wears spectacles. There is also no evidence of the use of contact lenses.

To sum up, what can be observed in China today is a country with a single purpose, a single goal. It is a country devoted to a collectivist way of life and it is determined to educate each new generation into positive attitudinal and behavioural participation in its continuing revolution. One is impressed by the singleness of purpose, enthusiasm and the thoroughness evident in its education system. One admires the

effectiveness of the total communication of the collectivist message so that no one can tell where culture, or education, or political propaganda begins or ends.

Nevertheless, one may raise questions about the effects upon family life with parents going out to work and children being left under group care at creches, or about the extent of provision for children's curiosity and individual development in such a highly structured education system. Or it may be that we need to examine our own educational assumptions.

PENGAJARAN MENGARANG

Tengah b Abdul Latif

Pensyarah Maktab Perguruan Islam

Bandar Seri Begawan

Brunei

Penguasaan bahasa seakan-akan tidak memerlukan usaha sama sekali. Pendapat ini kuranglah benar. Hal yang sebenarnya ialah, bahawa setelah bertahun-tahun dengan latihan yang tidak jemu-jemu dan kesalahan yang dibetulkan berulang-ulang secara eksplisit dan implisit barulah akhirnya kanak-kanak itu dapat menyesuaikan bahasa orang dewasa. Kepada manusia pula pada umumnya penguasaan bahasa itu merupakan suatu prestasi yang luarbiasa selama hidupnya.

Sangkaan yang salah tentang penggunaan bahasa itu disebabkan oleh agak keliru tentang sifat-sifat bahasa itu. Orang selalu menyangka bahawa anak orang Melayu tentulah akan pandai berbahasa Melayu, demikian juga anak orang Inggeris akan pandai berbahasa Inggeris. Seakan-akan kepandaian berbahasa itu merupakan soal keturunan atau warisan yang dipusakai. Tetapi perkara yang sebenarnya ialah biarpun itu anak Melayu atau anak Inggeris, jika dianjurkan dan dibesarkan di dalam keluarga dan di dalam lingkungan masyarakat yang tidak berbahasa Melayu atau berbahasa Inggeris, tentulah mereka (anak Melayu dan anak Inggeris) tidak akan pandai berbahasa Melayu dan Inggeris kerana kemahuan dan desakan serta alam sekeliling untuk memahami sesuatu bahasa itulah yang menyebabkan seseorang dapat berbahasa. Suatu bahasa itu nyatalah bukan dari keturunan atau dipusakai tetapi kemahuan dan kehendak-kehendak mereka mengadakan komunikasi antara individu dengan manusia yang lain lebih besar dan lebih kompleks, itulah yang menimbulkan minat untuk menguasai bahasa dan dari kehidupan kebudayaan yang mana masyarakat itu terlibat.

Memang suatu kenyataan bahawa bahasa itu wajar dimiliki oleh setiap manusia dan kewajaran ini mungkin menyebabkan bahasa dianggap sebagai suatu perkara sehari-hari yang biasa sahaja; sehingga tidak perlu mendapat perhatian yang selayaknya sesuai dengan fungsinya dalam masyarakat.

Sebab itulah sekolah-sekolah sangat diinsafi akan kepentingan-kepentingan yang dicapai oleh mereka dalam menguasai bahasa lebih-lebih lagi kaitannya dengan pelajaran-pelajaran yang lain. Dengan menguasai bahasa yang baik, terang dan jelas dengan menggunakan tatabahasa, penggunaan-penggunaan ragam bahasa, tanda-tanda baca yang betul tentulah kanak-kanak dapat menyatakan pendapat dan idea-idea dengan terang dan padat. Pembaca pula akan tertarik untuk membaca, kerana pelajaran mengarang itu sendiri ialah pelajaran kreatif dan mempunyai nilai estetika.

Fungsi pengajaran dan belajar, terutamanya pengajaran bahasa (termasuk **mengarang**) bukanlah semata-mata di dalam bilik darjah sahaja, tetapi ia berfungsi juga di luar bilik darjah. Pengajaran itu adalah satu kehidupan yang menjalani proses yang panjang waktu-nya kerana belajar ialah pemikiran. Setiap bahan yang diajarkan perlu mendapat perhatian yang teliti dan meninggalkan kesan yang mendalam atau meninggalkan ingatan atau tanggapan yang lebih berkesan.

