

# TEACHING

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## Editorial

THIS ISSUE OF *Teaching* was intended as a special one on the 'Teaching of Hindi'. We owe an apology to our readers for a change in plan, the main reason for which was a poor response from our contributors.

The teaching of Hindi is a highly topical issue, apart from being a controversial one, and since it has been made a compulsory subject in almost all schools in India it deserves the attention and interest of the public. We hope, therefore, that we shall be able to fulfil our promise and publish a special number devoted to this subject.

We offer a few suggestions to contributors:

When should the teaching of Hindi begin? The place of Hindi in the school curriculum. Hindi as a medium of instruction. Methods in the teaching of speech, reading and writing, and grammar. The syllabus for the first two years. The Hindi textbook. Visual aids. Library lists and supplementary reading (book titles should be in Devanagari). Any other aspects of the subject may be discussed, but political issues should be avoided.

## The Validity of School Marks

### *Individual Marking Patterns*

UNTIL the 1930's it was generally believed that the value of scholastic performances such as examination papers could be reliably determined by examiners and other men of keen insight. Once these values had been established and appropriately expressed in terms of school marks they were thought to be as unalterably true as the gold standard. Therefore, when Sir Philip Hartog and Cecil

Rhodes (in England), Henri Laugier (in France) and others elsewhere, demonstrated that the same performance might be 'evaluated' differently by different examiners, or by the same examiner at different times, many parents—and even teachers—were disagreeably surprised. The realization that errors might be made in the assessment of school work was indeed most disturbing.<sup>1</sup>

Later investigators (e.g. McLelland<sup>1</sup>, Van den Ende<sup>2</sup>) showed that divergent appraisals of the same piece of work were not merely incidental, due perhaps to an occasional lapse of discernment. The analysis of a large number of marks given by several teachers revealed certain distinct marking patterns which varied from teacher to teacher: thus, the range of marks attributed by one teacher might run from 7 to 9 (on a 10-point scale) and the marks 7, 8 and 9 be used equally often, while the marks of another teacher might range from 4 to 8 (on the same scale), with frequencies distributed approximately as on a normal curve. Clearly, therefore, teachers tended to use marking patterns of their own invention, and differences in appraisal were seen to be not incidental but systematic.

In countries where pupils are promoted (or not) on the basis of school marks, the effects of this phenomenon are often distressing. Van den Ende reports that in secondary schools in Holland about 20 per cent of all pupils fail to be promoted each year from one grade to the next, and he attributed this to the individual and often peculiar marking patterns of the teachers. In many countries in Africa, Asia, and Latin America, a similar or even much higher proportion of children fail every year in the primary schools, and there is some evidence that curious marking practices play a role here, causing widespread unhappiness.

It may here be noted in passing that the financial loss resulting from non-promotion is considerable; thus, Dr van Wyk<sup>3</sup> calculated that in the province of Transvaal (Union of South Africa) the amount of £1,145,936 is wasted every year as a direct consequence of non-promotion.

In view of the unpleasant consequences which school marks may entail, both in terms of wastage of human ability and from a financial point of view, it seems worth while drawing attention again to the relative validity of school marks. In doing so, it is not proposed to add new evidence to the facts established by McLelland,

<sup>1</sup> W. McLelland, *Selection for Secondary Education* (University of London, 1942).

<sup>2</sup> J. N. Van den Ende, 'Cijfers op de Middelbare School', *Paedagogische Studien*, vol. 31, nos. 3, 4, 9, 1954.

<sup>3</sup> A. H. du P. van Wyk, 'Promotion in School', *Transvaal* (Education Department), vol. II, no. 3, 1957.

Van den Ende and others. That teachers produce individual marking patterns cannot reasonably be doubted.

However, the question why teachers use different marking patterns needs further elucidation. In the following paragraphs an attempt is made to show that there are at least two factors which may lead teachers to adopt a particular (and arbitrary) system of school marks. First, the meaning of school marks is often misunderstood, or, in any case, there is a considerable amount of confusion as to what school marks stand for; secondly, the technique of assigning marks to a given performance inevitably involves an element of arbitrariness.

### *The Meaning of School Marks*

To seek the meaning of school marks will at first seem trivial, because in nearly all cases the list of symbols used to denote the school marks is accompanied by a list of corresponding adjectives which are supposed to say what each symbol means. Thus, every schoolboy knows that 8 means 'good' 9 means 'very good', and so on for all marks. The list of symbols and adjectives given below may serve as an example.

10	excellent	5	doubtful
9	very good	4	insufficient
8	good	3	very insufficient
7	sufficient	2	poor
6	passable	1	very poor

It will be clear that there is not necessarily a relationship between the numerical symbols, on the one hand, and the list of words on the other. When we say, for example, that 8 stands for 'good' we refer to a purely arbitrary convention. There is nothing in the symbol 8 which makes it a 'good' number; nor does the word 'good' signify or even remotely suggest the symbol 8. There is, of course, nothing against linking a symbol to a word as long as it is understood that the relationship between, say, 'good' and 8 is purely conventional; and that is equally justifiable to decide tomorrow that the adjective 'good' will be associated with the number 348, or the letter 'K', or the colour green, or, in fact, any other symbol.

A relation between one of the numerical symbols and the corresponding adjective which is *not* purely arbitrary and conventional may be said to exist under conditions such as the following. When 80 per cent of an assignment has been carried out correctly by a pupil, the mark 8 may be considered as the numerator of the fraction 8/10. At the same time it may be said (although this is, again,

a somewhat arbitrary statement) that a pupil who impeccably carries out 80 per cent of an assignment has made a good performance. If school marks were always assigned on this basis they would have a significance of their own, and the meaning of a mark like 8 would be that 80 per cent of a performance has been correctly completed. The adjective 'good' does not add anything at all to this meaning; on the contrary, it makes the precise meaning of the fraction less exact.

This may be seen easily by comparison with a thermometer. Somebody may find that it is 'hot' in a room when the temperature is 100 degrees Fahrenheit, 'very warm' when the temperature is 90 degrees, 'warm' when it is 80 degrees and so on. Here, '100 degrees Fahrenheit' has a precise meaning which is not in any way made more explicit by adding the adjective 'hot'. On the contrary, the meaning of 'hot' is extremely vague and may refer to almost any temperature; thus, when you ask whether there is hot water for making tea, you mean water of a temperature considerably higher than 100 degrees Fahrenheit.

If a teacher could always use something like a thermometer for measuring children's performances (i.e. if in all cases he could assign marks indicating which fraction of a given assignment had been correctly completed) there could obviously be no argument about school marks. But unfortunately he can only use this technique on rather infrequent occasions. If he is to judge the handwriting of his pupils, or their essays, or their behaviour, or their fluency in a foreign language, or the method by which they solved a problem in science or mathematics, then there is no way of expressing their performance as a fraction of the total or maximum performance. It is not possible to measure say, behaviour, in the same way as one measures temperature, or the portion of an assignment which has been correctly completed. Therefore, mark 8 can never mean that 8/10 of behaviour, or handwriting, or essays, has been achieved.

This difficulty may apparently be overcome by some argument such as the following. 'It has been agreed, arbitrarily or otherwise, that the numerical symbol 8 and the word "good" shall stand for the same thing. That is to say: 8 and "good" are equivalent. Therefore, in the case of some assignments 8 may denote the numerator of a fraction, and in the case of others it may be a shorthand notation for saying that the handwriting, or the behaviour, of a pupil is considered "good".'

