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THIS MONOGRAPH IS DEDICATED TO  
OUR COLLEAGUES IN INDIA, WITH  
HEARTFELT APPRECIATION FOR THE  
WARMTH OF THEIR COOPERATION  
AND READINESS TO CONTRIBUTE  
THEIR BEST FOR THE IMPROVE-  
MENT OF HIGHER EDUCATION.



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## PREFACE

THE story of examination reform in India is not new: it has a fairly long and interesting history extending even to pre-independence days. There is little virtue in pointing an acrimonious finger here at who or what may have been basal in the development of what almost everyone in India seems to agree is an anomalous scheme of evaluation. Today's problems in connection with reform of examinations are no more than one would expect where a democratic country is consciously striving to shift its emphasis from an education designed for the chosen elite to that which provides for the equalization of educational opportunity. India is a newly-independent nation; and how she goes about providing solutions to the complex educational problems she faces will be eagerly and anxiously watched by her sister states in Asia and elsewhere.

We have tried sincerely in this monograph to present a picture of the *status quo* as regards the effects of the present system of external examinations in India; then have pointed to certain desirable directions that seem to us useful for consideration, and perhaps implementation. It is our hope that a dispassionate reappraisal of the credit and debit balance of Indian examinations and their peripheral problems may be the outcome of our efforts.

The number of Indian educators and others to whom we are indebted for ideas and sympathetic encouragement is legion. Special acknowledgments are due to Dr. K. G. Saiyidain, Secretary, Ministry of Education, Government of India, New Delhi; Mr. P. N. Kirpal, Joint Secretary, Ministry of Education, Government of India, New Delhi; Dr. N. S. Junankar, Deputy Educational Adviser, Ministry of Education, Government of

India, New Delhi; Dr. Hari C. Gupta, Education Officer, Ministry of Education, Government of India, New Delhi; Dr. B. D. Laroia and Dr. P. J. Philip, Development Officers, University Grants Commission, New Delhi; Mr. Walter S. Blair, Director, India Wheat Loan Educational Exchange Program, New Delhi; Mr. Blanchard K. Parsons, Administrative Officer, India Wheat Loan Educational Exchange Program, New Delhi. We are grateful to them and to all our newly-found friends; for, if the truth be known, we have learned more from them than perhaps they from us. In acknowledging their gratitude and appreciation to all these people, the authors accept full responsibility for all the sins of commission and omission that this report may have.

EDWARD CHARNWOOD CIESLAK  
JOHN TODD COWLES  
ANNA MARIE DRAGOSITZ

*New Delhi, India*  
*September 1959*

# I

## INTRODUCTION : ROLE OF AMERICAN CONSULTANTS

A SIGNIFICANT step in the advancement of examination reform at institutions of higher education in India was taken when the Government of India appointed and sent to the United States a committee of ten Indian educators, representing nine universities, for the purpose of reviewing methods and techniques utilized in American universities for the evaluation and measurement of student learnings. This visit was financially sponsored under the provisions of Public Law 48, popularly termed the "India Wheat Loan Program," passed by the Congress of the United States in 1951. The program of the Indian team while in the United States during the summer and fall of 1958 was arranged with the cooperation of the American Council on Education's Committee on Leaders and Specialists.

It is important to observe that the *Report*<sup>1</sup> of this Committee is not an attempt to follow slavishly the basic features of evaluation practiced in America; rather, it comprises a series of observations and recommendations for reform that are *specifically* and helpfully geared to conditions and limitations characteristic of higher education in India today. Indeed, from the viewpoint of an American educator, the recommendations that are made seem quite modest—even conservative.

The bi-national cooperative effort toward aiding institutions

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1. *Report of the Committee on the Indian Examinations Reform Project* (New Delhi, India : United States Information Service, July 1959), pp. 95.

of higher education in India advance in their program of self-study and critical analysis of the system of external examinations was given further impetus by the appointment of the present Team of American Consultants. At the request of the Government of India, the United States Department of State and the American Council on Education cooperated in this project which was again financially underwritten by the India Wheat Loan Program.

The members of the American team that visited India during the months of July and August, 1959, were as follows:

Miss Anna Marie Dragositz  
Director of the Evaluation and Advisory Service  
Educational Testing Service  
Princeton, New Jersey

Dr. John Todd Cowles  
Professor of Psychology and Director of Educational  
Planning, Schools of the Health Professions  
University of Pittsburgh  
Pittsburgh, Pennsylvania

Dr. Edward Charnwood Cieslak  
Assistant Director of Admissions  
Wayne State University  
Detroit, Michigan

The program of the three American Consultants was planned in conference with the Indian Ministry of Education. Arrangements were made for meeting with the professional staff at those universities which had representation on the Indian team that visited the United States. The only exception was Kerala University, which was not visited due to the shortness of time.

The role of the American team was to study the existing

external examination system, observe its effects, and stimulate further discussion of short-range and long-range possibilities for modifications. The members of the team did not envisage themselves as zealous reformers, nor did they feel they had ready-made or final solutions to Indian examination problems. Rather, they visualized their role as one of helping Indian educators find solutions appropriate for their own country by sharing with them their successes and failures with similar problems.

