

# TEACHING

A QUARTERLY TECHNICAL JOURNAL FOR TEACHERS

*Edited by*  
MARGARET BENJAMIN

VOL. XXVIII  
SEPTEMBER 1955 — JUNE 1956



OXFORD UNIVERSITY PRESS  
POST BOX 31, BOMBAY 1



# INDEX

## ARTICLES

Annual Promotion Examinations for Improved Teaching, Using the	...	...	1
Art, Instilling the Appreciation of	...	...	97
— in Schools, The Teaching of	...	...	73
Arts in relation to other School Subjects	...	...	100
BOOK REVIEWS —			
Bhatia: <i>Performance Tests of Intelligence under Indian Conditions</i>	...	...	71
Britain: <i>An Official Handbook</i> , 1955 edition	...	...	72
Gurrey: <i>Teaching English as a Foreign Language</i>	...	...	108
Jayasuriya: <i>Statistical Calculations for Teachers</i>	...	...	71
McBain: <i>The First Two Years of Geography</i>	...	...	35
<i>New Education</i>	...	...	35
Polkinghorne: <i>Fundamental Number Teaching</i>	...	...	107
Priestley and Grayson: <i>My Music Guide</i> , Book III	...	...	72
Saunders: <i>The Teaching of General Science in Tropical Secondary Schools</i>	...	...	107
<i>Teaching of Modern Languages, The</i>	...	...	143
Tinbergen: <i>Bird Life</i>	...	...	36
• <i>World Survey of Education</i>	...	...	143
Book Week, A	...	...	120
Dramatic Activity in Schools	...	...	93
Editorial	...	...	37, 109
Education, Reorganization of Secondary	...	...	110
English Poetry in the Secondary School	...	...	38
Examination Paper?, What Makes a Good	...	...	16
Examinations, On	...	...	32
— , Reforms in	...	...	20
— , The Philosophy of	...	...	54
— , The Use of Textbooks in	...	...	28
— for Improved Teaching, Using the Annual Promotion	...	...	1
— in France, School	...	...	8
Good Examination Paper?, What Makes a	...	...	16
— Reading	...	...	139
Handwriting as a Craft	...	...	116
How a Test can Guide	...	...	26
Instilling the Appreciation of Art	...	...	97
Jamia Millia Islamia, The	...	...	48
Language Teachers, Suggestions for the Training of	...	...	41
Model-making	...	...	83
Multipurpose Schools, Some Problems of	...	...	124
Music, Teaching Western	...	...	104
— and Singing in Secondary Schools	...	...	78
On Examinations	...	...	32
Philosophy of Examinations, The	...	...	54
Picture-making, Some Problems in Children's	...	...	89
Poetry in the Secondary School, English	...	...	38
Reading, Good	...	...	139
— , The Teaching of	...	...	63
Reforms in Examinations	...	...	20
Reorganization of Secondary Education	...	...	110
School Examinations in France	...	...	8

Secondary Education, Reorganization of	...	...	...	...	110
Some Problems in Children's Picture-making	...	...	...	...	89
— — of Multipurpose Schools	...	...	...	...	124
Suggestions for the Training of Language Teachers	...	...	...	...	41
Teaching of Art in Schools, The	...	...	...	...	73
— — Reading, The	...	...	...	...	63
— Western Music	...	...	...	...	104 <sup>a</sup>
Test can Guide, How a	...	...	...	...	25
Textbooks	...	...	...	...	130
— in Examinations, The Use of	...	...	...	...	28
Training of Language Teachers, Suggestions for the	...	...	...	...	41
Use of Textbooks in Examinations, The	...	...	...	...	28
Using the Annual Promotion Examinations for Improved Teaching	...	...	...	...	1
What Makes a Good Examination Paper ?	...	...	...	...	16

## AUTHORS

Beling, W. J. G.	...	...	73	Kamat, V. V.	...	...	20
Benjamin, Margaret	...	...	120	Kotwal, Lalita	...	...	139
Bhalla, Shakuntala	...	...	48	Lahiri, J.	...	...	124
Billows, F. L.	...	...	41	Menzel, E. W.	...	...	1, 54
D'Souza, Austin A.	...	...	28	Mukherjee, Sushil Kumar	...	...	97
Forrester, Jean	...	...	16	Natarajan, S.	...	...	32
Gal, Roger	...	...	8	Patwardhan, C. N.	...	...	110
Ghate, Rhona	...	...	38	Rajalakshmi, R.	...	26, 63,	100
Green, Margery	...	...	78	Sahi, S. P.	...	...	93
Green, T. L.	...	...	83	Singh, Hridaya Narayan	...	...	130
Hellier, Gay	...	...	89	Surveyor, Aloo	...	...	104
Horsburgh, David	...	...	116				

# TEACHING

A QUARTERLY TECHNICAL JOURNAL FOR TEACHERS

*Editor:* MARGARET BENJAMIN

---

VOL. XXVIII

SEPTEMBER 1955

No. 1

---

## USING THE ANNUAL PROMOTION EXAMINA- TIONS FOR IMPROVED TEACHING

\*\*\*\*\*  
\*\* Examinations must \*\*  
\*\* be a Test of Develop- \*\*  
\*\* ment and Ability \*\*  
\*\* \*\*\*\*\*

EXAMINATIONS are neither good nor evil in themselves, but their effect is good or evil according to the way in which they are conducted and used. Unfortunately, few teachers and school administrators understand how to make use of their really helpful aspects. We are too much influenced by the very narrow objectives of the public examination. We imitate them, we practise for them, and we think only in terms of getting ready for the kind of examination that is forced upon us from the top for an altogether different purpose than that for which teachers and headmasters should really be using them. Public examinations are utilized to check whether teachers and schools are doing their duties, and also to see that sub-standard students are not given credit for doing what they cannot do. The public examinations attempt to keep up a standard. Unfortunately, the criterion has gradually become that of getting the pupil past the examination, little or no attention being given to his general development, excepting as it can be seen in his public examination marks. Good teaching cannot be done with such narrow objectives. This article will attempt to make the teacher forget the narrow objective of simply getting the pupils to pass and will concentrate on the larger goal of what students can actually do in broader fields.

Since the public examinations come only at the end of the primary school course, the middle school course, and the high school course, it means that teachers get used to thinking in terms of what is expected at the very end of these courses and not the development that is to be expected year by year or even monthly. In some of the States the examination at the end of the middle school course has been abolished, and yet one finds teachers still being guided by the standard of the former public examination. You find that the annual promotional examinations not only in the final class, but in every class, are an

imitation of the examination for Class VIII, which is too difficult for the lower classes. In an attempt to break this method the staffs of four middle schools were called together to prepare examinations which would be based more or less on just what we hoped to accomplish year by year.

A number of schools were requested to do this, but not because we wanted to imitate examinations given by outside authorities. Examinations given by outside authorities are in many cases less relevant and helpful than those prepared by the classroom teacher himself. The classroom teacher knows better just what he has tried to achieve and what ground has been covered during the year than the outside authorities do, unless you consider that he should follow a syllabus so rigidly and slavishly that every teacher will try to teach exactly the same. If some freedom is allowed to the teacher and he is able to use his imagination and his own personal experience, one cannot insist on an absolutely uniform course in all classrooms, at least not in all of the subjects. We thought it wiser to have several schools co-operating because it enabled us to get together and work out something better than any one school would work out. It also enabled us to distribute the printing charges of the examination between the schools. Furthermore, it permitted us certain comparisons between classes. This proved to be of some help to the teachers, especially to the younger ones. Four schools combined to prepare their annual promotional examination papers. We decided from the outset to concentrate on the most general aspects of the syllabus, and to leave out all petty questions which were not of real importance, or which every teacher could not have been expected to cover. Also by using the New-Type tests in at least part of the examination we could cover so much ground that a pupil would be able to do a large proportion of the tests even if the teacher had failed to cover certain points. By having committees prepare the examination rather than just an individual, a larger variety of questions was likely to be included.

We decided to pay no attention whatsoever to the models of public examinations. We considered it bad enough to be bound by their narrow limits in the year in which public examinations had to be taken, without tying us down for the entire school course. We began the preparation of the examination by asking ourselves just what the course for that particular year in each subject was supposed to cover. In particular we asked ourselves just what each pupil should be able to do by the end of the year and agreed to concentrate on finding the pupil's ability to do things rather than just his memory for facts. We also agreed that no teacher should be allowed to take the attitude that a certain skill should have been taught in previous years and that if the pupil did not have it his former teachers were responsible for it rather than he himself. For instance, we decided that every mathematics teacher, no matter what class he taught, was responsible for seeing that his pupils could do the fundamental processes in arithmetic with

eighty per cent accuracy. Therefore, in every class we included one paper in the more elementary processes which pupils were supposed to have learned in the primary school but which unfortunately many in the middle and high schools cannot do. There is no use teaching advanced arithmetic when the skill in doing more elementary arithmetic is so low as to handicap the pupil in his later work. You might call this one paper simply a review paper of former years' work which is foundational to the present and future years' work. The rest of the examination was constructed to see if the objectives for teaching the subject were met.

When it came to the preparation of the examination papers in English we asked ourselves four questions:

- (1) Can he understand spoken English?
- (2) Can he read English with comprehension?
- (3) Can he speak English?
- (4) Can he express himself in English in writing?