Apart from the difficulty that one never knows which is which (it would be much better to use 8 in the case of fractions and 'good' in the case of an appraisal), this argument would be acceptable only if the word 'good' denoted some fairly definite quality. But it



does not. If I say, 'This apple is good'; the word 'good' means 'not rotten'. In the phrase, 'In France the food is good', the word 'good' means 'palatable, pleasing to the taste'. A 'good' essay is an essay which describes or explains a subject clearly; handwriting is 'good' when it is clearly legible (or should one say, when it has personality). And what exactly is meant by 'good' behaviour? Or 'good' French? It is quite obvious that 'good' has a very large number of meanings. Further, it seems that most of these carry an element of personal appreciation. For example, what is pleasing to the taste of one teacher is not necessarily pleasing to the taste of another. Therefore, if teachers were to assign marks on the basis of what they think is a 'good' performance, all marks would be completely arbitrary, and it would be an astonishing coincidence indeed if two teachers gave the same mark to the same performance.

When two or more marks are to be combined—a question which will be discussed more fully in a later section—adjectives like 'good', 'sufficient' and 'poor' cannot be used. Suppose a pupil's fluency in a foreign language is decided to be 'good' and his grammar 'insufficient', what should be his final mark? Clearly, it is not permissible to fall back on the numbers that have been arbitrarily associated with 'good' and 'insufficient' and to compute the average of these two numbers. The numbers are now arbitrary and interchangeable, like the numbers on bus lines: you would not expect line 6 to take you to some point half way between the terminus stations of lines 4 and 8. Similarly, it is not possible to say with any degree of accuracy which adjective lies half way between 'good' and 'insufficient'; although words like 'passable' and 'doubtful' may come to the mind of a teacher, this is only so because these words are, to him, associated with numbers. If he had to choose a word half way between say, 'bold' and 'timid', or between 'lovable' and 'despicable' the choice would be less easy.

It is, therefore, proposed to consider school marks neither as symbols for adjectives nor as numerators of fractions, but as sub-classes of a category. If so considered, both the adjective and the numbers of the set of school marks indicated above express the same thing, namely a sub-class in a category of performances; for example, 8 then denotes sub-class so-and-so and 'good' likewise denotes that particular sub-class and nothing else. (In other contexts 8 and 'good' may denote different things but that should not concern us here.) It is believed that this is a more rational way of considering school marks, and further, that most teachers do in fact use the school mark in this way even though in some cases they may not consciously do so.

It is proposed to consider this conception of school marks in some more detail in the following paragraphs.

*Marking Based on Classification*

The simplest way of assigning marks is to arrange the performances of different pupils on the same test in a number of equivalent sub-classes, to place these sub-classes in rank order, and to assign a mark to each sub-class.

It may seem that the marking of one performance is a simpler operation, but this is not really the case. (Purely arbitrary evaluation is not considered here.) Suppose you show a teacher one single piece of work such as a dictation, or a series of sums: naturally the teacher would ask what is the age or the grade of the child who performed the work; and knowing from his experience other comparable performances, he could then express an opinion and classify the performance with a greater or lesser degree of accuracy. But it is obviously more difficult and complicated to recall a number of comparable performances from memory than having such performances actually at hand; and, more important, a teacher can never be quite sure that the experience thus recalled is in fact comparable to the one piece of work he is asked to classify and mark.

When a number of pupils carry out the same test the performances thus obtained may be arranged in a number of sub-classes which together form a scale. Thus, a teacher may classify the translations of a given text by counting the number of errors made in each translation and placing all translations with the same number of errors in one sub-class; the various sub-classes may then be arranged in rank order; sub-classes containing translations with zero errors, those containing translations with one error, translations with two errors, and so on for all sub-classes. The particular type of scale thus constructed may be called an interval scale, since the interval between two adjoining sub-classes is constant, namely one unit (in this case one error).

Take another example. A teacher may classify the handwriting of his pupils, as shown in their copying a given text, on the basis of legibility. In doing so he will be able to say things like: Johnnie's handwriting is more legible than Peter's, and about the same as Jack's, but not so legible as Freddie's. He may place Freddie's handwriting in one sub-class, that of Jack and Johnnie in another, and Peter's handwriting in a third sub-class. He thus obtains three sub-classes which, put together and arranged in rank order, form a scale of a different type, namely, an ordinal scale.<sup>1</sup>

The difference between an ordinal scale and an interval scale is,

<sup>1</sup> For a discussion of scales see S. S. Stevens, 'Mathematics, Measurement, and Psychophysics' in S. S. Stevens (Ed.): *Handbook of Experimental Psychology* (Wiley, New York, 1951).

then, that the distances between sub-classes are known in one case and not in the other.

Once a set or class of performances has been classified in either an ordinal or an interval scale, there is no difficulty in assigning a mark to each of the performances classified. For example, when using a 10-point scale, the mark 10 may be assigned to all performances in the highest sub-class, mark 9 to all performances in the next highest sub-class, and so on. Or 9 may be assigned to the highest sub-class, and lower marks to subsequent sub-classes.

In all cases, such marks denote a sub-class on a scale; and what these marks mean obviously depends on the characteristics of the scale used and on the place of the sub-class on the scale. Thus, mark 8 may mean that the exercise so marked belongs to the third highest sub-class of an interval scale having the following characteristics: there are six sub-classes numbered 10, 9, 8, 7, 6, 5, in that order; the highest sub-class is denoted by 10, and the interval between sub-classes is one unit (1 error). However, in another instance 8 may mean that the exercise so marked is a member of the highest sub-class of an ordinal scale having the following characteristics: there are three sub-classes numbered 8, 7, and 6, in that order.

It is at this point that a convention would be useful. For if it could be agreed that a given mark will always denote a sub-class of a given rank on an interval scale containing a given number of sub-classes (e.g. 8 is the third highest sub-class of a scale of ten sub-classes), marks would indeed convey meaningful information, in the same way as '60 degrees, scale Fahrenheit' is meaningful. Nor is it necessary that such a convention be nation-wide; agreement at the school level would be sufficient for most purposes. But before discussing this further it will be useful to see what is involved in the comparison of two or several marks.

### *Comparison of Marks*

In the course of a school year a pupil carries out a large number of assignments in each of the subjects of the curriculum; and one would naturally wish to have some over-all assessment of these performances expressed in some such simple way as the average school mark.

This may be done by prescribing a scale such as the 10-point scale, and it will be worth while examining what is involved.

Suppose a teacher wishes to assign marks to two tests which he has initially classified as in Table I.

In the case of Test A, the transformation of the initial error-scale into the prescribed 10-point scale used for public information does not present any great difficulty. If 10 is the top mark, all perform-

TABLE I

Test A			Test B		
Frequency	Sub-class (number of errors)	Mark decided on	Frequency	Sub-class (number of errors)	Mark decided on
3	0	10	0	0	
5	1	9	0	1	
8	2	8	0	2	
12	3	7	0	3	
7	4	6	0	4	
2	5	5	0	5	
1	6	4	3	6	10
			5	7	9
			8	8	8
			12	9	7
			7	10	6
			2	11	5
			1	12	4
<hr/> 38			<hr/> 38		

ances containing zero errors may be marked 10; all performances containing one error may be marked 9, and so on. It should be noted that such a transformation preserves the properties of the initial classification, notably the property of the distances between sub-classes remaining equal.

As to Test B, there is a minor problem in transforming the error-scale into the prescribed scale. If mark 10 is assigned to the sub-class containing performances with zero errors, as was done in the case of Test A, then certain sub-classes would be empty (there would be no performance in the first five sub-classes), whilst there would not be for other sub-classes (those containing performances with 11 and 12 errors) corresponding marks on the prescribed scale. There are various ways out, of course; for example one might redefine the sub-classes of the scales for both performances (or for almost any number of performances) by combining a number of sub-classes of the original scale; in this way, one sub-class might be defined as containing all performances with 0, 1, or 2 errors, the next sub-class as all performances with 3, 4, or 5 errors, and so on. But while such a stratagem would suit the results of Test B admirably well, it would result in a set of curious marks for performance A: all pupils (except one) would obtain either mark 9 or mark 10. It seems likely that most teachers would consider this absurd.