Pengajaran harus ada matlamat yang konkrit. Matlamat ini disebut matlamat perilaku (behaviourial objective). Matlamat inilah yang dijadikan tujuan yang hendak dicapai apabila kita mengajarkan karangan itu. Yang selalu menjadi matlamat perilaku ini ialah beberapa kemahiran-kemahiran tertentu yang hendak kita capai sebagai hasil pengajaran sesuatu aspek karangan.

Seorang pelajar tidak akan dapat menulis sebuah karangan yang baik, kemas serta dapat memahamkan pembaca-pembacanya, melainkan pelajar-pelajar itu sudah lebih dahulu menguasai kemahiran-kemahiran asas dalam penggunaan bahasa, tanda-tanda baca, susunan idea untuk sebuah karangan dan perenggan-perenggan karangan.

Menurut pendapat seorang ahli pendidikan, Sir Percy Buck, bahawa **perhimpunan isi yang sebenarnya mungkin menambah pengetahuan, tetapi pengetahuan dan kebijaksanaan datangnya dengan mengikuti satu-satu prinsip**. Maka mencapai atau memberikan kesan dalam pengajaran, khasnya pengajaran bahasa, maka prinsip-prinsip berikut haruslah dijadikan panduan yang dasar (fundamental):

- (a) tujuan
- (b) pengalaman
- (c) minat dan penarik
- (d) maksud
- (e) persediaan pelajaran

Guru sepatutnya tahu apakah tujuan-tujuan yang hendak dicapainya dalam menyampaikan bahan-bahan pengajarannya terhadap pelajar-pelajar. Guru seharusnya memikirkan kesan-kesan yang akan didapati oleh pelajar-pelajarnya setelah dia menyampaikan isi pelajaran itu. Berikut ini beberapa saranan yang difikirkan baik untuk menjadi panduan mengajar karangan:

a) Tujuan Am

1. Supaya pelajar-pelajar dapat mencapai kepandaian mengarang itu seperti zaman sosial kontrol, sosial support dan sosial partisipasi.

2. Supaya pelajar dapat menyampaikan atau menyatakan kepandaian mengarang itu, maka dapat pelajar itu menyampaikan pengalamannya, fikirannya, pertimbangannya dan hasil pendapatnya.
3. Supaya pelajar dapat mengembangkan dan menjamin akan ada kesanggupan untuk mencatatkan perasaan dan fikiran dengan bahasa yang baik, kemas dan teratur.

(b) **Tujuan Khas**

Supaya pelajar dapat menggali dari berbagai-bagai sumber kegiatan demi mencapai tujuan-tujuan itu. Berikut adalah landasan-landasan yang harus pelajar-pelajar ikuti dan fahami:

1. Tujuan belajar mengarang ialah membangun dan mengembangkan daya ekspresi penyair dengan tulisan dan lisan.
2. Pengajaran mengarang ini hendaklah disampaikan dengan secara berperaturan dan praktis, lain-lain perkataan secara latihan-latihan dan panduan-panduan yang baik.
3. Dengan tujuan mencapai kemahiran berbahasa, penggunaan tanda baca yang betul, penggunaan-penggunaan bahasa dll.
4. Mengarang itu sendiri ialah mengatur, menyusun dengan baik dan indah iaitu menjadi satu syarat yang bererti dan yang hendak dicapai.
5. Menerangkan kepada pelajar bahawa dalam karangan itu ada terdapat teknik tertentu seperti pendahuluan, perkembangan dan kesimpulan dari keseluruhan karangan itu.
6. Kesimpulan dari tujuan-tujuan khas mengajar mengarang itu adalah:-
 - i. bertujuan tetap
 - ii. yang mendatangkan kegiatan dan kebolehan pelajar untuk menulis
 - iii. hendaklah sejajar dan setaraf dengan tingkat pemikiran pelajar
 - iv. kerja-kerja yang diberikan tersusun dan teratur mengikut kepentingan-kepentingan pelajar itu
 - v. guru sentiasa mengingatkan matlamat apa yang hendak dicapai di akhir pelajarannya.