In each class a different standard is, of course, to be expected. The work was very simple in the lowest class but grew in complication in each succeeding class. We tested the ability to understand spoken English by having the teacher ask certain set questions and having the pupils write their answers. In the lowest class we let them write the answer in their mother-tongue since we wanted to test only the ability to understand: we were not testing their ability to give answers in English. After the lowest class we assumed that the answer should be given in English. To test the ability to read English with understanding we selected or composed little stories, or descriptive passages, which were altogether new to the pupil and then set questions on the paragraphs. We took care not to use any words that we could not reasonably expect them to know. If really unfamiliar words were used we gave the meaning of them. These paragraphs for testing the ability to read English are the most revealing of all the test items. They give us the best idea as to the progress the pupils are making. The ability to speak English, which includes pronunciation, could only be given through short oral tests, individually, in advance of the regular written examination. The ability of a pupil to express himself in English was given in two forms: (1) Translations of short sentences to see whether the right grammatical terms were used. (2) Completion tests which included as many as twenty items to be finished in ten minutes. The other part of the test was to have them write a story in English. Since we wanted to be sure that this was really a new exercise and something which they had not partly memorized, and since comparison is easier when they all write on the same theme, we *read* the story to them in the mother-tongue, and simply told them to try to tell this in their own words in English. In case there were any words which we suspected they might not know, we gave them the English equivalents so that they

would not be unduly handicapped by not knowing the one or two key words without which the story could not be written. This kind of exercise works better than an original composition because we did not intend to measure thoughts or knowledge about any certain subject, but simply wanted to know how they could express themselves when the thought was already there in the form of an interesting little story. We did not print the story for them in the mother-tongue because we did not want a translation; we simply wanted them to understand the plot of the story, and then convert it into their own form of expression in the English language.

Within two or three years we found that the whole character of teaching English had changed. The teachers paid less attention to the textbook. In fact, all the schools did not even use the same textbook, but since the objectives in teaching were the same the particular textbook in use made little difference as long as we were careful not to use words that occurred in only one or two of the textbooks and not in the others. The teachers were rather afraid of such novel examinations at first but soon realized that these examinations gave their pupils a much fairer chance. They realized that if the pupil could understand simple English, and could express what he was supposed to be able to express, he was certain to get through the examination. It depended upon ability rather than luck. They also realized that there was very little final preparation to be made for such an examination. If the work was done throughout the year an examination that came without warning was actually no more to be feared than one which came after much cramming. Also the teachers have begun to realize that the pupil who cannot pass this type of examination is not fit to go up to the next class, and that, therefore, it is in the interest of all parties to find out exactly what the pupil's ability is and to act accordingly. Once a teacher knows that he is doing fairly good work, he does not look upon the success or failure of particular pupils as attaching blame to himself and is not tempted to help the pupil get through just for the sake of his own prestige. Teachers thus become more responsible and reliable in the conduct of the examination.

A similar procedure was followed in other subjects. In discussion we agreed on the objectives and standards to be achieved by the end of the year and then framed our questions to meet these requirements. We used New-Type tests to some extent but we also used the old type. We used whatever seemed to serve our purpose best. Since we tried to cover most of the important points in the year's course, our examinations from year to year now resemble each other a good deal. Of course we change the forms so that memorizing of old papers will do no good. But since we have most of the substance of the year's work in each examination we do not have to change the examinations to any considerable extent. The New-Type test forms enable us to cover from four to five times as much ground as we used to cover when we used only the old type. Since almost everything of importance gets



into the examination our teachers have ceased to think in terms of 'lucky' or 'likely' questions.

In the high school department we have not made as much progress, the main reason being that the high school certificate examination still frightens the high school teachers and narrows down their objectives to the requirements of the examination. However, gradually it is being realized that teaching to enable the pupils to do the requirements of the syllabus as a whole is better preparation than preparation to answer the specific questions which have occurred in recent public examinations. Coaching is being recognized as too narrow a method, which does not give the pupil the experience and the grasp of the subject-matter which enable him to do well even in the examination. Our high school has stood at the very top of the list in promotions, first-division students, and distinctions the last few years. The less we coach for the public examination and concentrate on developing skills, the better our results in the examination are.

You cannot prepare comprehensive annual promotional examinations without resorting to printing or duplicating, but we find saving on this to be poor economy. Actually it is not economy. The blank copy-books used in the old-type examination actually cost more than our cyclostyled examination papers when we have several schools co-operating to get the papers printed. We are lucky to have a cyclo-styling firm in the city which will give us one hundred copies of one stencil for Rs 3. This is as cheap as we can do it ourselves and relieves us of a good deal of trouble and eliminates the danger of 'leaks'. Thus, our longer New-Type test costs us no more than the old system and is far more satisfactory from the examination point of view and certainly helps us to use the time of the annual promotional examination to make the teachers aware of just which things should be stressed during the entire year in order to achieve the best results. Gradually we have learned just what the standard of achievement for each class should be, thus removing that confusion in the minds of teachers which is present when the public examination is considered to be the model. Its standard may be correct for the final class, but is quite wrong when thought of in terms of being the proper model for the lower classes.

E. W. MENZEL

*Specimen of New-type Annual Examination Paper*

(Abridged)

SCHOOL.....

CLASS.....

NAME OF STUDENT.....

E. W. MENZEL

CLASSES VI AND VII

English—First Paper

VOCABULARY TEST

I. (a) नीचे लिखे शब्दों के अर्थ हिंदी में लिखो ।

1. Axe, 2. Bath, 3. Bees, 4. Hurt, 5. Join, 6. Kite, 7. Meal, 8. Need, 9. Often, 10. Pick up.

(30 words in original)

(b) नीचे लिखे शब्दों के अर्थ अंग्रेजी में लिखो ।

1. हंसना, 2. सबसे ऊंचा, 3. लेना, 4. ठहरना, 5. चोर, 6. चिउंटी, 7. पुराना, 8. कमजोर, 9. अन्तिम, 10. आसपास.

(30 words in original)

English—Second Paper

GRAMMAR TEST

(a) खाली स्थानों को भरों ।

1. पानी उबल रहा है । The water——boiling.  
2. तुम्हारे हाथ में क्या था ? What——in your hand ?  
3. मैं सुंदर तस्वीरें खींच सकती हूँ । I——draw pretty pictures.  
4. कक्षा में पाठिका नहीं है । The teacher——in the classroom.  
5. बगीचे के बीच में एक घर भी होगा । A house——be in the centre of the garden.  
6. चिड़ियाँ अंडे देती हैं । The birds —— eggs.  
7. लड़के दौड़ रहे हैं । The boys——.

(30 sentences in original)

(b) The tiger is like a large cat. It has black and yellow stripes. What a big head it has, and what big paws! With those paws the tiger can kill a bullock or a deer. The tiger always lives in the jungle. It never comes near towns. If tigers came near towns, boys and girls would be afraid.

Name 2 nouns (संज्ञा), 2 verbs (क्रिया), 2 adverbs (क्रिया विशेषण), 2 adjectives (विशेषण), 2 prepositions (सम्बन्धवाचक अव्यय), 2 pronouns (सर्वनाम), 2 conjunctions (समुच्चय बोधक अव्यय).

ऊपर लिखे अन्त के दो वाक्यों में से उद्देश्य (subject) के नीचे एक रेखा और विधेय (predicate) के नीचे दो रेखाएं खींचो ।

ENGLISH READING TEST

I. खाली स्थानों को भरों ।

1. It is cold in December but is very.....in the month of May.

2. Sita ate three laddus. Her brother ate four. Sita and her brother together ate.....laddus.
3. At 4.30 the school bell rings. We are very glad because we have sat in school many hours and may now go.....
4. Dogs cannot climb trees. But cats climb very well. When the dog tries to catch the cat, the cat.....into the tree. The dog then.....at the cat but this cannot hurt the cat.
5. Birds have two wings. One wing is on the right side of the body and the other wing is on the.....side of the body. Birds also have.....feet but only,.....head.

- II. Mohan goes to middle school. He lives near a wide river. One day he went to the river to catch fish. He fell into the water. He cannot swim. He went under water. A ryot saw him and pulled him out.

Whom is this story about ?.....  
 Where did he live ?.....  
 Why did he go to the river ?.....  
 How did he get out of the water ?.....

- III. A hen was eating grass in the garden. She looked up and saw a jackal coming after her. She was afraid. She ran as fast as she could but this was not fast enough. Then she flew up into a tree.

What was the hen doing in the garden ?.....  
 What did she see coming ?.....  
 Where did she go ?.....

*(Six English reading tests in original)*

In this test a higher passing mark is required from the pupils of Class VII than from those in Class VI.

# SCHOOL EXAMINATIONS IN FRANCE<sup>1</sup>

\*\*\*\*\*  
\*\* France has some \*\*  
\*\* problems in \*\*  
\*\* common with us \*\*  
\*\*\*\*\*

## THE FRENCH EXAMINATION SYSTEM

THE organization of examinations in France has a very long history which takes us back to the Middle Ages. This explains perhaps why the teaching profession is so strongly attached to a system which represents an unbroken process of selection and which reacts both favourably and unfavourably upon the development of the child. On the whole, it still enjoys a wide measure of support for various reasons. In the first place, from the point of view of strict fairness, the examination is regarded as the best guarantee of the impartiality of selection at every level; for the same reason, estimates of the pupil's ability formed by his previous teachers tend to be discounted, and we have great difficulty in persuading examiners to take sufficient account of the pupil's scholastic record over a period. Moreover, stress is laid on the stimulating effect, both for teachers and for pupils, of the examination as the culmination of the given course of study. Finally, the French educational system is characterized by its extreme selectivity, leading, in the case of the most gifted pupils, to results of a very high level.