There is however another way out, which is, up to a point, far more reasonable. Most teachers, seeing the results obtained on Tests A and B would say that Test B is evidently more difficult than Test A. How much more difficult? Would it not be correct to say, in reply, that a pupil who made six errors in Test B has done as good a job as the pupil who made no error in Test A? And

would it not be just and equitable, therefore, to assign the mark 10 to both boys: the one who made no error in Test A and the one who made six errors in Test B?

There seems indeed to be no reason why a teacher should not proceed in this way when assigning school marks; and it has the advantage that it permits the computation of averages in a very simple manner, namely by taking the average mark assigned to each of the performances in the various tasks considered, for the average marks thus computed constitute a scale which has all the formal properties of an interval scale.<sup>1</sup>

Therefore, in the case of interval scales, a teacher may mark each sub-class as he pleases provided he assigns the top mark to the sub-class with the fewest errors and each subsequent mark to each subsequent sub-class. He may then add all the marks obtained by a given pupil on any number of tests so marked, and compute the average mark obtained by this pupil. All possible averages thus obtained will again form an interval scale having the following property: the highest average mark is assigned to the pupil who has made the fewest errors on all tests combined, the second highest mark to the pupil who ranks next in errors, and so on. Such a list of average marks is, therefore, both rational and meaningful.

When performances have been arranged according to an ordinal scale, the highest mark may be assigned to the highest (greatest, best, most preferred) sub-class, the second highest mark to the second highest (greatest, best, most preferred) sub-class, and so on till all sub-classes have been marked. It should be noticed that 'the highest mark' does not necessarily mean the highest mark of the prescribed scale; if the prescribed scale is a 10-point scale, one may use 9 or 8 or in fact any mark to denote the highest sub-class, as long as the order is preserved. Thus, if 8 is used for the highest sub-class then 7 should be used to denote the second highest sub-class, and so on. What matters is that the order of the marks corresponds to the order in which the sub-classes have been arranged.

<sup>1</sup> This follows from the fact that there is a fixed relationship between the number of errors ( $e$ ) of a sub-class and the mark ( $m$ ) assigned to this sub-class. Thus, in the case of Test A above, the relation

$$m_a = 10 - e_a$$

is true for each sub-class. Similarly, as regards Test B,

$$m_b = 16 - e_b$$

holds for each of the sub-classes of Test B.

Consequently, the mean of marks  $m_a$  and  $m_b$  is equal to  $13 - \frac{1}{2}(e_a + e_b)$  for all possible values of  $m_a$  and  $m_b$ . This may be extended to any number of tests; the mean of the marks ( $m$ ) can always be expressed as a function of the corresponding number of errors ( $e$ ). And since the averages of the quantities  $e$  form an interval scale, the averages of  $m$  will also form an interval scale.

If there is more than one set of performances to be marked it makes no difference, for the purpose of comparison, whether one considers the ranks of the sub-classes or the marks assigned to these sub-classes, as long as the marks are assigned consistently.

In the case of an interval scale it is, as we have seen, permissible to compute the average of the marks obtained by a given pupil; and it is possible to state unambiguously, in each case, what the average mark means. One would naturally wish to find a similar procedure for the mark of an ordinal scale; but averages cannot be used.

That averages should not be used follows from the definition of the properties of the ordinal scale. All that is known about the relation between two sub-classes (two marks) on a given scale is that one is greater than the other. It is not known how much greater. For example, consider the following:

	<i>Test I</i>	<i>Test II</i>
Pupil A	9	7
Pupil B	5	8

This information means: on Test I pupil A has done better than pupil B, and on Test II pupil B has done better than pupil A. It is not known how much better; therefore, if one is to say on the basis of both tests which of the two pupils is the best, the answer must be: they are equally good. There is indeed no justification for saying that pupil A is better than pupil B; for this implies that the distance between 9 and 5 is greater than the distance between 8 and 7, and while conceivably this may be so, it is not known, and the opposite may well be true also.

If more tests are applied in which both A and B participate, one may find that one or the other ranks higher more often; for example, on four occasions A may rank higher than B and on two occasions B might rank higher than A.

This result may be expressed somewhat like the results of a football competition.

	<i>Tests</i>	+	—	<i>Difference</i>
A.	6	4	2	2 +
B	6	2	4	2 —

The difference column merely facilitates the placement of A and B in rank order. In this case it is clear that A has rank 1 and B rank 2. And, of course, each rank may be replaced by a mark.

A similar procedure may be followed in comparing the performance of several pupils on a series of tests, as shown in Table II.

TABLE II

<i>Pupil</i>	<i>Test I</i>	<i>Test II</i>	<i>Test III</i>	<i>Test IV</i>	<i>Test V</i>	<i>Test VI</i>
A	7	8	6	7	9	6
B	8	9	7	8	4	7
C	5	6	5	6	5	5
D	6	7	6	7	5	4
E	8	9	6	8	9	6

Consider, for example, the position of pupil A in comparison to the other four pupils B, C, D, and E. On Test I, there are two comparisons in his favour (with C and D) and two against him (B and E), which gives A a net score of 0. He obtains the same score on Test II. On Test III, one comparison is in A's favour (namely the comparison with C) one against him (the comparison with B) and two, namely D and E, have obtained the same mark as A; therefore, A's total score on Test III is 0. In the same way one finds that his score on Test IV is -1; on Test V it is +3; and on Test VI it is +1. The score of A on all six tests is, therefore, +3.

The above may be tabulated as below (Table III); in practice, it will not, however, be necessary to construct such tables for each pupil, since only the final score on each test is required.

TABLE III

*Score of A*

	<i>Number of Comparisons</i>				+	-	0	<i>Score</i>
Test I	...	...	...	4	2	2	...	0
Test II	...	...	...	4	2	2	...	0
Test III	...	...	...	4	1	1	2	0
Test IV	...	...	...	4	1	2	1	-1
Test V	...	...	...	4	3	...	1	+3
Test VI	...	...	...	4	2	1	1	+1
				24	11	8	5	+3

The total scores obtained for each of the five pupils may now be placed in rank order; and the ranks may, of course, be replaced by marks in the usual way. This is done in Table IV; it will be noted that it does not matter which marks are given as long as they correspond to the rank order. It will also be noticed that these marks are meaningful; thus, the highest mark indicates that following a number of comparisons (in this case 24) it appeared that the pupil obtaining this mark did better than the others in his class.

TABLE IV

<i>Pupil</i>	<i>Score</i>	<i>Rank order</i>	<i>Mark given</i>	<i>Mark given</i>
A	+3	3	8	6
B	+13	1.5	9	7
C	-19	5	6	4
D	-10	4	7	5
E	+13	1.5	9	7

It will be noted that taking averages would have given different results, notably in the cases of A and B: but this is irrelevant because taking averages is not a rational procedure.

What if a teacher wishes to combine marks from both interval scales and ordinal scales? This should not present any difficulty, since an interval scale may in fact be considered as an ordinal scale, the sub-classes of which are equidistant. If one chooses to ignore this additional property, i.e. if one treats interval scales as if they were ordinal scales, the difficulty is solved, for the combination of marks is then subject to the same rules as the combination of marks of two ordinal scales. (And the resulting scale is an ordinal scale).

### *Marks Assigned by Different Teachers*

We have seen in the preceding paragraphs that marks may be assigned in a perfectly rational manner, and that on the basis of these marks a composite or final mark may be established in an equally rational way. Any teacher who uses this method in marking the work of his pupils—and it is believed that many do indeed use it, deliberately or intuitively—will be able to explain in precise and exact terms why he has given a higher mark to pupil A than to pupil B. He does not have to resort to vague and meaningless adjectives like *passable*, *sufficient*, or *good*; nor does he have to evoke sacrosanct ‘standards’ which the school earnestly strives to uphold but somehow never manages to define clearly.