Untuk sekadar pandangan, diperturunkan di bawah ini berbagai definisi untuk jenis-jenis karangan yang biasa diajarkan di sekolah-sekolah:

- (a) **Karangan Darihial:** sejenis karangan yang dikhususkan untuk menerangkan sesuatu perkara yang nyata atau yang abstrak untuk mengenalkan atau membolehkan seseorang pembaca mengetahui perkara itu dengan jelas.
- (b) **Karangan Perihal:** karangan yang dikhususkan untuk menceritakan sesuatu kejadian yang mempunyai awal-akhirnya.
- (c) **Karangan Imajinatif:** sejenis karangan yang dikhususkan untuk menceritakan rekaan imajinasi pengarang yang berdasarkan dunia

kenyataan atau khayalan.

- (d) **Karangan Perbahasan:** sejenis karangan yang menegaskan hujah-hujah penulis yang pro dan kontra dalam suatu perkara yang dibahaskan.
- (e) **Karangan Dialog:** sejenis karangan yang berbentuk katabual imajinasi sesuatu perkara dan ada awal-akhirnya.
- (f) **Karangan Ucapan:** sejenis karangan yang memajukan sesuatu perutusan yang hendak disampaikan kepada umum dengan bahasa yang sesuai dengan situasi yang ada.
- (g) **Karangan Laporan:** sejenis karangan yang melaporkan kejadian sebenarnya untuk pengetahuan umum.
- (h) **Surat Kiriman:** sejenis karangan yang dikhususkan untuk perhubungan antara dua pihak mengikuti peraturan-peraturan yang tertentu.

Anatomi atau penubuhan sesebuah karangan itu merupakan komponen dari empat aspek karangan, iaitu:

- (a) Tajuk karangan
- (b) Pendahuluan karangan
- (c) Perkembangan karangan
- (d) Penutup karangan

Tajuk karangan: Guru bolehlah memilih tajuk yang sesuai untuk dibincangkan oleh pelajar-pelajarannya. Tajuk biasanya bergantung kepada apakah jenis karangan yang hendak guru ajarkan kepada pelajar-pelajarnya itu.

Pendahuluan karangan: sebaiknya pendahuluan ialah yang ringkas, jelas, padat dan menarik perhatian pembaca. Kalau pendahuluan sesebuah karangan itu tidak menarik, orang tidak akan membaca seterusnya. Jadi walau bagaimanapun baiknya karangan itu, jika pembukaannya atau pendahuluannya itu tidak menarik, kebaikan atau kebagusan karangan itu tidak akan dinikmati oleh pembaca.

Perkembangan karangan: pada bahagian ini akan kelihatan kecekapan penulis-penulis karangan itu tentang penyusunan isi. Isi manakah yang patut diutamakan dan isi manakah yang tidak perlu ditonjolkan sangat; isi manakah yang perlu dikumpulkan dalam satu-satu perenggan karangan dan isi manakah yang patut diasingkan. Kecekapan penulis karangan menggunakan bahasa adalah berguna menjadikan susunan perkembangan karangan ini cukup berfungsi.

Penutup: tidak kurang pentingnya, seperti pendahuluan dan perkembangan karangan tadi, bahagian penutup ini. Pada penutup karangan akan kelihatan kecekapan atau kemahiran penulis karangan itu membuat kesimpulan yang singkat, jelas tetapi mencakupi segala isi karangan yang hendak dikemukakan kepada pembaca-pembacanya.

Demikianlah, dengan beberapa saranan dan pandangan ini, mudah-mudahan kita dapat memperbaiki dan menambahi kemahiran murid-murid atau pelajar-pelajar kita dalam hal mengarang.

PERANAN BAHASA DALAM KEBUDAYAAN

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Bahawa “bahasa” dalam pengertian orang-orang Melayu tidaklah semata-mata bersifat lingual (yang hanya menjadi alat komunikasi antara dua pihak pengguna bahasa sahaja); tetapi bahasa itu adalah lebih kultural (yang menjadi pengilham dan pendorong manusia ke tahap lebih baik dalam hidupnya; sekaligus mempertinggi kebudayaan manusia itu).