The drawbacks of the system constitute the other side of the picture. The fairness of examination results is subject to considerable reserves. It is not difficult to imagine the part which chance can play in tests which are necessarily limited in time, which stake a scholastic career on a few isolated questions and in which there is so much room for the operation of chance, the inspiration of the moment, the emotional make-up of the child, and his previous school training: the same pupil, according to whether he has or has not had the good fortune to be suitably trained, will find his talents very differently required, in a way which will not always correspond to their true worth. The exclusive concentration on preparation for examinations, and their deplorable effect upon the course of studies, are universally regretted. Nevertheless, examinations, by the inevitable course of events, grow steadily more difficult and more ambitious. Whenever a new question is raised, the teachers include it in their curriculum and prepare their pupils to answer it, even if it is a mere scholastic question with no implications beyond itself, in order not to subject their pupils to the risk of failure should they be faced with it in the examination. And so curricula become more and more ambitious; the encyclopaedic character of the course is a brake on teaching methods, retards the work of genuine education and deprives candidates and teachers of all liberty

<sup>1</sup> This article has been supplied by the Education Clearing House, UNESCO, Paris, through the Indian National Commission for UNESCO.

in the choice of their subjects. Emulation itself turns against both educators and candidates; the latter are forced to rely on luck and inspiration. As for the selective value of examinations, the fact that it comes into play at a very early stage, at the examination for admission to the 6th class—the first of the secondary classes, that is to say, with children ten years old—leads to premature discrimination and, in any case, to harmful ‘forcing’. Persons whose tempo of work is slower, and who are not necessarily the least gifted, after striving desperately to keep up, lose ground and finally give up. The teaching system, instead of endeavouring to open the gates of culture to the greatest possible number of school children, favours excessively the most gifted and condemns the rest to content themselves with a second-rate education.

It is for this reason that teachers in ever-increasing numbers are protesting against the misdeeds of the examination system and are speaking of ‘examinitis’ as a sort of disease of a pedagogical character. Thus, too, the Commission for the Study of Educational Reform under the chairmanship of M. Sarrailh, Rector of the Academy of Paris, which was recently appointed by the Minister of National Education, proposed, among its findings, to abolish all examinations up to the *baccalauréat* inclusive. It must be observed that this proposal aroused so much criticism that it was not included in the ministerial project. It is for this reason, also, that we propose in this article, after a rapid review of our examination system as it still operates at the present time, to proceed to the critical study of one of these examinations, the examination for admission to the 6th class, which must be taken by all children who wish to pursue their studies beyond the elementary primary course.

#### STRUCTURE AND ORGANIZATION OF EXAMINATIONS IN FRANCE

We shall not deal with the *Certificate of Primary Studies* which is awarded, at the end of their studies, to those children who are not going beyond the simple primary course, whether or not it is followed by a course of professional training. This certificate is normally taken at the age of 14. The examination comprises a dictation followed by questions, arithmetic, an essay, a written paper on history and geography, two questions on applied science, a simple test in drawing or manual work, the reading of a short text, a mental arithmetic test and a singing or recitation test. The examiners form a Board under the chairmanship of the Inspector of Primary Education.

For country children who intend to engage in agricultural activities, the elementary course may be followed by courses in agriculture and household management at the conclusion of which the pupils may qualify for special certificates.

Young people who intend to engage in commerce or industry may enter apprenticeship centres and take courses which may qualify them for certificates of proficiency.

For children who intend to undertake a longer course of study, the

entrance examination to the 6th class, the first of the secondary classes, comprises a dictation followed by questions; a précis in ten lines or so of a text of narrative one or two pages long which is read out twice to the candidates, supplemented by one of two questions designed to reveal the child's sensitivity, imagination and judgement; an arithmetic test consisting of two problems, the function of the first of which is to indicate to what extent the child has mastered the techniques of arithmetic, while that of the second is to reveal the child's reasoning capacity. The candidates also receive marks for writing and presentation in respect of one of the above papers, to be selected by the Board at the conclusion of the examination. The criticisms to which this examination naturally gives rise will be considered later.

Children who have been admitted to the 6th class continue their studies in secondary establishments. After a further four years, that is, on the average, about the age of 15, they may take the examination for the *Certificate of the First Cycle of Secondary Studies*, comprising a written paper with dictation followed by questions, and papers in mathematics, a living language (without dictionary) and any one of the following subjects, according to the course which the candidate has followed: Latin, sciences of observation, physics, applied sciences, domestic sciences and agricultural sciences. A second series of tests, oral and practical, includes: exposition of a French text, an oral examination in history or geography based on the curriculum of the previous class, and a test in any one of the following: sciences of observation, physics, applied sciences, Greek, a living language, or manual work. This Certificate is not compulsory for pupils who are later proceeding to the *baccalauréat*.

Pupils who, on completing the 5th class, have opted for technical training, have also to take an examination for admission to a technical college; at the end of their studies there they take a passing-out examination for the Industrial or Commerical Certificate.

We shall not deal with the *baccalauréat*, which is taken in two sections at the end of the 6th and 7th years respectively of the secondary course and which comprises separate written and oral tests for each branch. We shall merely draw attention to its general cultural character and to the fact that it covers all the subjects studied, varying only in respect of certain special subjects—sciences, dead languages, one or two modern languages. In spite of the multiplicity of sections, this general character is its salient feature, if it is compared with the Anglo-Saxon systems.

It should be added that a further system of selection operates throughout the school course in the shape of the end-of-year examinations for passing from one class to the next. It is calculated that from 30 to 40 per cent of the secondary school population is thereby gradually eliminated.

CRITICAL STUDY OF THE EXAMINATION FOR  
ADMISSION TO THE 6TH CLASS

We stated above the problems raised by the examination system as it operates at the present time, as a means of checking and selection. We shall now give the results of an investigation which we have carried out under the auspices of the Pedagogical Research Bureau of the *Centre National de Documentation Pédagogique*, on the subject of the entrance examination to the 6th class.

The terms, if not the solution, of the problem are relatively simple: What is the value of the entrance examination to the 6th class as a means of selecting those children who are fit to enter the various secondary educational establishments? Does it make it possible to forecast the child's future development and to direct him in his further studies? Is its present organization well adapted to the task assigned to it? Are the tests employed exactly suitable to this task of discrimination? How if need be can this instrument of selection be improved?

All these questions are of as great concern to the parents as to the teachers. We put them to a certain number of primary and secondary school teachers, headmasters and inspectors.

Opinions vary a great deal on all these points. There is general agreement that the entrance examination to the 6th class is fair, if all that it is expected to do is to eliminate the pupils who are really too dull or whose elementary groundwork is too shaky to enable them usefully to pursue a further course of study. This is the case when nearly all the candidates can be taken together and only those for whom the 6th class course would really be a waste of time are eliminated.

However, once competition becomes keen, the element of chance begins to operate: the chance inherent in the limited question (Why these 7 or 8 spelling difficulties, rather than some other difficulty? Why this type of problem rather than that? etc.), the chance of the inspiration of the moment, of the child's emotional state, of his previous preparation. And so one can cite cases of weak and undeserving candidates who passed the examination; but this is not the most serious point: there are also cases of pupils who failed the entrance examination to the 5th class and who, after a little coaching in Latin during the vacation, have been admitted to the 5th, where they have held their own very well.

There is a greater degree of disagreement as to the value of the examination as a means of forecasting the child's future development. While some find a definite correspondence between the results obtained at the entrance examination and those obtained in the subsequent course of studies, resulting in the elimination of doubtful elements, others, after statistical studies covering a number of years, find that the entrance examination results and the average results for the following years give a correlation figure of 0.3 to 0.4.

The deserving candidate, it is said, tends to do himself justice in the examination as a whole, making up, on an easier question, for his failure to cope with one which was too difficult. In fact, however, when one observes that on one occasion, in the arithmetic examination, only 2 out of 290 candidates, or 1 in 180, worked out the problem, one may well wonder if the methods employed to remedy such widespread failure (general raising of marks or almost complete elimination of one question) are fair and do not grossly distort the results. The list of questions, from the examination for admission to the 6th class up to the *baccalauréat*, which, as the returns in the recent National Education competition make clear, are unfair or are considered as such by the entire teaching body, includes a number which leave one gasping.

Finally, the discussions which have taken place on the boards of examiners themselves show that it is necessary to state more precisely what is expected from candidates at this level. Some teachers deplore the easiness of the grammar questions; others feel that the requirements in the matter of grammar are too severe for the normal capacity of a child of this age; some consider that spelling is of no real significance; others maintain that it is as indicative of the child's capacity as the essay or the arithmetic test. Some lay great stress on the *précis*, while others doubt its value.

The diversity of viewpoints and the empiricism which underlies the opinions expressed render experiment necessary. A number are now in progress; their purpose is to provide an objective basis for the views expressed. Only a long-term system of checks will make it possible to solve the problem.

It is not my purpose here to consider these experiments, but to propose a number of concrete measures designed to improve the existing examination. Since the entrance examination to the 6th class exists, and since it is inevitable so long as it is impossible to admit everyone to the 6th class, surely the best that can be done is to see how it can be made to play its part more adequately.

This is the view of some 500 teachers, which we shall restrict ourselves to expressing here.

### A FEW CONCRETE PROPOSALS

#### 1. *Material conditions*

(i) The ideal period for the examination would be the last fortnight of the school year. This would facilitate preparation and would not upset the end of the year.