Yet there are two points at which a teacher has to take an arbitrary decision. The first concerns the number of sub-classes into which he divides the performances on a given test;<sup>1</sup> the second refers to the question which mark should be assigned to the highest sub-class. It is at these two points that individual differences between teachers may lead to different marks being given to the same performance. And although the marks of each teacher would be perfectly rational, there would be a definite advantage, for purposes of both public information and general reviews of pupils’ progress, to have at least a school-wide convention on these points.

The following example from Van den Ende’s data may illustrate how differences in the number of sub-classes affect school marks.

Sub-class:	1	2	3	4	5	6	7	8	9
Frequency (no. 8):	11	11	93	177	338	177	129	21	43
Frequency (no. 12):	104	139	244	335	120	58	...	...	...
Mark given:	10	9	8	7	6	5	4	3	2

<sup>1</sup> In the ordinal system there is of course a subjective element; no two teachers will have exactly the same judgement, discernment or taste, and the judgement of a particular teacher will also tend to vary when, for example, grading essays or handwriting.



If both teachers assign mark 10 to the highest sub-class, the pupils of teacher no. 12 all obtain mark 5 or higher, while some of the pupils of teacher no. 8 get mark 4, others 3 and some 2. Do they get these lower marks because their performance was exceptionally poor, or because their teacher happened to decide upon a very large number of sub-classes, or both? This question cannot be answered on the basis of the marks alone; if, but only if, the intervals between the sub-classes of both scales are identical, the work placed in sub-classes 7, 8 and 9 of teacher no. 8's scale must be considered as inferior to that in sub-class 6 of teacher no. 12. But this condition is very seldom met; most scales used in schools are ordinal scales, and even if two teachers should establish interval scales the chance that they hit upon the same interval is very small.

Therefore, it is quite safe to assume that some pupils of teacher no. 8 get lower marks than those of teacher no. 12 because teacher no. 8 chose a larger number of sub-classes. In order to eliminate this handicap some of no. 8's sub-classes might be combined (e.g. sub-classes 1 and 2, and sub-classes 7, 8, and 9) in such a way that both teachers observe the same number of sub-classes. This involves throwing away some of the information collected by teacher no. 8; but the loss of this information is more than compensated by the gain in equity.

The second point at which an arbitrary decision has to be taken concerns the mark to be assigned to the highest sub-class. Consider, for example, the marks given by teachers no. 20 and 21 (Van den Ende's data):

		<i>Number of times a given mark was used</i>									
		1	2	3	4	5	6	7	8	9	10
Teacher	No. 20	...	...	...	13	138	508	275	66	...	...
,,	No. 21	...	...	...	...	14	184	502	264	36	...

Both teacher no. 20 and teacher no. 21 use a range of five marks; further, the distribution of these marks is approximately the same in both cases as may be seen more clearly by moving the frequency list of teacher no. 20 one place to the right. Indeed the patterns of the marks of these two teachers show a striking similarity; the only difference is that teacher no. 20 uses the range from 4 to 8 and teacher no. 21 the range from 5 to 9.

The important implication is that teacher no. 21 would give mark 5 where teacher no. 20 assigns mark 4, and so on: the marks of teacher no. 21 are always just one point higher than those of his colleague. (Secondary school pupils know that this sort of thing is not exceptional.) Supposing that both teachers teach the same class of pupils, and that the marks of these pupils are reviewed

in order to decide upon their promotion to the next grade, it would obviously be unfair to take the marks given by these teachers at their face value. It would be particularly unjust if mark 5 jeopardizes promotion; for pupils of medium ability working very hard for teacher no. 20 but not so hard for teacher no. 21 would pass, while those doing the reverse would fail. It is not known whether teacher no. 20 is aware of this implication. But it is fairly certain that teachers do at times give low marks in order to stimulate their pupils.

In order to make the marks of teachers nos. 20 and 21 comparable it is not necessary, and indeed hardly justifiable, to make use of parametric statistics; these methods are applicable to interval scales and, as has been shown above, a set of school marks constitutes in nearly all cases an ordinal scale. Also, there are no grounds for doubting the correctness of the frequency distribution (i.e. the classificatory system) of either teacher; the difference between their marks resides merely in the circumstance that one teacher decided to assign mark 8 to the highest sub-class of his system whilst the other preferred to assign mark 9 to the highest sub-class of what is essentially the same system; and this decision, as we have seen, is always a purely arbitrary one.

Therefore, such decisions may be reversed, and should indeed be reversed in order to make the school marks given by different teachers comparable. Thus, teachers nos. 20 and 21 should agree to use either mark 9 or mark 8 to denote the highest sub-class of their system of marking; if they agree on 9, all of no. 20's marks should be increased by one point, and if they agree on 8, all of no. 21's marks should be decreased by one point. This would not in any way affect the validity of the marks given.

(But it would, of course, affect the number of pupils that fail. If all pupils with mark 5 must fail, the decision that mark 8 shall denote the highest sub-class leads to about 20 per cent failures, and the decision that 9 shall denote the highest sub-class entails about 1.5 per cent failures. Since the decision as to which mark denotes the highest sub-class is arbitrary, the percentage of failures is also arbitrary).

### *Conclusion*

In the foregoing pages an attempt has been made to describe a method of assigning school marks based on classification. It is not known whether any teacher actually uses the method described here; but it is certain that most teachers base their marks on some system of classification, and the present paper is no more than an endeavour to set out in some detail the techniques and the implications of this method of giving marks.

Classificatory marking has, it seems, the advantage of being rational. A teacher who uses this method will always be able to say why he has given such-and-such a mark to such-and-such a pupil. At the same time, he will be able to say what a given school mark means; if Johnnie is given 8 for his algebra it means, for example, that his work over a given period was classified second on a scale of five sub-classes.

Although the procedure of classification is rational and meaningful, there are two points at which a teacher has to take an arbitrary decision. Firstly, he has to decide on the number of sub-classes that will make up the scale he is going to use; secondly, he must decide which mark he will assign to the highest of these sub-classes. Since every teacher is practically free to do as he pleases with regard to these two points, it is only natural that the marks he gives form a certain pattern which has all the characteristics of individuality. It would be surprising if it were otherwise.

If such individual differences occur between teachers at the same school, and *a fortiori* between teachers of the same class of pupils, the result will be that the marks are not comparable. A child may get a 'sufficient' mark from one teacher and an 'insufficient' mark from another even if his performance is the same for both teachers. This inequity may be avoided, or even corrected after the event, by an agreement of the teachers concerned on the two arbitrary issues mentioned above; namely, the number of sub-classes and the mark to be assigned to the highest sub-class.

Another important implication concerns the number of pupils who are not promoted to a higher grade, or fail in an examination. If the number of sub-classes and the mark assigned to the highest of these sub-classes are both arbitrary, it follows that the number of those obtaining the low marks that are decisive for failing or passing is also arbitrary. This does not mean, of course, that the wrong ones fail: teachers and examiners are perfectly capable of discriminating between strong and weak pupils. But the question of how many will fail contains an arbitrary factor which can be changed at will by the school or a board of examiners. And this seems to be always true, whatever the system of giving marks.

W. VAN VLIET

# Education in the Third Plan

THE PLANNING COMMISSION'S draft for the Third Five-Year Plan covers a crucial span in the 25-year programme of purposeful economic development. It is interesting to see, at the close of the first decade of planning, a languid tolerance of grandiose schemes. As the Planning Commission will not moderate its enthusiasms to something nearer reality, the public has become accustomed to large promises which no longer rouse expectations. But what has not been fully appreciated is that the years 1961-66 also represent the end of a planning period as far as education is concerned. The Indian Constitution adopted in 1950, envisaged free and compulsory education by 1960 for all children up to 14 years of age; English as the official language was to be replaced by 1965; and a system of Basic education was to be introduced throughout the country.