Orang yang **tidak reti (erti) bahasa** tidaklah dimaksudkan bahawa orang itu tidak tahu berkata-kata dengan menggunakan sesuatu bahasa (language) semata-mata, tetapi ia lebih dimaksudkan bahawa orang itu tidak tahu aturan; tidak tahu adat; tidak tahu adab; tidak ada kultur (kebudayaan). Maka sesuai benarliah ia dengan sikap para pemimpin kita yang mahu supaya bahasa ibunda (yang di sini kita anggap sebagai bahasa kedua) itu dipermaju dengan tujuan untuk memelihara warisan kebudayaan (tradisi, nilai-nilai dan sikap-sikap ketimuran) kita yang sedang tercabar oleh teknologi Barat sekarang ini.

Dalam perbahasaan kita didengarkan perbilangan: orang berbudi kita berbahasa (yang maksud implisitnya ialah **orang memberi kita merasa**). Sebagai respon kepada perbilangan itu, berkatalah orang: ada ubi ada batas (yang maksud implisitnya ialah ada budi ada balas).

Pendidikan moral yang tersembunyi di sebalik kedua perbilangan itu ialah bahawa dalam hidup bermasyarakat, manusia tidak harus menyendiri sahaja; masing-masing adalah saling sandar-menyandar (seperti **aur dengan tebing** – kata peribahasanya), iaitu seorang memberi sementara yang lain menerima; pada kali ini dia memberi, tetapi pada kali yang lain dia akan menerima pula.

Dengan demikian, jadilah kehidupan masyarakat manusia ini sebagai suatu tubuh yang tiap individu dengan sendirinya menjadi unsur atau komponen dalam penubuhan masyarakat itu. Dan, dalam penubuhan masyarakat itu **bahasa** menjadi inisiator kepada kebangunan fikiran manusia-manusia yang menganggotai masyarakat itu, sehingga mereka dapat mengatur; menyusun dan mendisiplinkan masyarakatnya begitu rupa.

Konsep hidup sandar-menyandar dan sama merasa bertanggungjawab dalam kehidupan anggota-anggota masyarakat Melayu lama itu telah terkanun dalam perbilangan Adat Perpatih yang diungkapkan oleh bahasa dengan kata:

Duduk perpelarasan,
dekat rumah dekat kampung;
halaman satu sepermainan,
seperigi sepermandian,
segayung sepergiliran,
sejamban setepian.

Muafakat tak bertukar;
rahsia tak berubah.

Ibarat labu menjalar ke hulu,
ibarat kundur menjalar ke hilir;
pangkalnya sama dipupuk,
pucuknya sama digantis,
buahnya sama ditarik.

Bukit sama didaki,
lurah sama dituruni,
laut sama direnangi.

Berat sama dipikul; ringan sama dijinjing,
hati gajah sama dilapah; hati kuman sama dicecah.
Sembah kepada datuk!

Dengan perbilangan itu, manusia Melayu yang terikat oleh Adat Perpatih diarahkan supaya hidup sentiasa dalam satu kesatuan yang masing-masing anggotanya mempunyai tugas yang selaras (seperti yang dinyatakan dalam: **ibarat labu menjalar ke hulu, ibarat kundur menjalar ke hilir; pangkalnya sama dipupuk, pucuknya sama digantis, dan buahnya sama ditarik**); masing-masing anggota masyarakat itu mempunyai hak memberi dan hak menerima yang samarata (seperti yang dinyatakan pada: **berat sama dipikul; ringan sama dijinjing, dan hati gajah sama dilapah; hati kuman sama dicecah** itu).

Menurut kanun atau perlembagaan adat itu bahawa sesuatu rancangan harus dikerjakan dengan muafakat (menerusi mesyuarat) dan dengan satu kepimpinan yang teratur. Arahan itu kedapatan pada kata: **muafakat tak bertukar; rahsia tak berubah, dan sembah kepada datuk** itu, Dan, kata: **sembah kepada datuk** yang melambangkan kepimpinan itu diperluas pula dalam satu perbilangan lain yang menerangkan:

Sepertama kalam Allah,
kedua kalam Nabi,
ketiga kalam Yang Tua;

Bak apalah kalam Yang Tua:
alam beraja,
luak berpenghulu,
buapak beranak-buah.

Kalam Allah dalam perbilangan itu dimaksudkan: Quran, **kalam Nabi** ialah hadis, dan **kalam Yang Tua** ialah terombo adat. Dan, sistem penyelenggaraan kepemimpinan itu dirujukkan setahap demi setahap untuk membuat ketentuan dan menentukan kebenaran. Adat itulah yang dipertahankan oleh orang-orang dahulukala dengan perbilangan: **biar mati anak, jangan mati adat** itu.