(ii) The succession of tests accumulated in a half-day imposes a severe strain upon a large number of children. The inconvenience occasioned by the postponement of one of the tests to the afternoon would be more than compensated by the advantage of less tiring work which would be broken during the morning by an adequate rest period.



The subject postponed to the afternoon should be arithmetic, for the reason that the examination in this subject, with its more readily visible results, might tend to discourage unsuccessful candidates and so to influence their results in the other subjects.

(iii) The *précis* and the arithmetic examination should last at least an hour, in order to enable the children to think and to organize their work. There is a danger that the slowness of certain school-children at this age—it is no indication of lack of intelligence—may occasion misleading results.

(iv) The time taken in reading out the questions, added to that of the examination proper, intensifies to an excessive degree the effort required. Whenever possible, printed or cyclostyled question-papers should be distributed.

(v) In particular, it would be better if the text submitted for *précis*, instead of being read out, were distributed to the candidates in printed form for them to read to themselves for a prescribed number of minutes. This visual reading, which is more difficult and more conclusive than audition, would offer less scope for pure memory work and would give more significant results. An experiment conducted by Inspector Tournis with three homogeneous groups at a complementary course, in the course of which in some cases questions were read out while in others they were circulated in printed form, has proved the superiority of the latter method.

## 2. *The examination papers*

(i) Dictation and questions. We shall not discuss the problem whether the traditional dictation of a continuous text, in which the difficulties occur in more or less haphazard fashion, could not be replaced with advantage by the dictation of separate sentences with carefully graduated difficulties, while the questions would have to do with a continuous text distributed to the candidates in printed form. It is obvious that the choice of a text must be inspired by the studies which have made it possible to classify the various types of spelling difficulties (Buyse, Dottrens, Hotyat, etc.).

The diction employed in the reading of the text should also be fixed in advance, in order to ensure that the same liaisons or repetitions of consonants, the same pauses and the same punctuation shall everywhere be observed or dictated, as the case may be.

There is a general demand that an equal degree of importance be attached to the comprehension of words or ideas and to grammar; likewise for the inclusion of a question on the conjugation of verbs, with which children of this age are often insufficiently familiar. It is desired that a question appealing to the intelligence or to the ordinary experience of the 11-year-old child should enable him to express his ideas or reveal his capacity for observation, while at the same time making it possible for the examiners to observe the type of language which he employs spontaneously.

(ii) The précis may be the best or the worst of things. The choice of the text is therefore very important. It should deal with some topic which is close to the child's experience, it should be of a very concrete character and, without constituting a puzzle by its vocabulary or the subject with which it deals, it should require of him a real effort of reflexion and attention.

(iii) Arithmetic. The group of mathematics teachers shares the general opinion: the effort of attention demanded throughout the morning is too severe and works to the detriment of the final examination, that in arithmetic. It also would like to see this paper carried over to the afternoon and suggests that the questions be distributed in printed or cyclostyled form.

The purpose of this paper being to establish to what extent the candidate has mastered the techniques of arithmetic and understands the meaning of the operations, as well as to bring to light his powers of attention and reflexion, they consider that those three points should be kept separate. They propose unanimously to replace the first problem by a series of 3 or 4 independent operations, to remove the operation element from the second problem by means of simple numerical data and to utilize it merely to bring out the pupil's understanding of the meaning of the operations and his powers of common sense and reflexion. A period of 40 minutes could be allotted to the problem, thanks to the saving of time made by distributing the question in printed form on a second sheet of paper instead of dictating it. 20 minutes would be allotted to the operation.

### 3. *Correction of papers*

This requires, in the interests of fairness, that a table of mistakes or of results accompany the papers, fixing, for example, the terminology applicable to the grammatical functions, the weight to be attached to spelling mistakes or the evaluation of the types of answers which may be expected. Double correction is also desirable at this level.

### 4. *Preparation and testing of examination papers*

The papers set should be tried out in advance to avoid certain surprises. This need for experiment is not incompatible with the necessary secrecy, for, if it is undertaken in good time, if certain establishments or certain teachers are given the task of preparing examination questions throughout the year several years in advance, a body of sound, useful material will soon be accumulated.

We shall say nothing of such important problems as the following: what can and should be expected of an 11-year-old child at the entrance to the 6th class? What body of knowledge, what work habits, what automatic reactions should be developed in him? What effect does his work in preparation for the examination have upon his studies past and future? What degree of importance should in actual

fact be attributed to reports made upon the pupil by his past teachers? How much consideration should be given to what we shall term, very generally, the character of the candidate, which, as we have seen above, distorts, in the proportion of 20 to 30 per cent of cases, the results which might have been expected in the light of tests of the candidate's ability and knowledge at the present stage?

We shall conclude with the observation that it is somewhat strange to have recourse to such summary methods of testing the child when we have his whole youth on which to judge him. Certainly, the results of school work, as of all work, must be checked. But we are tending ever more to replace this hasty system of check and selection by a continuous observation of the schoolchild and a progressive orientation extending over his whole course of study.<sup>1</sup>

ROGER GAL

<sup>1</sup> R. Gal, *L'Orientation Scolaire* (Presses Universitaires de France, 2nd ed., 1955).

## WHAT MAKES A GOOD EXAMINATION PAPER?

\*\*\*\*\*  
\* That which fosters \*  
\* Good Learning and \*  
\* Good Teaching \*  
\*\*\*\*\*

MOST of the discussions on examinations have revolved round the questions of their validity and reliability. Are they fair? Do they really test what they set out to test? Do candidates who deserve to pass actually pass? Arising out of these questions the relative merits and defects of the essay-type examination and the objective or New-Type examination have been discussed, usually, though not entirely, to the advantage of the new-type form of examination. It is claimed that this type of test is more objective than the essay type, since there is only one possible correct answer, though Professor P. E. Vernon has pointed out that there still remain possibilities of subjectivity in the setting of an objective-type examination. The fact that a far larger sampling of the students' knowledge can be tested in the New-Type test which requires the minimum amount of writing from the candidate is hardly open to doubt.

The question, however, which is too little considered is what kind of testing and learning is fostered by the different kinds of examination questions. It would be unrealistic to pretend that anything about an examination is more important than the result and the opportunities that are opened up to the boy or girl who passes.\* This is true whether the examination is the promotion examination for Std I to Std II or the public examination at the end of the course. But from the point of view of the teacher and of good education an equally important consideration is the kind of learning and teaching fostered by the different types of examinations. From a mistaken passion for so-called fairness and equality it is possible to develop the type of examination which encourages cramming, the learning by heart of model answers, and the stultifying of originality and independent thought. It is not without significance that Indian students have coined the verb to 'by-heart' as a synonym for 'to learn'. Questions moreover can be set because they are easy to mark rather than because they are a good test of the students' grasp of the subject. This is well illustrated by a certain type of grammar question on a language paper, for example, questions on naming parts of speech.<sup>1</sup> Such questions are very easy to mark but they are no test of the pupil's ability to use language correctly.

Boards of studies often issue instructions to their examiners to set papers strictly on the pattern of the model supplied. While there is every reason to expect an examiner to set a paper within the syllabus, there are many reasons why he should not be expected to adhere too closely to a model. When a model is followed in the setting of a paper it is comparatively easy for teachers and writers of notes to provide

<sup>1</sup> M. West, 'How much English Grammar?' (*English Language Teaching*, Autumn 1952).

possible model answers, for the existence of the model limits the number of possible questions. Teaching therefore very easily drifts into preparing the pupils to answer questions instead of teaching them to understand the subject-matter. This is sometimes done openly but sometimes teachers drift into it without quite realizing what is happening. We have therefore always to come back to the question, What kind of teaching and learning do these questions encourage?

This question is closely related to another, namely, What is the aim of each of the questions in the paper? It is not always sufficiently realized that it is as important for a question to have an aim as it is for a lesson to have one. Legitimate aims for questions are not always concerned with evaluating knowledge. They should be equally concerned with testing the pupil's ability to apply the knowledge he has, his ability to interpret tables and diagrams, to make deductions, to express himself clearly, to marshal and arrange facts, to present an argument, to detect false thinking and so on. The good examiner knows why he is setting each question and what abilities he expects to test through it.

In a good examination paper there will be questions with these different aims. The kinds of abilities tested and the proportion of questions allocated to the different aims will vary with the subject and the age of the examiners. A few illustrations will make this clear.

Before the last World War it was the practice in Burma to set the arithmetic paper, in the School Leaving Certificate Examination, in two parts. Part A was concerned with testing the pupil's knowledge of the mechanics of arithmetic—the four rules, decimals and fractions. Part B was concerned with mathematical reasoning, or problems. Pupils had to pass in both parts. The result of this was that in teaching, accuracy was never sacrificed to method. This division in the question paper brought home to pupils the need to learn their tables and practise number combinations. They knew that it was as important to get the right answers as to use the right method. A pupil who has worked hard at the mechanics of arithmetic for the sake of Part A is not going to make mistakes in calculation in Part B. This division, however, enabled the examiner to choose his questions so that all the difficult combinations were tested. A good paper was a diagnostic test. When this division is not made pupils sometimes gain a reputation for being bad at mathematical reasoning when their real weakness is a lack of certainty in some of the fundamental processes—what to do with a 0 in subtraction or the right answer to  $7 \times 8$ . A good arithmetic paper will therefore give sufficient short questions to test the students' knowledge of all the number combinations in addition and subtraction, the difficulties of borrowing in subtraction, the tables in multiplication and division, the manipulating of decimals and fractions. It will also contain one or two long columns to be added to test the pupils' ability to carry figures in their heads. It will also test knowledge of weights and measures, and other tables. With the

exception of the long column additions the examples can be simple and short. How many lb. is 22 oz. is as good a test of whether the pupil knows that 16 oz. make a pound as a question involving large numbers. If sums are kept simple, more have to be given and a larger area of knowledge tested. Good questions in Part B, the problem section, will be characterized by their realism. They should deal with the kind of problems that people in real life have to solve.