## *Priorities*

Needless to say, all this has not come about. In fact, emphasis on basic education—even with later concepts radically modified from the first enunciation—has led to a deterioration in the standards of primary education; overloading the curriculum and insisting on extra-curricular activities has led to deterioration in secondary education; and several factors have weakened the quality of university education. In terms of physical achievement, the expectation now entertained for 1965 is that in the age-group of 6 to 11 years, 80 per cent of the children will receive schooling, and that between 11 and 14, 30 per cent of the children will be in schools. By 1966 all training institutions will be of the Basic type and 80 per cent of the teachers will be trained teachers.

It might be noted that the education of girls lags behind the education of boys and is expected to continue to do so for another five years, the relative figures being: in 1961, between 6 and 11 years, boys 79 per cent, girls 40 per cent; in 1966, boys 100 per cent, girls 60 per cent; in 1961, in the age-group 11 to 14 years, boys 34 per cent, girls 11 per cent. 'In the course of the Fourth and Fifth Plans, the objective of free and compulsory education for all under 14 years is expected to be achieved,' that is, in 1976, or fifteen years after the date set by the Constitution. Had a more practical policy been adopted and the proper priority been given to teachers' training at the outset, it is more than probable that better results would have been attained. Certainly, we would have been saved the problem of devising methods of dealing with what is called indiscipline, the result of too many students and too few teachers, and poorly equipped teachers at that.

The allocation for education and its analysis make interesting reading and provide a contrast to similar figures for the Second Plan:

	1956-61 (in crores of rupees)	1961-66 (in crores of rupees)
Elementary education	92	180
Secondary education	45	90
University education	44	75
Other programmes	32	25
Technical education	60	130
	<hr/> 273	<hr/> 500

The intention is to increase facilities for science education at the secondary stage and to impose a practical and vocational bias. Like the programme of basic education in the primary stage, this will mean more expensive education, which is hardly likely to appeal to an administration that concentrates its whole attention on industrialization and is inclined to reduce all other spending to a minimum.

### *State Control and Policy*

More important than the physical aspects of the Plan is the fact that a good deal of the programme involves so much state control and regulation that running a school becomes increasingly a matter of politics and correspondence rather than education. Moreover, the Government's own anxiety to change the educational system and reorientate the teacher prevents any initiative to experiment. As a consequence, even enlightened teachers tend to talk of a sense of frustration arising from the daily performance of routine duties and of growing old intellectually and morally. The Planning Commission seems also to suffer from an inability to learn from past experience. There has been considerable reluctance in the states, for instance, to switch over from non-Basic to Basic schools. The figures reveal that compared with the money expended on non-Basic schools the allocation for Basic schools is meagre. More has been done for Basic schools in the rural than in the urban areas. Yet the persistence in planning for extending these schools is obstinately adhered to. It would be a useful investigation to try to find from teachers themselves how far the acceptance of Basic education is due to the necessity of conforming to the prejudices of the politicians.

The emphasis in the Third Plan is on primary education and the training of teachers. Though much is being written and spoken about national service, discipline and moral instruction, it is significant that the allocation for these programmes is some Rs 7 crores less than the allocation in the Second Plan. Less satisfactory is

the decision to introduce the selective principle in place of the present general practice of awarding scholarships and studentships to backward classes. Similarly, it hardly seems an attractive policy to emphasize the value of technical education in discussing extension of facilities to these children. The interest of the backward classes in a general education follows from the interest of the more advanced classes in it. To propose now a bias for technical education for the backward classes will only tend to create an atmosphere of suspicion. It hardly seems in accordance with the avowed intention to minimize all distinctions between general and technical education.

We are fast reaching a stage when teachers will press for better remuneration, and they cannot be denied it. Already there is among primary teachers a feeling of resentment that in many states they are excluded specifically from voting in the professional teachers' constituencies. Such problems as these will have to be settled satisfactorily, and it would be wise to attend to them before the pressure becomes irresistible. Greater elasticity too should be shown in matters affecting the retirement age, considering both our educational needs and the better health of the general community.

#### *Funds for Scientific and Technical Education*

At present, the chief anxiety seems to be the proportionate drop in the number students who take a science course as compared with the increase in the number who take up arts or commerce. This anxiety results from the shortage of science graduates revealed in the course of the Second Plan. The shortage of technical graduates and diploma holders also gives cause for worry.

Rs 500 crores is a small amount to spend on education when compared with the total plan outlay of over Rs 102,00 crores. It is certainly a valid argument that, since the need for trained men is increasing, the first concern of the Government should be to provide adequate facilities for training them. But international sources of finance are less favourable to this kind of expenditure than to industrial projects; and a country dependent on external aid has necessarily to curtail its demands. Nevertheless, no one is likely to be unduly disturbed if a fourth steel plant, costing Rs 200 crores, is given up in order to make funds available for education. That the demand exists can be seen from the pressure on admission into educational institutions at all levels. That the demand is badly met can also be seen from many other signs. That it will be fully and adequately met depends on a variety of factors. The present mood of acquiescence in existing conditions is itself a cause of the prevailing evils.

# Towards a Dynamic Inspectorate of Schools

THOSE WHO CAN, do, those who can't, teach,' quipped the late George Bernard Shaw, to which a pedagogic wag has added, 'and those who can't teach, become inspectors of schools!' There is just enough truth in this witticism to add spice to it, for though, on the whole, inspectors are perhaps more sinned against than sinning, yet there is no doubt that many a frustrated teacher is to be found in the ranks of the inspectorate, just as many a frustrated author or poet is found among literary critics. Every profession has its cranks, its humbugs and its failures, and the inspectorate is no exception. But like every other profession it also has its average and successes and its brilliant few, and if it cannot fully measure up to its job, the fault perhaps lies as much in the nature of the job, and the conditions under which inspectors are expected to work, as on their personal and professional deficiencies.

## *Old and New Concepts*

In Great Britain, the basic character, role and functions of the inspectorate today bear little resemblance to the inspectorate of thirty years ago. When the post was first created, about seventy-five years ago, the role of an inspector of schools was not very different from that of an income-tax inspector or a sanitary inspector. At first his sole function was to ensure that the rules and regulations laid down by the education department were observed by the schools to the letter. Later, when the vicious system of 'payment by results' was introduced, he became, in addition, a peripatetic examiner. This dual role of grim enforcer of the law and examiner, on whose report depended not only the reputation and the continued existence of the school but also the salary and security of tenure of the teachers, hardly made for a happy relationship between the inspectorate and the schools. This two-fold function of the inspectorate was emphasized in the famous Educational Dispatch of 1854, on the recommendation of which an education directorate and an inspectorate were set up in each of the provinces of India. 'An adequate system of inspection,' stated the authors of the dispatch, 'will also, for the future, become an essential part of our educational system; and we desire that a sufficient number of qualified Inspectors be appointed who will periodically report on the state of the colleges and schools which are managed by the Government, as well as such as will hereafter be brought under Government by the measures we propose to adopt. They will conduct, or assist at, the examination of the schools and these institutions.'



As we have said, this role of law enforcer-cum-examiner created an unnatural and unhappy relationship between the inspectorate and the school authorities. Power almost inevitably corrupts, and while a few enlightened inspectors managed to resist the infection, the majority tended to become petty tyrants whose annual inspections were regarded by teachers and pupils as dread visitations. This unfortunate state of affairs still persists in many parts of India.