Bagaimanapun, jika kita selidiki perbilangan tadi, kita akan mendapati bahawa konsep bermasyarakat yang dinyatakan menerusi perbilangan itu masih valid buat zaman kini. Inilah yang dibahasakan orang: **adat yang tak lapuk dik hujan, tak lekang dik panas**. Apa yang nyata berubah pada perbilangan itu ialah situasinya perbilangan (**lain hulu lain parang; lain dahulu lain sekarang**), tetapi konsep persatuan yang mengharmonikan masyarakat itu masih dapat dipertahankan.

Kalau kita teliti untaian pertama perbilangan tadi, antara kata-kata:

“Duduk berpelarasan
dekat rumah dekat kampung;
halaman satu sepermainan,
seperigi sepermandian,
segayung sepergiliran,

sejamban setepian” itu, hanyalah tiga frasa terakhir (**seperigi sepermandian, segayung sepergiliran dan sejamban setepian**) itu yang perlu diubahsuaikan supaya selaras dengan situasi sekarang, akibat kemajuan teknologi; sedang situasi tiga frasa yang mula-mula itu kelihatan masih utuh, tidak terjejas oleh perkembangan fikiran modern sekarang ini.

Frasa-frasa **segayung sepergiliran dan sejamban setepian** itu mungkin dapat kita kekalkan makna implisitnya sahaja, iaitu kita harus menghadapi kenyataan hidup sekarang ini dengan sabar dan toleran; atau boleh kita padankan dengan sikap Barat **“after you, please”**. Makna eksplisit dari kedua frasa itu mungkin tidak dapat diamalkan memandangkan bahawa kekampungan sekarang ialah kekampungan bandaran. Satu dari ciri-ciri kebandaran ialah keindividuan; kalau bukan **selfish**. Dan, jamban dan gayung sekarang sudah dianggap milik individu; bukan lagi milik masyarakat. Jadi makna eksplisit kedua frasa itu, nampaknya, tidak dapat dipertahankan lagi!

Tentang frasa **seperigi sepermandian** itu pula, pada fikiran saya, akan menjadi sesuai dengan kekampungan rumahpangsa kita kalau dipinda menjadi **sekolam seperenangan!**

Kecuali tiga frasa terakhir dalam untaian pertama perbilangan tadi, saya berpendapat bahawa seluruh kandungan perbilangan itu masih dapat kita pertahankan. Yang demikian, nilai-nilai dan sikap-sikap hidup yang diasaskan oleh perbilangan adat itu masih praktikal. Hanyalah: siapakah **datuk**; siapakah **buapak** dan siapakah **penghulu luak** tempat kita berdatang sembah untuk meminta penyelesaian atas masalah-masalah hidup sekarang ini, bukanlah lagi **datuk-datuk, buapak-buapak** atau **penghulu-penghulu luak**

di zaman perbilangan itu diwujudkan dahulu.

Dan, untuk melayakkan kita hidup sekarang dalam masyarakat modern berdasarkan konsep perbilangan adat tadi, kenalah kita menyesuaikan diri kita sendiri dengan keadaan-keadaan yang menurut ajaran-ajaran “bahasa” dan kebudayaan kita yang mengatakan: **di mana bumi dipijak di situlah langit dijunjung**. Lain ajaran “bahasa” yang boleh menyelamatkan kita hidup dalam masyarakat terbuka ini ialah **masuk kandang kambing mengembik dan masuk kandang lembu menguak** (asal sahaja jangan ditambah dengan ungkapan yang dicipta oleh Taufik Ismail, seorang penyair Indonesia, iaitu **masuk kandang kerbau beranak!**).

Selain daripada peranannya sebagai penyampai idea yang menyaran, menganjurkan dan membimbing masyarakat menerusi perbilangan-perbilangan adat dan peribahasa-peribahasa itu, **bahasa** itu menampakkan juga perbezaan golongan-golongan masyarakat samada golongan daerah-daerah pengguna bahasa itu ataupun golongan kelas-kelas penggunanya.