This division of the paper into two parts can be followed in other subjects, Part A dealing with factual knowledge and Part B with the application of these facts. For example, in a science paper, Part A would contain a straightforward question asking what foods contain the different vitamins, perhaps in the form of a matching test or simple recall test. In Part B there might be a question in which students have to point out the defects in certain diets given, and suggest remedies. Or they might be given examples of the application of scientific principles to everyday life and asked to say what principles they illustrate. For example, a man put a large brass pot from his bathroom into the compound where it stood for several hours in the sun. When he wanted to put it back he could not get it through the door, although he had taken it out through the same door earlier. Why? It is important that the questions in Part B should call for really independent thought and should not be based upon illustrations given in the textbooks.

Similarly, questions in geography in Part A would deal with facts of natural regions, locations of places, geographical terms, facts of climate, physical features, etc. Questions in Part B would deal with interpretations of rainfall charts, deductions about crops and vegetation in certain places.

In testing English a useful distinction can be made between comprehension, and ability to use the language. It is extremely valuable to keep the testing of these two aspects separate. When they are not separated the examiner is always faced with the problem of how much credit should be given in any answer to the content and how much to the language. Again, when the teacher knows that pupils will be tested on specific points of usage these will be taught and practised, for example the use of the present perfect tense, or the 'if' clauses or the use of 'might' and 'may have'. The testing of correct English usage at the present time is haphazard, so the teaching on such points as those mentioned tends to be haphazard also. This affords a very good example of the way in which examinations influence teaching.

When the effect on study habits and methods of learning of the different types of examinations is considered, the value of dividing the papers in some such way as the above can be seen. It is clear that papers in science, geography and history in Part A, the survey of factual knowledge, may be more easily tested by the use of New-Type tests, as more ground can be covered in a shorter period of time. This type of test has, however, been criticized lately because it tends to encourage piecemeal, scrappy learning with too much concentration

on detail and not enough attention to the overall picture and the grasp of broad principles. It is for this reason that Part B, the application of knowledge and the opportunity for independent thought, is vitally important. This part may, or may not, be partly on new-type lines. What is important is that learned 'by heart' answers should definitely be discouraged. Naturally, the amount of application of principles, the kind of independent thought that can be expected, will vary both with the subject and the age of the examiner. Other people, as well as Sir Richard Livingstone, have considered that history can be appreciated only by people of some maturity and experience. If this is so, then it will be more difficult to set young people questions on history which require independent thought. If they cannot be expected, on account of their age, to have developed the ability to do anything else than reproduce then obviously nothing else can be tested. What then can be the aims of questions in Part B of a history paper (or, if pupils study their history as part of social studies, those questions which deal with history)? Let us ask ourselves just what we want pupils to learn from a study of history. We want them to get some idea of chronology—the relation between cause and event. Questions in which students are asked to arrange events in their right order *with reasons*, test this. Also questions in which they are asked to compare two or more events. For example a comparison of the causes and results of the American Revolution and India's fight for independence. An example of the worst kind of question (as has been pointed out in a previous article) is one in which the only question on Napoleon Bonaparte and his activities was, 'Name the island to which Napoleon was exiled'. Such a question, with its emphasis on unimportant detail, not only encourages the pupils in the wrong kind of learning but also builds up wrong ideas of what is important and what is not. Part A of the paper which tests factual knowledge (or usage, in the case of the language paper) should bring home to the pupil the need for accuracy, something which needs badly to be emphasized in a set-up where the pass mark is low with all the consequent demoralizing effects. Part B should provide for testing in reasoning and independent thought. If these distinctions are made and the examiner will ask himself about every question in Part B 'Why am I asking this question? What do I want to test?', papers which have a stimulating instead of a depressing effect on real learning may be expected.

JEAN FORRESTER

#### REFERENCES

- MAX D. ENGELHART, 'Examinations' (*Encyclopaedia of Educational Research*, 1950).  
 P. E. VERNON, *The Measurement of Abilities* (University of London Press, 1940).  
 JEAN FORRESTER, 'The Psychology of the 35 per cent Pass Mark', *TEACHING*, March 1950.

# REFORMS IN EXAMINATIONS

\*\*\*\*\*  
\*  
\* Some suggestions \*  
\* worth considering \*  
\*  
\*\*\*\*\*

## NEED FOR SOME INSTRUMENT OF MEASUREMENT OF ABILITIES AND ATTAINMENTS

EXAMINATIONS are one of those things which we criticize bitterly for their evil effects, but which at the same time we cannot do without. For hundreds of years people have used one or other method by which the evaluation of the abilities and attainments of candidates has been made. At times we have fumbled in our methods and criticized bitterly our instruments and methods of measurement and tried to do away with them, but we have never been able to do so. Let us see why we feel their necessity and why we criticize them.

### INDIVIDUAL DIFFERENCES

It is an established fact that no two persons are alike. Some are short and others are tall, some are stout and others are thin, some are clever and others are dull, and there are all kinds of variations between extremes. Such differences have been recognized from time immemorial.

The teacher teaches all his pupils alike, but the result is not the same. Some pick up the knowledge imparted quickly and become efficient; others are very slow to pick up and lag very far behind.

There are also stories in the *Panchatantra* to illustrate the difference between a literate fool and an illiterate clever person. There are no two opinions now about the existence of these native differences. Further, individuals put forth greater or less efforts to learn and to develop their abilities in various ways. The resultant of these native abilities and conscious individual efforts to acquire knowledge and information is the production of individuals in society of various types of ability at various levels. Such being the individual differences between person and person, teachers, educationists and employers have ever felt the need of measuring these different abilities and attainments.

### DIFFICULTIES IN MEASUREMENT

Difficulties, however, arise when we come actually to measure these abilities and attainments. The modern method of assessing them is to assign marks. When psychological methods of measurement began to be more scientific about the beginning of this century, it was soon found that this marking was most subjective. The marks assigned by different examiners to the same script or answer-paper differed widely. Even the same answer-paper if examined by the same person on different occasions secured marks that were found to be widely different. This is so even when the examiners make honest efforts to assess the answer-books as accurately as possible. These differences are further accentuated where the examiners or assessors have interests



in a particular batch of candidates, such as those belonging to their own institution or their family or community. Such methods of examination are called essay-type examinations and are still largely in vogue in almost all public examinations, although it has been proved experimentally that they are highly subjective and cannot be relied upon for any kind of scientific investigation.

#### THE OBJECTIVE TYPE OF TESTS

About the beginning of the present century, psychologists developed a new method of examining or testing. These were the New-Type tests consisting of the one-word answer type or the multiple-choice type where some five answers are suggested, only one of which is correct, and the examinee is to underline the correct one. In this way the marking becomes objective and exact. Whoever may examine the scripts the marks assigned are the same. Such scoring now becomes entirely reliable and can be used for scientific purposes. Besides the complete objectivity of such an examination, the other good point about it is that you can assess the knowledge acquired by the examinees over vast fields in a very short time and without much labour on the part of the examiners. Whereas the essay-type examinations require the candidates to answer the questions in about three hours at each sitting, the objective type tests are usually of half an hour or three-quarters of an hour duration at the most.

#### THE DRAWBACKS OF THE OBJECTIVE-TYPE TESTS

The time saved by the examiners in assessing the objective type scripts is lost by them in drawing up the question paper. Whereas the old essay-type question paper contains usually five to eight questions printed on a quarter-sheet to be answered in three hours, the new objective-type test paper usually contains about 75 to 100 questions printed on four sides of full-size foolscap paper to be answered in about thirty to forty-five minutes. This in itself is a great drawback if we are to utilize such questions in our public examinations. The quantity of paper required and the cost of printing is enormous where thousands of candidates are to be examined. Besides this drawback there are other serious drawbacks such as the temptation felt by the candidates to guess the answer or to copy from the neighbour, which becomes a comparatively easy affair as the answer is only one word or the underlining or ticking of one of the alternative answers given.

#### GENERAL CRITICISMS AGAINST EXAMINATIONS

The most common criticism levelled against all examinations is that instead of fostering and measuring the growth that has taken place in candidates—which should be the proper aim of all examinations—their effect is to stunt the growth.<sup>1</sup> Children and their parents take these

<sup>1</sup> For a fuller discussion see pp. 145-7 of the *Report of the Secondary Education Commission, 1952-3*, published by the Government of India, Ministry of Education.

examinations as the sole criterion for their ambitions in life. Children are goaded to put forth tremendous efforts, even at the cost of their health, towards the end of the year when the annual examinations are approaching. We have to recognize clearly the two purposes our examinations are meant to serve, the one to measure the progress made by pupils in their attainments from year to year so that they can be found fit for promotion from standard to standard, and the other to serve as a hall-mark, which can be relied upon by employers or universities as a comparative mark of the level of attainments reached by the pupils. If we keep these two purposes clearly in view we shall be able to do away with many of the evils associated with our examinations.