In Great Britain, however, as the short-sighted system of 'payment by results' was abolished, and a rise in the general level of educationists made the rigid enforcement of petty regulations unnecessary, a newer and more enlightened inspectorate came into being. Inspectors became educational advisors and consultants; they ceased to be the natural enemies of schools and became instead guides, philosophers and co-workers whose visits were welcomed by teachers and pupils alike. Inspectors now became active links and co-ordinators of educational efforts between schools, and between schools and other educational institutions such as training colleges, polytechnics, and museums; they began to act as liaison officers between the local education authorities and the schools, and as educational missionaries who went from school to school inculcating new ideas and ideals. Many of them also became field research workers who initiated new experiments in education, and then carried the fruits of these experiments throughout their jurisdiction. The modern inspector of schools in England and other progressive countries plays a much more complex role than his predecessor, and is expected to exercise wider and more dynamic functions than mere routine inspections.

This modern, more virile concept of the inspectorate has unfortunately not been generally accepted in India. A handful of progressive administrators and inspectors in various states, it is true, are endeavouring, within the limitations under which they work at present, to realize this ideal. But the new concept of the inspectorate has not yet gained general currency. Even where it has been nominally accepted, no radical change has occurred in the regulations and practices of the various educational departments which govern the work of the inspectorate, or in the manner in which the inspectorate is selected and trained.

### *Inspectors as Liaison Officers*

While the educational service must form an integrated whole, and while every section of the service is important, it is perhaps no exaggeration to hold that a dynamic inspectorate is perhaps the cornerstone of the educational structure, and the key to educational well-being and progress. This is especially true in modern India,



which is in the process of radically overhauling and reconstructing its entire system of education from the nursery school to the university in order to adapt it to the new conditions and challenges of the post-Independence era. Under our present administrative set-up, all change tends to be initiated from the top, and to filter down through the administrative hierarchy to the schools. The inspectorate, with one foot in the administration and the other in the schools, forms a natural bridge between the policy-makers and the educationists. It is therefore the primary duty of the inspectorate to ensure that the enlightened policies of the administration are interpreted to suit actual conditions in the schools in such a vital manner that they may take root. The success or failure of the educational revolution which we are endeavouring to bring about will depend to a large extent on the manner in which inspectors are able to fulfil their vital role as liaison officers between the administration and the schools. They must also fulfil their roles as field workers and innovators of progressive techniques in education.

If the inspectorate in India is to measure up to the tremendous tasks before it, it must be manned by the right type of people. The inspectors of today and the future must be a dedicated body of men and women of well-balanced personalities, imbued with vision and a spirit of service, with a broad background of academic knowledge and experience. But this alone will not be enough; specific training will also be necessary if the inspectorate is to discharge worthily the many obligations and responsibilities of its vocation. To what extent is the inspectorate in India equipped, personally, professionally, and by education and training to play this progressive role? The answer is depressing. The average inspector is neither personally nor professionally equipped for the task before him. The blame for this lies partly with the individuals themselves; it rests perhaps still more with the way in which they are selected, their inadequate training, and the unsatisfactory conditions of service.

### *Conditions of Service*

Primary school inspectors are generally recruited from the ranks of trained primary teachers and of untrained graduates who have little or no teaching experience. The former group almost invariably lacks academic training; the latter know little or nothing about teaching or school problems. Secondary school inspectors are generally better equipped, but they also, by and large, lack experience. Both categories lack stimulating conditions of service. They are generally tied down to routine administrative work and have little time left to inspect and improve the great number of schools for which they are held responsible. In Great Britain, a member of

the inspectorate is not saddled with administrative responsibilities, so he can devote his entire time, energy and talent to his primary responsibility, which is to visit, advise and assist educationists, and to strive to improve the quality of the education imparted in schools. He seldom has more than a dozen high schools and fifty primary schools within a limited radius under his jurisdiction.

In India a district inspector is frequently responsible for a couple of hundred high schools, middle schools and primary schools spread over a very large area, and even an ordinary inspector or sub-inspector has perhaps a couple of hundred schools to supervise. All inspectors are expected to both administer and inspect the schools under their jurisdiction. And since the administration must go on whatever happens—schools must be built or repaired, teachers appointed and dismissed, and grants and salaries paid before the end of the financial year—it is generally the supervisory and advisory side of his work that is neglected. 'The true role of an Inspector,' according to the Secondary Education Commission, 'is to study the problems of each school, to view them comprehensively in the light of educational objectives, to formulate suggestions for improvement, and to help teachers to carry out his advice and suggestions.' How can inspectors who have to spend the major portion of their time dealing with routine administrative matters in their offices, and who have to inspect two or three schools in a day, hope to fulfil such a role? How can such inspectors hope to serve as guides to educationists, and how can they help to leaven the entire educational system?

### *Remedies*

This is a sad state of affairs. Even sadder is the fact that school authorities not only accept such a situation but welcome it, being convinced from bitter experience that the less they see of the inspector the better, for they regard him as a hindrance rather than a help. And what is saddest, is that only too often they are right! For the average inspector, immersed in routine affairs and out of touch with real conditions in schools, still believes that his business is to criticize the teachers, pick holes in the administration, and to enforce the letter of the law, even if it means virtually imprisoning the schools in masses of red tape. Further, under the present administrative set-up, all power tends to be centralized in the education departments, so that even when inspectors in the field try to accomplish anything worthwhile, they are compelled to forward their schemes for sanction to the Centre via the district inspectors. By the time a scheme is finally approved, the need for it has probably passed!

These defects call for urgent and, in some cases, drastic remedies. To put first things first, the salary scale and the status of the inspec-

torate at all levels need to be substantially raised to attract the right type of people. Simultaneously, the minimum qualifications for admission need to be raised, so that only those with the right type of personality and academic background can enter the ranks of the inspectorate. Once selected, inspectors should be required to undergo a suitable course of pre-service and in-service training along the lines laid down by Smt. C. Naik in her stimulating and constructive pamphlet, *The Training of School Administrators* published by the Central Ministry of Education.

Careful selection, proper training, and a more attractive salary scale will produce good inspectors, but unless service conditions are also changed, this potential will be largely wasted. Inspectors should be freed as far as possible from routine day-to-day administration. This can be done by providing them with an adequate, well qualified office staff, so that they can spend as much time in the schools as possible. And there should be a suitable devolution of financial and administrative powers from the top to the men and women on the spot so that they can execute most of their plans without referring to an authority higher than the district inspector.

#### *Towards More Effective Inspections*

Further, an inspector should not have too many schools under his jurisdiction, and he should not be expected to inspect all types of schools in all subjects as he does at present. He should visit the schools regularly and offer teachers general help and advice, but periodically a group of inspectors should be formed into a panel to make a full inspection of schools, as is done in the United States every five years. Such full inspections, involving the pooling of many expert views, is alone likely to produce an inspection report that will be comprehensive, constructive and of lasting value to the school authorities. Lest inspectors degenerate, as they so often do, into bookish theorists and armchair critics, they should be required every five years or so to return to the schools as principals or senior teachers, so that they can attempt to implement some of the suggestions they themselves offer so glibly to educationists.

Finally, it should be clearly understood that competent though the individual inspector may be, he is after all only a detached observer, and while a spectator may see most of the game, he misses much of its complexity. Hence any advice that the inspector offers should be in the nature of suggestions to be explored and experimented with, not laws to be obeyed without question. Direction and regimentation by the inspectorate invariably creates hostility and distrust among educationists; it also tends to curb originality and initiative.

Hence the good inspector will be democratic rather than autocratic, not for ideological or sentimental reasons, but for practical and psychological ones. He will act upon the conviction that his essential function is to provide democratic leadership, to guide, stimulate and help teachers to critically examine their educational objectives, attitudes and procedures so that they may contribute more effectively to the progress of education.