Perbezaan antara masyarakat-masyarakat daerah dapat kita lihat menerusi dialek. Berbeza dialek masyarakat di Kelantan dengan yang di Kedah, dan dengan yang di Negeri Sembilan atau yang di Johor. Dialek-dialek itu dapat dikesan samada menerusi fonemikal dialek atau menerusi semantikal dialek.

Fonemikal dialek ialah sebutan-sebutan daerah yang lain bunyi sebutannya tetapi tidak berbeza maknanya. Kata standard **mengapa** misalnya, biasa dituturkan dengan kata “kenapa” atau dengan frasa “kena apa”. Di Negeri Sembilan kita dengar orang menyebutnya **apo kono**; di Perak kita dengar orang menyebutnya **ape-ke-hei** (sebutan standardnya: apakah hal); manakala di Pulau Pinang kita dengar pula orang menyebutnya **aw-wat** (sebutan standardnya: apa buat)!

Semantikal dialek pula ialah sama sebutan kata-katanya tetapi berlainan maknanya difahami oleh pengguna-pengguna yang berbeza daerahnya. Kata standard **bujang** umpamanya, maknanya yang neutral ialah lelaki atau perempuan yang tidak/belum kahwin atau yang sudah kahwin tetapi sudah pula bercerai atau kematian suami/isterinya. Tetapi, di setengah-setengah daerah kata **bujang** itu diberi makna **pelayan** atau **pembantu**; sama maknanya dengan apa yang disebut di Indonesia sebagai **jongos**. Di Kelantan, yang disebut **bujang** itu ialah perempuan lacur; dan **membujang** diberi makna: meniduri perempuan lacur!

Bahasa menggambarkan juga perbezaan kelas-kelas atau kasta-kasta antara pengguna-pengguna. Golongan bangsawan menggunakan kata-kata khas yang agak asing buat orang kebanyakan; golongan-golongan menengah dan rendah lain pula cara bahasanya, dan pertemuan antara orang-orang bawahan dengan atasannya atau antara orang-orang kebanyakan dengan orang bangsawan lain pula adab bahasa-

nya. Pendeknya, menerusi tuturan yang kita dengar kita akan segera mengetahui dari golongan dan dari kelas manakah si penutur itu.

Kata **tidur** bagi orang kebanyakan disebut **beradu** buat golongan bangsawan, demikian pula kata **mandi** disebutnya **bersiram**, kata **makan** disebutnya **santap**, kata **berjumpa; bertemu** disebutnya **mengadap**, dan sebagainya. Orang kebanyakan membahaskan dirinya “**patik**” kepada orang bangsawan; tetapi orang bangsawan membahaskan dirinya “**beta**” kepada orang biasa.

Antara orang-orang kebanyakan sendiri pun kedapatan juga perbezaan penggunaan bahasa yang menampakkan golongan-golongan pengguna itu. Orang-orang tua biasa beraku-engkau kepada yang muda; demikian pula orang-orang atasan kepada orang-orang bawahannya, tetapi orang-orang muda kepada orang tuanya; pun orang-orang bawahan kepada orang atasannya, akan menggunakan kata-kata yang hormat. Golongan muda/rendah ini akan membahaskan dirinya **saya** dan **tuan** buat orang tua/atasannya itu.

Apabila kita mempelajari sejarah perkembangan dan kemajuan kebudayaan menerusi kesusasteraan, bahasa adalah salah-satu daripada data-data yang diteliti. Menerusi sastera lama yang menggambarkan kehidupan zaman purba dan zaman kuno, dan menerusi kesusasteraan baru yang mencerminkan kehidupan dan pengalaman masyarakat zamannya, kita dapat melihat dengan nyata perkembangan dan kemajuan kebudayaan.

Menerusi kesusasteraan lama atau sastera klasik

kita mendapati dalam masyarakat lama orang memakai pantun dan gurindam untuk sesuatu upacara tertentu. Dalam upacara peminangan misalnya, dapat kita dengar orang memulakan upacara itu dengan sebuah pantun:

Kacang bukan sebarang kacang,
Kacang kedelai dari Maluku;
Datang bukan sebarang datang,
Datang membawa hajat nan tentu.