#### PREVIOUS DISCUSSIONS AND EXPERIMENTS ON THE SUBJECT

This recognition of the drawbacks in our methods of examination has impelled educationists and teachers to devise various kinds of methods to see how they work. In the State of Bombay we have been trying such variations in some of our public examinations. For the last twenty years we have been trying the one-word or multiple-choice type of objective tests at our middle school and high school scholarship examinations and also sometimes at our Secondary School Leaving Certificate examinations. The results, however, have not been very happy on account of the drawbacks inherent in them as stated above. There may have been some improvement since the vagaries of the subjective marking may have been checked to some extent. But in some cases even thoroughly ill-prepared candidates have managed to obtain marks far above what they really deserve. Now this is not desirable in a public competitive examination.

A new method, a *via media*, was tried at some higher university examinations by the author with the help of his colleague, Miss Sulabha Panandikar, Principal, Secondary Training College, Bombay. This new method consisted in asking questions neither of the long essay-type nor of the one-word-answer type but of an intermediate variety. Instead of setting five questions to be answered in three hours and carrying 100 marks, twenty questions were set to be answered in the same time, each question carrying five marks. The questions were short and precise and could be answered in a short paragraph of about twenty lines. The result was that much greater objectivity was obtained and there was no scope for the candidates to write round and round the same idea as in a long essay-type question and thus to elude the wits of the examiner. The results are set forth in a paper published elsewhere.<sup>1</sup> Further experiments are being carried out in schools on the same lines and the results will be published in due course.

<sup>1</sup> See 'The Improvement of Examinations' by V. V. Kamat, *Journal of Education and Psychology*, Baroda, January 1954.

REPORTS OF THE SECONDARY EDUCATION COMMISSION AND  
THE INTERNATIONAL TEAM OF EXPERTS

The need for improvement in the system of examinations has been recognized by the Secondary Education Commission, who have published a whole chapter in their Report entitled 'A New Approach to Examination and Evaluation'. They discuss at some length internal and external examinations and the keeping of a school record over the whole period of a child's career in school. They even recommend a cumbrous procedure of entering the school record in the final School Leaving Certificate. The procedure they suggest could probably be simplified by splitting the final certificate into two parts, Part A based on the Cumulative Record Card to be given by the Head of the school, and Part B based on the final external examination, to be given by the Secondary School Certificate Board. Instead of making the certificate pass to and fro between the S.S.C. Board and the school for signatures, the principal of the school can issue Part A of the Certificate direct and send a copy to the S.S.C. Board. The Commission has rightly given importance to the school record kept over a number of years.

This Report was further studied by an International Team of Experts appointed by the Ministry of Education, New Delhi. Its deliberations are given in *Teachers and Curricula in Secondary Schools, Report of a Study by an International Team*, published by the Ford Foundation, New Delhi, in 1954. They consider the question of examinations particularly from the point of view of lessening the burden on pupils, and recommend minimizing the number of external examinations as much as possible. For this purpose they recommend five Terminal Points in the educational career of pupils—at 14+, 17+, 18+, 21+ and 23 + — and only at the end of each of these periods should there be external examinations (p. 95 of the above Report).

## THE MAHABLESHWAR HEADMASTERS' SEMINAR

Lastly, the whole question was more thoroughly thrashed out in the Headmasters' Seminar held at Mahableshwar in October 1954, sponsored by the Ministry of Education, New Delhi, and financed by the Ford Foundation, New Delhi. The Seminar after careful discussion of the points raised in the reports of the Secondary Education Commission and the International Team of Experts arrived at certain conclusions, which headmasters should try to implement in their respective schools.

The following were some of the conclusions arrived at. The two great evils particularly considered were (i) the burden of external examinations on pupils, and (ii) the great subjectivity of the essay-type examinations. The two objects examinations were meant to serve, namely, to measure the periodical growth of children and to serve as hall-marks for the benefit of the public and the employers, were also considered. In general, short objective-type tests could be used

periodically to measure progress, and external examinations by means of more elaborate tests, made as objective as possible, could be used for the purpose of giving the hall-mark at a few terminal points.

*Recommendations of the Mahableshwar Seminar in brief:*

(1) The first terminal point should be at 13+, i.e. at the end of Std VII. The school records and an internal examination should be the basis of judgement of the pupil's having completed this terminal point.

(2) The second terminal point should be at 15+, i.e. at the end of Std IX. No external examination is necessary even at this stage.

(3) The third terminal point should be at 17+, i.e. at the end of Std XI. There should be an external examination conducted by the S.S.C. Board at this stage. The S.S.C. Board should give certificates to all candidates who pass in a minimum of two subjects, one of which should be the regional language. Along with the Secondary School Certificate there should be a School Leaving Certificate issued by the Head of the school based on the strength of the Cumulative Record Card.

Personally I am of opinion that there should be only two terminal points up to the age of 17+, namely at 15+, i.e. at the end of Std IX, and at 17+, i.e. at the end of Std XI. The terminal point recommended by the Seminar at the end of Std VII, i.e. at 13+, would come too early. At that age children are not sufficiently mature and the terminal point seems to be unnecessary. There are complaints also that the education which pupils get up to the end of Std VII is inadequate, particularly when these candidates have to go on to train as teachers. There should be external public examinations at both these points, i.e. at 15+ and 17+. People cry loudly against the external examinations, but when these are abolished and the power of certifying is given to the Heads of the Institutions the experience so far has been that this gives rise to a greater evil as the Heads of some of the Institutions try to bolster up their own results, thus creating a very awkward and undesirable situation. Hence it is necessary that there should be external examinations at a minimum number of important terminal points. At the S.S.C. Examination taken at the end of Std XI it is recommended that certificates should be issued to candidates who pass in a minimum of two subjects, a regional language and a selected vocational subject. This will conserve the energies of a large number of backward children and lead to less frustration. For a large number of jobs, proficiency in a number of school subjects is not required and employers would be willing to employ pupils who show sufficient attainments in the abilities they want for those particular jobs. Besides these two public examinations there will have to be some more public competitive examinations, such as the middle school and the high school Scholarship examinations. But these are meant only for children who are competent to appear for this examination.

(4) As regards types of questions for internal examinations it is recommended that, in general, the work done in each quarter year should be tested in that quarter by the short one-word-answer type of questions. At half-yearly and annual examinations the midway or short answer type of questions may be asked. The oral examination may sometimes be used to supplement the written test.

V. V. KAMAT

# HOW A TEST CAN GUIDE

\*\*\*\*\*  
\* An Experiment \*  
\*\*\*\*\*

AN attempt is made here to illustrate, how a test, if suitably constructed and used, can guide the teacher in his task of testing a child's ability.

A test on percentages was given to the pupils in Forms III, IV and V in a local high school by the B.Ed. students of the Annamalai University as part of their testing programme. The test consisted of 10 parts, each consisting of 5 items, making 50 items in all. The table on p. 27 shows some of the test items with the number of correct responses in the various Forms against each item.

A perusal of the table is revealing. It is surprising to note that there should be so many incorrect responses for items numbered 1, 2 and 3 in the table, as they test basic comprehension of the percentage concept. The low percentage of correct responses to 5, 14 and 19 indicates that pupils have had little or no experience with percentages less than one, though situations in which they occur are not wanting in daily life. A similar difficulty is seen to be experienced by pupils in dealing with percentages greater than 100 as indicated by responses to item numbers 7, 10, 15 and 18. Again, only 27 per cent of those tested have been able to give correct responses to 17 (taken from Ballard) which shows that the meaning of 100 per cent has not been grasped.

Surprised by the results of the test, the writer put the following question to several high school pupils, college students, and university graduates: When I was young, sugar cost 5 annas a viss. Now it costs Re. 1-4. By what per cent has the cost of sugar gone up? She found that very few were able to answer the question. Some of those questioned remarked that the data must be wrong as the answer came to more than 100. It was pointed out that only actual facts formed the data for the problem. Another question: The population of a town increases annually by eight for every thousand. By what per cent does the population increase each year? This elicited an equally poor response.

A study of mathematics textbooks revealed that no problems or illustrations involving percentages greater than 100 or less than one are given in most of the textbooks.

Implications which follow for teachers and textbook writers are obvious. Pupils should be enabled to grasp the meaning of 100 per cent, 200 per cent, etc. They should be familiar with life situations in which percentages less than one and greater than a hundred are involved. A study of the table will show other respects in which there must be some reorientation of teaching.

The foregoing will show that tests, if used constructively, can guide both the teacher and the taught in the teaching-learning process and help in improving instructional materials and techniques.