AUSTIN A. DE SOUZA

## Recent Trends in Indian Education

THE DEVELOPMENTS in a country in any field can be judged in two ways, namely, the direction in which the developments are taking place and the results which have been achieved. It is not possible in a short article to dwell on both aspects. An attempt will, therefore, be made here to confine our discussion to the first, that is to say, the direction in which education in India is moving today. The future of Indian society will depend more on the processes than on the results. It appears that this realization is lacking at the moment on the part of educational planners and administrators, which may be considered natural in view of the existing conditions, when the nation is engaged, to a great degree, in the quantitative improvement of educational facilities. Such has also been the state of affairs in the history of education of many other countries which had to build up their educational systems at a rapid speed to suit their national aspirations and requirements. It is in this light that one should view the progress of education in India, a country which is striving to bring about a new social order.

True beginnings in the progress of education were made in 1950 when the new Constitution was adopted. Being pledged to a democratic social order, educational administration was decentralized and made a state responsibility in the articles of the Constitution. This responsibility is retained by the states after guaranteeing fundamental rights of education and culture in the Constitution. In view of the difficulties of other countries which lack such provisions in their constitutions, the incorporation of fundamental guarantees in our Constitution was a bold step in the right direction. It also avoided many kinds of discrimination. An understanding of the educational provisions in the Constitution is necessary for a right perspective of the partnership between the central and state

authorities as regards administration of education. In the field of education the state, in accordance with the spirit of the Constitution, does not possess absolute power to follow the path of its own choice. In other words it has restricted autonomy to plan, provide and administer education within a national framework of standardized educational opportunity.

The Union Ministry of Education, besides its normal duties of co-ordination, guidance and counselling, has been showing in recent years an increasing interest in the affairs of the states. It has attempted to improve provisions for education and has tried also to equalize regional differences, a difficult task in a vast country like ours. This tendency is visible in a number of schemes sponsored by the Union Ministry to provide initiative in the field of state education. It is interesting to note that quite often the Union funds remain unutilized in certain fields because of the failure of certain states to establish the partnership envisaged in the schemes. This raises a number of controversies regarding the relationship between the Union and state governments in the promotion of education. The question of utmost importance is: how far should the Government of India direct, subsidize and control the state's effort for the promotion of education? Leaving aside outright interference in educational effort at the state level, the Central Government in India has the responsibility of directing the states in designing systems of education which are in tune with the democratic principles incorporated in the Constitution.

Recent trends in the relationships between the Union or state governments and the universities have caused anxiety among educators and intellectuals. The tightening of state control over these institutions of higher learning has been viewed as a restriction of their autonomy and academic freedom. It is true that there are instances of such dealings between the states and the universities, sometimes resulting in crises of a disturbing nature. It is not correct to label outright such trends as undemocratic without considering the role of the universities in a society that is engaged in bringing about a planned social order. Tradition-bound Indian universities have failed to move with the times. In the changed circumstances in which our country is placed today, the universities, instead of extending their influence, have contracted their spheres of activity and formed isolated cells of life. The state governments on the other hand have been struggling hard to reconstruct society. This has been the dominant factor responsible for conflicts and tensions between these two agencies, the state and the university.

In Russia, where educational initiative is nurtured and controlled by the state, the universities have come closer to the needs and

aspirations of the people, and academic activities favour fundamental and utilitarian research to push forward communist ideals. On the other hand, universities in Russia have more or less lost the academic freedom which is so necessary in institutions of higher learning. The reverse is true in the case of British universities which, while enjoying academic freedom of a high order for a number of centuries, have lost contact with the changing needs of the people. It is therefore in this context that freedom and planning should be considered.

The dealings of the states with the universities in India in recent years, termed either as increasing control or as interference, may be considered from three points of view. First, the states have been planning the expansion of higher education and diversifying the courses of studies to suit the socio-economic needs of the country. This has shown substantial progress during the two five-year plans. Secondly, on account of the failure of the universities to engage in utilitarian research, the state has given a lead by starting a series of national laboratories and centres of fundamental and applied research. While the universities confine themselves to fundamental research, the state and industry continue to take increasing responsibilities in applied and utilitarian research. Thirdly, instances of increasing state control over the administration of these academic institutions, is a result of the first two developments. Amendments to the University Acts are being made from time to time with a view to tightening their functions.

The attitude of the Union Government to this process is evident by the establishment of the University Grants Commission which administers the funds allocated for higher education. It is true that the establishment of such autonomous commissions at the state level will eliminate the chances of interference and control. Control over the universities arising from direct financial support can be minimized by such independent bodies.

In a planned social order freedom of the universities and planning by the state should be complementary to each other. The state should ensure that planning does not degenerate into mere control. The universities on the other hand should move with the times by reorienting their ideals and practices to suit the aspirations of the common people. The more they succeed in this the more they will serve education and retain their autonomy, the two essential elements in their functioning. The universities themselves can do a great deal in this direction without looking for support from other agencies. They should now take a definite stand, avoiding dogmatism and bias, on the social and economic problems that are facing the country.

There is another pertinent question related to the influence of the private and public sectors in education. In a democratic society the role of private initiative in education is as important as that of the public system. It is useful from the view-point of experimentation and growth of education. This assumes a special significance in our country at a time of reconstruction. Even from the financial point of view private initiative in education establishes a partnership with the state's effort to promote education. Such a partnership in secondary and higher education allows public funds to be diverted to the expansion of primary education. This relationship between private and public initiatives results in a division of responsibilities in maintaining the educational system. Public funds have so far been utilized mainly for the promotion of primary education. At the secondary and collegiate levels, contrary to the systems in other countries, support has come mainly from private factors, supplemented with grant-in-aids from public funds. While this system has been of a great advantage to conditions obtaining in India, there are certain trends that tend to disturb the balance. Under the stress of forging a welfare state the private initiative which used to rely mainly on public philanthropy is suffering because of the ever-increasing burden of taxation and nationalization of industries. It is becoming increasingly difficult for private effort in education to survive the economic stresses of the times. It is true that the state has come to the rescue by liberalizing its grant-in-aid policies. The increasing dependence of privately managed schools on public funds is creating difficulties at two levels. First, the institutions are losing their vitality to act, experiment, and grow according with their ideals. This may not be generally perceptible for the time being, but the symptoms are becoming apparent in many outstanding educational institutions, and the disease is likely to spread on a large scale. On the other hand, dependence on public funds is leading to increasing state control in the affairs of the private institutions. It is also true that even without much financial help from public funds, control of privately managed institutions is increasing in order to introduce a standardized pattern in the school system. This tendency may be termed as direction, control or interference according to the magnitude of the state's interest and action. In a country such as India where privately controlled institutions at all levels of education have played a significant role in the past, such a development in their relationship with the state can mark the growth of democratic education. Methods can easily be found to check improper utilization of public funds by closing institutions that misuse these funds. What is therefore needed at the moment is a cautious and intelligent approach to this problem.



A word now on the administration of public education itself. Certain movements are afoot in different states to refashion their educational systems with the idea of providing equal educational opportunities for all. For a fair distribution of efficient educational provision, several states are planning to nationalize schools. They are taking over control from private managements. In other states the control is passing from the local bodies to the state. Wherever attempts have been made to nationalize or centralize the school systems they have resulted in overburdening the administrative responsibilities of the inspectorate. The inspectorate should concentrate its efforts on guidance and supervision for the improvement of academic standards. Inefficiency in such a system is also evident in other forms. It is the responsibility of the state to see that education is provided for all without discrimination and that schools are fairly distributed over the area of its jurisdiction. It is only when no initiative is forthcoming in a particular area that the state should come forward to establish and maintain the schools. Neither nationalization nor centralization of education is desirable in a democratic society. The schools should be maintained either by private effort or by the local agencies.