Dan seterusnya, upacara peminangan itu pun berjalan dalam suasana pantun-memantun yang indah dan seronok. Sesuai dengan keadaan dan masyarakat zaman itu **kepandaian berbahasa** adalah satu pristej bagi tiap anggota masyarakat. Kebetulan pula, ketinggian bahasa adalah setaraf dengan ketinggian budi dan kebudayaan pada zaman itu. Dan, kesetarafan itu dapat kita lihat menerusi pantun pusaka ini:

Yang lurik ialah lundi,
Yang merah ialah saga;
Yang baik ialah budi,
Yang indah ialah bahasa.

Perhatikanlah, dan cuba fahami apa yang dimaksudkan oleh pantun lama ini:

Orang Arab pulang ke Arab,
Anak China bertanam lada;
Orang bergantung kepada harap,
Lamunnya tinggi dapatnya tiada!

BOOK REVIEWS

The Developing Child, 2nd Edition.

BEE, Helen.

New York: Harper and Row, 1978. 420 pages

In recent years, many imported books on child development have been available in the local book market, indicating a demand for such literature in Singapore. Policy makers, educators, concerned teachers and interested parents are all potential buyers of these books. Most of these books are rather similar in content and format, varying only in length and depth of treatment.

Helen Bee's "The Developing Child" (2nd edition) is a very readable book. She consciously tries to avoid using jargon but recognises that in a subject such as child development, some technical terms are unavoidable and admits so in the Preface. There is a warm and personal touch about the whole book, made so by the author writing in the first person and sharing her own experiences with her family with the reader. The easy, flowing style belies an excellent piece of scientific writing. There is nothing emotive about the whole treatment of the subject.

There are altogether sixteen chapters. Besides the usual chapters on genetic and environmental factors, prenatal development, physical growth, perceptual development, language development, cognitive development, development of interrelationships and personality development, there is a chapter devoted to the methods of developmental research. This is rather unusual as the topic is not found in most books of a similar nature. In this chapter, she tries to give a comprehensive overview of the common methods used in developmental research. The most valuable contribution is the set of guidelines given on the evaluation of research findings, so that readers who are not trained researchers will be able to acquire analytical skills that will permit them to discriminate useful data from biased findings.

In each chapter, interesting topics are highlighted by being "boxed" in, for example, Box 6 is on "Ethnic Differences in Rate of Motor Development" (page 116). Relevant and recent research findings are cited to substantiate discussions on theories.

Another unusual feature about this book is the series of suggestions given on projects, so that readers can experience some of the material discussed in the chapters more directly. Obviously, the writer believes in translating theories into action. There are altogether eight projects based on a wide range of topics, with the "Observation of a Child" as an easy starter. Lucid instructions are given for each project.

As with most books written by American authors, each chapter includes a concise summary and an annotated reading list. Drawings and photographs, though not colourful, are abundant and valid.

The last chapter on "Age Overview" is a summary of all the preceding chapters and is an appropriate curtain drop on the whole book.

I am rather disappointed with the lack of information on adolescents. In most literature on child development, the adolescents are given considerable attention.

The hard cover book costs US\$12/95 and can be an expensive addition on the shelf of a private collection but would be a useful item in the public, school and college libraries.

Chang Shook Cheong

Planning Education for a Plural Society CHAI Hon Chan.

Paris UNESCO International Institute for Educational Planning 1971. 68 pages.

Educational Development in a Plural Society CHANG Ming Phang.

A Malaysian Case Study. Singapore: Singapore Academia Publications, 1973, 96 pages.

The paucity of studies regarding the development and planning of education in such plural societies as Malaysia justifies this late review of two books published in 1971 (Chai) and 1973 (Chang). Though the problems that beset plural societies are multifaceted in nature, being rooted in and reflecting disparities over a wide spectrum of activities, it is primarily to education that planners in plural societies turn in search of solutions. Such issues as access to educational facilities at various levels, language policies, in particular those having to do with media of instruction and examination, the conflicting claims in the curriculum between content designed to promote a supra-ethnic identity and value system and the preservation of ethnic values, among others, bedevil educational planning. It is, however, precisely their importance to the various ethnic groups that makes the resolution of differences — in a manner acceptable to the various groups — so vital. Studies such as the ones reviewed are useful for the insights they offer into the measures taken to resolve problems.