RAJA LAKSHMI RAMAKRISHNAN

TEST ITEM	Total No. of Responses	Form III		Form IV		Form V		Total
		Correct Responses	Percentage	Correct Responses	Percentage	Correct Responses	Percentage	
1. If the annual interest for 200 rupees is 7 rupees, what is the percentage of interest?	...	92	59	102	77	120	92	314
2. A man saves 10% of his salary. If his salary is Rs 240, what amount does he save each month?	...	120	70	112	85	112	86	334
3. Express 80% as a fraction	...	131	83	118	90	119	92	368
4. Express 150% as a fraction	...	121	77	108	82	98	75	327
5. Express $\frac{1}{4}$ % as a fraction	...	43	27	59	45	72	55	174
6. Express $\frac{1}{4}$ as a percentage	...	118	75	117	89	115	89	350
7. Express $3\frac{1}{4}$ as a percentage	...	81	51	85	64	58	45	224
8. Express 0.25 as a percentage	...	92	58	88	67	64	49	244
9. Express 0.05 as a percentage	...	81	51	78	59	57	44	216
10. Express 3.75 as a percentage	...	48	31	56	42	11	8	115
11. What is $33\frac{1}{3}$ % of 795?	...	80	51	75	57	117	90	272
12. What per cent of 600 is 75?	...	49	31	64	49	73	56	186
13. 25% of a number is 40. What is the number?	...	39	25	71	54	82	63	192
14. $1\frac{1}{2}$ % of a number is 27. What is the number?	...	21	13	29	22	49	38	99
15. 125% of a number is 50. What is the number?	...	22	14	56	42	61	47	139
16. 1% of 100	...	57	36	77	58	66	51	200
17. 100% of 1	...	44	28	36	27	33	25	113
18. 200% of 100	...	38	24	35	26	34	26	107
19. 0.5% of 200...	...	13	8	29	22	16	12	58
20. 5% of A's salary is equal to 15% of B's salary. If A's salary is Rs 300 what is B's salary?	...	17	11	18	14	48	37	83
								17

The writer's thanks are due to Professor R. Ramanujachariar, Dean, Faculty of Education, Annamalai University for the interest he has shown in this study. Thanks are also due to the B.Ed. students (1954-5) who administered and scored the test, and to Mr H. Balakrishnan in particular, for his help in compiling the data. The writer also thanks the authorities of the Ramaswami Chettiar Town High School, Chidambaram, for their kind and willing cooperation in carrying out the testing programme.

# THE USE OF TEXTBOOKS IN EXAMINATIONS

\*\*\*\*\*  
\*  
\* How Examinations can \*  
\* be made a Mobilizing \*  
\* Force in Education \*  
\*  
\*\*\*\*\*

IN his stimulating and thought-provoking defence of the examination system in *The Case for Examinations*, Mr J. L. Brereton, Secretary of the Oversea Local Cambridge Examination Syndicate, eloquently describes examinations as 'a mobilizing force in education, and a means of testing its results'. Mr Brereton is obviously describing the ideal examination; for most examinations, internal and external, fulfil neither of the high claims for their survival put forward by their persuasive apologist. They are indeed, by and large, not a mobilizing force but a dead weight, dominating the curriculum, stifling progressive methods of teaching, and casting their baneful shadow and deadening influence over the whole educational system to such an extent that one is tempted to the despairing conclusion that, as long as the present system of examination continues unchanged, one might as well abandon all thought of real progress in education. And far from 'testing the results of education', most examinations, as we know them, test only a small fraction of those results, for most of the really worth while primary products and by-products of education remain untested and untestable by examinations in their present form.

Examinations as they are at present conducted by schools and examining bodies in India, apart from the considerable difficulties involved in marking them satisfactorily, suffer from two major defects. Firstly they tend to dictate the curriculum and method of teaching in schools. Teachers knowing that, in practice if not in theory, they will be judged by the school authorities, by parents and by the community at large primarily by their examination results, tend to concentrate only on those aspects of their syllabuses which are examinable or likely to be examined, and they tend to practise teaching techniques which, while they pay rich dividends in the shape of good examination results, are of extremely dubious educational and psychological validity, to say the least.

Secondly, examinations tend to test the memory, rather than the intelligence, or the power of judgement, or the faculty of taste, and hence teachers tend to become 'information-mongers' aiming at the efficient imparting of knowledge rather than the inculcation of wisdom, which Professor Whitehead defines 'as the art of the application of knowledge'; they concentrate on teaching 'examinable facts', most of which are promptly forgotten as soon as the examination is over, rather than on the development of those enduring interests, habits, attitudes and values that should be the first-fruits of the study of any particular subject but which they know cannot or will not be tested in the usual examinations.

And yet, despite these serious defects, examinations are, and will



remain till a suitable substitute can be devised (if ever), a necessary part of the education system. Hence it is the duty of educators to make a virtue out of a necessity and to fashion such examinations into as effective an instrument as possible for accomplishing what they expect from them. The remedy, in short, for the defects of examinations is not to end them but to mend them. How can this best be done? Many remedies have been suggested to cure the ills most examinations are heir to—intelligence tests, objective attainment tests, standardized marking, searching oral tests on the continental pattern to replace, or in addition to, written examinations, the setting of the question paper that will encourage a child positively to use his intelligence in the effective application of the facts he has learnt to new situations and problems and, negatively, discourage the cramming and unintelligent reproduction of ill-digested facts. These are some excellent ways of improving upon the present system of examinations which are being dealt with at length in other articles in this issue.

The writer of this article wishes to make a strong plea for dynamic experiments with another measure which he considers will, if carried out properly, mitigate to a great extent the two major evils of examinations pointed out earlier. This measure, which has been used on a small scale but with considerable success in the United States and the United Kingdom and one or two other countries, aims to allow pupils to sit for their examinations with the aid of their textbooks and reference books.

To teachers accustomed to teaching and testing their students' ability to memorize and reproduce facts, the above measure will appear to be a *reductio ad absurdum*. What is the point of going through the mockery of setting and marking an examination at all, they will argue, if the student can take his books into the examination hall and copy the answers from them? The short answer to this apparently unanswerable objection is, of course, that the type of examination papers that will be set when students are allowed to take text and reference books into the examination hall will be quite different from those set at present, and that the student will *not* be able to copy the answers to the questions set from the various books at his disposal. The type of questions set will not require a mere knowledge of facts but the ability to apply those facts to new situations and problems; they will not primarily test the student's memory, but his intelligence, his judgement, his taste, interests, skills, and values. The question paper in an examination of this type will, in short, test a student's capacities in the same manner, but on a much more limited scale, as a thesis or dissertation, or a piece of minor research does. While conducting such a research a student has all the facts before him—his task is to sift these facts, select from them those that suit his purpose, and apply them to the thesis he is endeavouring to prove, or the problem he is trying to solve. And in the way in which he selects, organizes and presents his facts, he

reveals his attitudes, his discipline of mind, his interests and his values, for, once the strain on his memory has been reduced to a minimum these higher abilities of the mind are in a position to exert themselves more freely and effectively.

A few random illustrations will show that this new type of examination is not only practicable, but can be extremely effective.

Take the average English essay paper. Candidates are faced in an examination hall with five or six topics and asked to do what even an experienced essayist like Robert Lynd would hesitate to attempt—to produce an essay of 500–1000 words, like a conjuror producing a rabbit out of a hat, without preparation, without reading, almost without thinking. The deplorable results are well known—either an essay which the student has learnt from a bazaar cram book, ‘adapted’ to fit the given topic it resembles most closely, or a disconnected hotchpotch of ill-considered trifles. Would it not be more effective if students were turned loose in a library with their list of topics, and given enough time in which to read and think about the chosen topics before attempting to write an essay on any one of them?

Or take an examination paper on Shakespeare. I consider it would be an immense gain if students could take with them into the examination an unannotated copy of the text they are studying. For answering questions on context, paraphrase, delineation of character etc., the possession of the text of the play would only benefit those students really familiar with the play, and many other types of critical questions could be set which would test the student’s attitudes, values and interests as well as his power of memorizing facts.

Questions designed to test the power of judgement and appreciation in history, or the power to apply geometrical axioms and proofs to the solution of fresh problems in geometry, or given arithmetical and algebraical formulae and physical or chemical laws and principles to the solution of real-life problems could similarly be devised. Then the textbook would be of use only to those who know how to make use of it as a tool rather than as a prop or as an end in itself.

The writer feels quite certain that once teachers accept this apparently revolutionary idea of allowing students to use text and reference books in the examination hall, they will be quite capable of devising newer and much more stimulating types of question papers than the type commonly in vogue today, papers which will call into play and test, at least to some extent, abilities and aptitudes which remain inert and unused at present. It is not suggested that this new type of examination should completely supplant the traditional type, or the oral examination, or the New-Type objective tests; rather it should supplement them. Each type of examination should be specifically designed to test specific aspects of the ability and personality of the student; taken together they will then form a ‘unity in diversity’ that will give us as complete and balanced a picture of our students as it is possible to get from any examination system. Some of the

imponderables will still slip through the examination sieve, but not many will completely escape the notice of the school authorities.

The approach to the difficult and extremely complex problem of devising an ideal examination must be a dynamic, experimental, and many-sided approach, for we are attempting to obtain complete and composite pictures of a series of complex and many-sided personalities. Only such an approach will make examinations 'a mobilizing force in education and a means of testing its results'—or, at least, as many of them which it is humanly possible to examine with any degree of real success.

AUSTIN A. D'SOUZA

# ON EXAMINATIONS

\*\*\*\*\*  
\*\* A Layman's Point  
\*\* of View \*\*  
\*\*\*\*\*

I SOMETIMES wonder why we still continue to pin our faith to the examination system. It is necessary, in these days of mass education, to have some convenient measure. That is why there is a dependence on textbooks and examinations amongst teacher and taught. The first ensures that every schoolchild learns the right things; the second is the trademark that ensures to a sceptical and gullible world that the goods are genuine. Time and again we learn that passing an examination is an art, that it is no guarantee of general intelligence, any more than it is a negation of ability in other directions. I once worked for a newspaper whose proprietor (although he had not been to college himself) was firmly convinced that a college education is not conducive to clear thinking and simple writing. To him a college education meant securing a degree. More usually, people are inclined to regard a degree as a hall-mark of ability often in subjects quite unconnected with the ones studied. Generally speaking, the current opinion is that examinations are a hindrance rather than an aid to education. A Japanese friend once remarked on the obsession of Indians with foreign degrees, whereas in his own country, he said, the emphasis is on education rather than on certificates. Men, he argued, must be trained for the jobs they have to do; it was no use a number of persons acquiring all kinds of degrees without even knowing if they were going to find their knowledge useful to them and to society.