There is also a movement in the country to establish one-teacher schools at the instance of the Government of India in order to accelerate the percentage of literacy. The experience in America and other advanced countries of the West should help us to realize the inadvisability of such a move, even though the circumstances that initiate it may be pressing. When these countries are engaged in consolidating their small school units, we in India are going in the opposite direction. Our requirements for accelerating the provision of education can be met to a large extent by decentralizing educational administration and by legislation for imposing the educational tax. Decentralization of educational administration up to the secondary school stage should not be difficult in India in the face of the revival of the panchayat system. A beginning can be made towards this end even on an experimental basis. The argument that this can be done only after local administrative units are ready to shoulder responsibility is the kind of logic advanced by a body which is not inclined to transfer its power. Difficulties can be surmounted to a great degree by scientific delimitation of these school administrative units, proper direction and guidance, and sizable subsidies. The bold step in this direction taken by the state of Rajasthan is of special significance. Under democratic decentralization the administration of primary schools has been given to the village panchayats. We must watch this experiment with interest.



This discussion would be incomplete without a reference to the nationalization of textbooks. This is a development of recent origin. Educational administration in India has not escaped the influence of nationalization in industry and commerce. State after state has taken over the preparation and publication of school textbooks, sometimes under the control of autonomous boards. Despite arguments which may look sound at first sight, such a scheme in the educational programme cannot be accepted by a truly democratic society. It is carrying the idea of a planned social order too far. Even if the basic idea behind it is the production of cheap textbooks to promote expansion of education, it is not worth while. Even if indoctrination is eliminated from such a system, the prescription of one book in a subject over the whole area of the state is educationally unsound. The two important agents of education, the textbook and the teacher, should in no way be tools in the hands of the state. Both should be encouraged by open competition under decentralized control. From this point of view even the selection of teachers by state public service commissions is unsound, and is more or less identical in nature to nationalization of textbooks. Public service commissions can very well select personnel for other state services, but the task of selecting teachers should be left to the local education authorities. This is possible even under present circumstances if, from time to time, these commissions suggest approved lists of names for further selection and employment by schools or school administrative units.

K. N. SRIVASTAVA

# Book Reviews

F. G. FRENCH: *English in Tables* (O.U.P., 1960), Demy 8vo, pp. xii + 140, 6s.

Here is a godsend to all conscientious teachers of English who spend valuable hours making up exercises to give their pupils sufficient practice in different sentence forms.

Nearly fifty years ago Harold Parmer at the Institute for Research in English Teaching, Tokyo, published *Colloquial English, 100 Substitution Tables*. These tables enabled students to practise no less than 393,366 sentences in correct English. Unfortunately, for many years teachers of English have neglected the use of substitution tables even though French, in his *English Composition Without Trouble* and his later books on the teaching of English, amply demonstrated their great value.

Now we trust they have come into their own as an invaluable means of forming correct habits of English speech. Teachers of English must realize that whatever the value of grammar in the analysis of a language, English, unlike inflected languages, is not amenable to rules. Sentence construction cannot therefore be reduced to a neat set of working directions. Grammar may explain the make-up of an English sentence, but it cannot and never does give a learner the ability to speak and write correctly with confidence, nor can it prevent errors.

These sentences are built up from the simplest statements, such as 'This is a house', giving the pupil a number of words that may be substituted for 'house', and gradually progressing to more difficult patterns such as the uses of the Future Perfect, e.g. 'I shall have finished this letter before the post office closes'. From this last table the pupil can make as many as 250 sentences. After each table there are a number of further exercises.

The introduction shows the teacher how to build up tables so that there is no opportunity for error. What is still

more valuable, the teacher is shown various ways of using these tables so that the pupil is not wearied and forms correct habits of speech. The learning of a language depends essentially on forming correct language habits, and these can come only with much practice.

Every teacher of English, however experienced or immature, should get a copy of this book and use it at every opportunity.

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*Problems in Education*† (Deccan Education Society, 1960), Demy 8vo, pp. xvi + 126, Rs 5.

This slender volume gives us the views of the members of the Deccan Education Society and other educationists in Maharashtra on the problems that face teachers today. All of them are aware of the applicability of the answers they provide to a wider national field, but this has not drawn them outside their own practical experience. The main arguments are concerned with the appointment of better teachers and with according them a better status.

The well-known educationist, Dr R. P. Paranjpye, who as Education Minister of Bombay Province promoted the education of the depressed classes and insisted on their acceptance in general schools, contributes a valuable foreword. He pleads for the maintenance at least of existing standards of teaching, and for better educational facilities for promising students. In particular he draws attention to the lowering of standards, a result of the insistence on first class marks for admission to technical colleges or government service, and to the resultant competition among universities and examining bodies to declare more candidates deserving of a first class. 'We should keep our ideals high at any rate, even though we may not be able to attain them immediately.'

The individual contributions, which between them cover the whole edu-

cational field from primary education to university, are practical discussions of the problems which confront teachers. The range of opinion is widest concerning the medium of instruction in higher education. One writer pleads earnestly for the acceptance of the regional language, while another argues with equal fervour for the retention of English. A quality noteworthy of these articles is that they are all thought-provoking and could serve as useful starting-points for policy discussions.

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*The Children's History of India* (Ministry of Information and Broadcasting, Government of India, 1960). Medium 8vo, pp. viii + 166, Rs 4.

History seems hardly a suitable subject for a textbook published by the Ministry of Education, and a 'children's history' requires more skill than a textbook for advanced students. This is not the first of its kind; it could not even be called the best. But it is well produced, makes good use of photographs and coloured plates, and is, on the whole, readable.

Of special appeal is the thread of continuity throughout the narrative, and the manner in which the author communicates the diversity of India's peoples. Equally praiseworthy is the ease with which a sense of time is conveyed without any mention of dates. The personalities presented are few, until we come nearer our own times when there is a tendency to overcrowd the stage. Singularly out of place are the laudatory references to the Prime Minister, whose position is rendered the more embarrassing by the fact that he has commended the book in a foreword. The fairy-tale touch is not lacking. At the close, there is a they-all-lived-happily-ever-after effusion with the Planning Commission, the Prime Minister, the Constitution and the country stepping out into a brave new world.

This tendency to talk down to the reader mars the value of an otherwise attractive book.

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SHANTA RAMESHWAR RAO: *Tales of Ancient India* (Orient Longmans, 1960), Crown 8vo, pp. viii+124, Rs. 3.50.

This attractive paperback does not bear the name of the illustrator. Perhaps the decorations are the work of the author herself, in which case she can draw charming pictures as well as tell charming stories.

Mrs Rao has collected and re-written many 'how' and 'why' stories and myths which, in slightly varying forms, have become almost a part of our race-consciousness. Through the ages, when grown-ups had time to tell and children had time to listen, these stories passed from generation to generation, sometimes changing a little in the telling, but on the whole retaining to a remarkable degree their original form. Now, parents no longer have time to tell, although children still have time to listen, and it is possible that children in towns may grow up without that background of legend and mythology which enriched the childhood of their elders. Mrs Rao's presentation of these tales will relieve many parents of the worrying thought that their children might grow up without knowing 'Why the Cock Sparrow has Black Specks upon his Feathers'.

My own favourite among these is the one about 'How the Squirrel Got his Stripes'. Although other details of this story may vary from place to place, the stripes on the squirrel's back are always the marks of Rama's fingers as he stroked his gallant little friend. This explains why the squirrels in Europe do not have stripes on their backs. Silri Rama never went to Europe!

In reading these tales together, it is possible to trace certain patterns. Many of the stories derive from the days of Rama's and Sita's wandering in the

jungle. These are stories about the birds and beasts of the forests. In the other stories, there is often a certain similarity: the curse or wish which has later to be modified. Such for instance is the theme of 'Why the Moon Waxes and Wanes' and 'Why Fire Consumes All Things and Remains Pure'. The gods and demons often

make a too-hasty use of their supernatural powers; they utter curses which they later find cannot be recalled.

It is always difficult to write for children. It is a controversial point whether the author's use of words such as 'aught' and 'naught' add grace to her style. On the whole, however, the stories read very pleasantly.