Chai Hon Chan's book (1971) was published in the UNESCO **Fundamentals of Educational Planning** series and Chang's (1973) as the first volume in a series of monographs on education in Singapore and Malaysia. Both are slim volumes and of the two it is Chai's that is the more valuable. Chai provides a theoretical perspective to the problems of planning

education for multi-racial societies and some parallels to conditions elsewhere. Chang's book by contrast is distressingly descriptive, using the familiar historical approach, beginning at the evolution of the multi-media system in the nineteenth century and ending with an account of the establishment of an independent inspectorate. Only in the last chapter entitled "Some Major Trends of Development" does Chang attempt, albeit briefly, discussion. Another limitation of Chang's book is that, though published in 1973, the discussion of developments ends with 1968. As a consequence there is no evaluation of policies and developments since 1969, an important date since major race riots took place in that year.

Chai's book displays a refreshing honesty about the many complex problems involved in planning education for a plural society. He is surely right when he reminds us that the provision of universal education as a democratic ideal and as an economic investment may result, in fact, in unbalanced development between ethnic groups because of their differential capacities for absorbing and utilizing education (p. 15). Chang in his book underlines the significance of Chai's observation by noting that a 20-fold increase in less than a decade in Malay medium secondary education, an attempt to favour a previously disadvantaged group, could paradoxically be counter-productive for without attendant growth in the economy and thus employment opportunities, there is a real danger of creating a pool of Malay-educated unemployed who could be a source of social conflict.

Chai is also forthright on the issue of language policy in education, a particularly contentious one in the Malaysian context. He notes that "while a common language is necessary for social integration at the national level, it is by no means clear that it is a sufficient condition for national unity" and "that the instrumental value of a common language in achieving national unity must be reinforced by the appropriate social and political norms and practices which reflect the nation's ideals of national unity." That surely needed saying for all too often the controversies generated by the selection and use of a common language in schools have given it undue prominence and obscured the need for supportive measures in other areas of education and national life.

One cause for complaint in the two books is the scant attention both writers give to the issues involved in providing school systems with a culturally relevant curriculum. The major thrust in such plural societies as Malaysia is towards the creation of a supra-ethnic national identity based on the values of a dominant majority. Such an attempt often steps up tension between the different ethnic groups. Minority languages and cultures cannot be abolished by fiat, nor is it necessary to do this for nation building does not automatically require the denial of minority rights. Indeed there are sound political and pedagogical reasons for providing an integrated

school system which allows for the study of minority languages and cultures, at least at some levels.

The nature of the curriculum is likely to be an important factor in how successfully the school meets the challenges posed by multi-culturalism. Many curriculum revision efforts in the post-war decades have centred on providing a common curriculum of all language streams. Though designed to promote a Malaysian consciousness, there was no clear statement as to what this implied nor any analysis of how a content-heavy examination-oriented curriculum was going to yield personal commitments to national unity, multi-racialism, social equality, etc. Curriculum revision has remained effectively within the domain of subject specialists and token inclusion of geography and history topics has passed for cultural relevance in the curriculum. Until there is a clearer understanding of the potential of the curriculum, adequately based on the cultural reality of the country and positively enhancing the self-image of pupils of all cultural backgrounds, common schools and common curriculum can do little to root out ingrained prejudices and ignorance.

S. Gopinathan

Objective Questions in Physics for Advanced Level (1st Edition)

(Reprint) Singapore Heinemann
1978 216 pages.

Toh Koh Aun and Tan Sean Huat

This book contains more than 630 objective questions which are grouped together into eighteen topics. It is designed for Advanced Level students of Physics and covers General Physics, Oscillations and Waves, Thermal Physics, Electromagnetism, and Microscopic Physics. The selection of subject matter and order of presentation are based on the 'A' Level Physics syllabuses of the University of Cambridge, University of London and other examination bodies. Hence this book has been specially designed to give maximum assistance to pupils preparing for the Cambridge G. C. E. 'A' Level examination.

The questions have been arranged to provide students with a systematic presentation of material so that they can assess their continuing progress during the normal two year 'A' Level physics course. The short questions in Section C of each chapter of the book are useful for students in testing their learning, understanding and intelligent application of physical principles.

Most chapters are designed such that they contain questions which will help students establish new ideas while others probe their understanding of the subject more deeply. These should provoke sufficient discussion between teacher and pupils. All the questions are specially arranged in five parts which correspond to the usual areas of teaching using the horizontal development of concepts. The wide use of graphs help the students to understand the problems and the way in which the answers can easily be obtained.