Until public attention in this State (Bombay) was drawn to the textbooks, everyone tended to look on examinations as the main feature in our education to be corrected, or at least criticized. Periodically, we find items in the popular press ridiculing students who failed to tell their examiners correctly who is the President of India or what Madagascar is. In a system where passing the examination is the main object of going to school or college, it is natural that cramming should be the means to success. And anyone who concentrates on his books is naturally oblivious of other things, which all seem irrelevant. There are any number of us, well-qualified, who could not name a tree on the roadside or adjust a radio to the right station, because these things did not come into our studies during our school or college days.

The average student in my day—that was some thirty years ago—found it hard to adjust himself to college after he passed his matriculation. In school he was subjected to hard discipline. He was taught his subjects, made to do his quota of homework, and, if he spelled a word wrong, he had to write it correctly some twenty times. From this rigorous training he stepped into college where he was practically left to his own devices and did not know what to do with himself. The first year was a year of adjustment. Then when the university examination loomed large before him, he grasped at the

one familiar object on his horizon and—settled down to cram his lessons. Nowadays I understand that the colleges have had perforce to adopt the school technique which, if it is bad, at least has the advantage of imposing no new strain on the student! The University of Bombay's recent hint to teachers to speak slowly and simply, bears this out. The effort has to be made by the teacher; the student is required to be attentive, but has not to exert himself to understand. This, as I see it, is because of the increasing language problem. But, whatever the reason, the fact cannot be ignored.

Indian examinations are far more book-bound than examinations elsewhere. This is the first defect that needs to be tackled; and the place to make a start is in the Education Departments of Governments. I remember that I did my whole mathematics and history in school without the aid of a book. Admittedly the headmaster was an eccentric teacher who sprang annual examinations on the boys without notice and forced them to answer questions without preparation. But he believed in using books himself and keeping the student to a minimum of texts. There were awkward moments and none of us quite liked the experiment. But it had much to commend it. Of course, the classes were much smaller than they are generally these days. It is not adequately appreciated that the size of the class makes examinations inevitable. A teacher in a big class has no time for the odd student, whether below the average or above it. He has to grind the student between the nether millstone, the examination, and the upper millstone, the prescribed textbook. This is the century of mediocrity.

Nevertheless, it should be possible even in these circumstances to introduce certain modifications that would lighten the burden and remove the premium on cram books. An oral examination is a useful corrective, provided it is carried out by sympathetic examiners. And it would prove quite revealing. The other day the head of a college in Bombay deplored the fact that students nowadays were not able to understand simple questions put to them in English; that they were not able to form correct sentences; and it was added that very often they could write English correctly when they could not express themselves orally. An American who has been long in Japan, mentioned to me that this is exactly what is happening in Japan, where fluency in writing and reading English goes side by side with an inability to speak it well. This is the pattern where a language not ordinarily spoken is being learnt, and it is interesting to note that we are sliding rapidly to that stage after all our contacts with the English language. Another aspect that needs looking into is how far this pattern holds with Hindi in the non-Hindi regions of India where vigorous campaigns are being conducted for teaching Hindi. If it does hold—and I for one do not doubt that it does—then something has to be done to remedy it.

I think it might be a useful move to make examinations stiffer and less based on textbooks. I do not see why a candidate should not be allowed to take his standard books in with him and use them for working

out the answers. That of course means that the questions will need intelligence rather than memory to be tackled properly. But it would also mean that the student will learn not to memorize his lessons but to search for information. In the mathematics test in my first year in college, I had beside me a student who had been in the first year for a very long time. He gave me a nudge as I struggled with my paper. Looking up, I saw that he had the book in his hand. In an agonized whisper, he appealed to me to give him the page where the answer was. As I hesitated in this unusual predicament, I heard a gruff voice from behind me, 'You may help him to find the page. He has been five years in this class. I am as tired of seeing him as he is of seeing me. And if that will help'—pointing to the book—'then I shall be very happy.' The Professor's doubt was well conceived because even the book failed to yield the answer. These, however, are the mechanics of the problem. The main point is to take the formalism out of examinations and render them more effective tests of general ability and initiative.

S. NATARAJAN

## BOOK REVIEWS

*New Education*. Edited by T. P. SANTANA-KRISHNA NAIDU, Saidapet. Vol. VI, Nos. 2 and 3. 5½" × 8¼", pp.vi + 149. Single copy Re 1. Special number Rs 2.

This is a quarterly journal for teachers and others interested in education. This particular number is a special one and contains some very good articles both by local and foreign contributors. The articles 'The Importance of Attitudes' by Dr H. S. S. Lawrence and 'Teaching of English in the Secondary School' by F. L. Billows require special mention. *New Education* does not confine itself to any one aspect of education but embraces all education from the primary to the secondary stage. Besides articles of interest to teachers and educationists it also gives under the heading of 'Gleanings' educational news and accounts, in a brief form, of educational events and experiments in India and other parts of the world, such as 'National Cadet Corps in Andhra', 'Opening of a Telugu School in New Delhi', 'The Schooling of U.S. Negroes', 'Public Schools in Washington'.

A large section of this particular volume is devoted to an account of the Regional Seminar on Secondary Education held at Coonoor in June 1954.

The journal is a government publication, published under the authority of the Director of Public Instruction, Madras. It gives plenty of scope, however, for contributors to express non-official opinions on educational matters. It is a pity though that the official element intrudes obviously in this particular volume under the title of 'Quiz'. This describes among other things what the First Five-Year Plan has done for food-grains production and the figures pertaining to the output of coaches by the Hindustan Coach Factory at Bangalore. These facts may be informative, or even educative, but are certainly misplaced in a journal of this nature.

Reviews of educational and other books occupy the last few pages of this journal.

The volume contains photographs but would have done better without them. They are poor and some of them pointless—such as the picture of a Governor turning the first sod for silt clearance in a village near Tuticorin.

But these are negligible defects which can be easily rectified. This journal should be read by all progressive teachers and educationists.

\* \* \* \*

F. C. A. MCBAIN: *The First Two Years of Geography*. (Oxford University Press, 1955), 5½" × 8¼", pp. viii + 86, 3s.

Most teachers of geography will tell you that school children either like this subject very much or dislike it. There is no halfway house and the reason is that the development of the children's attitude to geography is more dependent than that of most other subjects on how it has been put across to them by the teacher. If the teacher is capable of imparting his enthusiasm by correct approaches and teaching methods you may be quite sure that his charges will find the subject fascinating.

*The First Two Years of Geography* is an excellent book for every geography teacher and particularly one who is teaching geography to beginners. The author has written this book for African schools where 'geography lessons often do not begin until the third year by which time children are eight or nine years of age, and even then most schools can only give two periods a week to this subject . . . At the same time it makes use of the fact that in Africa it is generally possible to hold geography lessons in the open air.' These conditions may just as well apply to India, and the Indian geography teacher can get the best out of this book.

The book has to its credit several clear and interesting photographs and sketches, without which no good book on the teaching of geography is complete. The treatment of the subject is rational, beginning from the child's own classroom and surroundings and then continuing to the village, the surroundings, the province and the country.

A map is a fascinating object of study and several hours can be spent in the company of a map. Therefore in the very early years of geography teaching map-study and map-reading are extremely important. Mr McBain has devoted a substantial section of his book to this, illustrating his matter with practical diagrams and sketches.

How local visits and excursions can be exploited for good geography-teaching forms another important section. Interesting 'Questions on Imagination' as they are called, are included to fix the knowledge acquired on these visits.

Today teachers and heads complain, perhaps justifiably, of the pressure of work due to an overburdened curriculum and therefore find little time for any extra reading. This small book of 86 pages with large clear type should take less than an hour's reading and will certainly be well worth while.

\*       \*       \*       \*

NIKO TINBERGEN. *Bird Life*. (Oxford University Press, 1954), 9½" × 7", pp. 64, 8s. 6d.

This is the fourth volume in the Oxford Visual Series which deals with physical or natural science subjects. Written by one of the foremost exponents of animal behaviour and the author of the remarkable books *The Study of Instinct* and *Social Behaviour of Animals*, this is an excellent addition for students, and they should consider themselves lucky in having such a lucid exposition of the ways of birds, and how they may be watched. It even goes so far as to encourage a beginner and teach him how, backed by enthusiasm and persistence, he can also be a contributor to the science of ornithology.

It is surprising how this little book of 28 short chapters, appropriately illustrated, covers almost every aspect of bird life. Actually these chapters form an initiation to the life and ways of birds and suggest ways and means to those who would desire to go bird-watching for pleasure and for purposes of scientific study. The author not only tells us what we have to learn and what has been done but what remains to be learnt and done, and his extraordinary familiarity and intimacy with these problems is obvious in every page. It is refreshing to find that the style is simple and devoid of the formidable jargon usually resorted to in discussing animal behaviour.

'Instinctive Action of Birds', 'Bird Language', and other similar chapters introduce us so simply to the subject. The final chapter, 'Some Practical Hints', completely proves to anyone, even slightly inclined, that bird-watching can be one of the most fascinating hobbies. That is why this book can be recommended not only to the confirmed ornithologist but also to the beginner and even to those who are thinking of beginning the pursuit of watching the ways of birds. Its usefulness in India is heightened by the last chapter in which simple techniques are suggested for the study of living birds.