Perhaps the one salient observation that should be definitely emphasized is that substantial and earnest interest in reform measures was found among college and university faculties. It is unlikely that any useful purpose would be served by appointing further investigatory committees since the problems inherent in the present mode of evaluation by means of an external examination are already explicitly known. The time is ripe for a program of concrete action. Given constructive leadership and a definite plan, there is every reason to believe that the faculties of colleges and universities in India not only *can* but *will* respond to the challenge of adapting their examination systems to fit the *current* educational scene.

## II

### ITINERARY AND EXAMINATION REFORM CLIMATE

THE inclusive dates spent by this team at each university were as follows:

Karnatak University	July 6—11
University of Poona	July 13—16
Osmania University	July 19—23
Muslim University, Aligarh	July 28—31
University of Delhi	August 3—8
Utkal University	August 10—13
Patna University	August 16—22
Gujarat University	August 24—27

The team attended the following meetings:

All India Council on Secondary Education	July 27
Physics Review Committee of the University Grants Commission	July 24
Zoology Review Committee of the University Grants Commission	August 1
Examinations Committee of the University Grants Commission	August 31

In addition, while visiting the neighboring universities, special tours and/or discussion sessions were held at the following institutes:

Central Institute of English	Hyderabad
Indian Statistical Institute	Calcutta

Institute of Ophthalmology	Aligarh
Central Institute of Education	Delhi
Central Rice Research Institute	Cuttack
Gokhale Institute of Politics and Economics	Poona

In general, a rather concentrated program of visits to nearby colleges, general discussion sessions and topical seminars with the Vice Chancellor, Registrar, Director of University External Examinations, the Examinations Committee, principals, deans, and heads of departments was arranged by each university. At the visiting team's request conferences were also held, wherever time permitted, with secondary school principals and teachers, and with university student leaders or student groups. One of the team members, with special interest and experience in medical education, visited the medical colleges at several universities and discussed with deans and department heads the selection and evaluation of medical students, and the medical college curriculum.

At several of these universities a series of planned symposia or seminars was held. At one university, for example, four symposia were held by participants drawn primarily from the teaching staff, on such topics as: definition of course objectives in terms of student behavior, theory and practice of evaluation, evaluation techniques, and achievement test construction. At another university, the guest team was asked to present a series of four seminars on specific evaluation techniques, ranging from essay tests to objective tests: their construction, scoring and analysis, and from achievement testing to admissions and placement testing. At each institution relatively extended contact was made with those persons, or teaching and research units, which have been carrying out the development of new tests and measures for college or for secondary school use. With one or two exceptions, there was found at each university at least one small group of teachers, usually of psychology or education, who had on their own initiative been engaged in some form of new test construction, studies of tests, workshops on test development, or

related work of a service nature such as preparation of guidance materials. These were under various administrative arrangements, such as: a division of experimental psychology and psychometry, within a combined philosophy and psychology department; an extension services department of a teachers' training college; a psychometric unit in a department of education; a bureau of educational and vocational guidance within a training college; and an institute of psychological research and service, in conjunction with a department of psychology. The larger specialized staffs and more extensive facilities of the Central Institute of Education (Delhi) and of the Psychometric Unit of the Indian Statistical Institute (Calcutta) showed, of course, relatively greater productivity, and considerable time was spent at these latter places reviewing their programs of research. References to various publications of these groups are given in the Bibliography.

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At one or two universities, individual teachers in fields other than psychology and education had on their own proceeded to develop improved tests in their own subject areas. Often they had been stimulated by contacts with Dr. Benjamin Bloom or other consultants. For example, a chemistry professor at one university and an English professor at another had made notable progress toward definition of objectives and development of improved evaluation techniques in their subjects.

The most impressive steps toward a thorough review of teaching objectives in the principal subjects of an arts and science faculty have been made at still another university which did not claim any specialists in tests or measurements. An all-university committee on examination reform had been organized, and a set of experts had been drawn from about nine fields of study within this university; within a three-year period sub-committees had already begun the difficult task of clearly re-defining the objectives of their principal degree programs in each subject. The guest team had the privilege of participating in workshop sessions, one in English and another in mathematics,

These groups of interested teachers were well along toward not only a consensus in regard to the important behavioral objectives for these subjects, for principal student groups and at principal levels of instruction, but they had also proceeded to lay out new outlines of teaching materials and techniques, as well as to determine what kinds of evaluation techniques (including objective tests) might be most suitable for evaluating their objectives. This represented much voluntary time and effort on the part of a representative and enthusiastic group of teachers.

In brief, most of the university administrators and teachers with whom the team talked expressed a keen awareness of the major shortcomings of the external examination system at all levels of its use, even though many of them had not yet seen the summary of the recommendations of the Indian Examinations Reform Team. (The full, printed report was not available until after the American team began its visits.) This summary was brought before the teachers at several universities. In each instance it evoked interested discussion. In some of these universities this was the first time that concerted discussion of examination reform had taken place on a university-wide basis.

There seemed to be general acceptance of the recommendations of the Indian Examinations Reform Team. However, there was a widespread lack of understanding of the proper sources of educational objectives and how these can be defined in observable, behavioral terms (Recommendation number 1). It was commonly unclear to the university teachers that syllabi must be in accord with such teacher-defined objectives, and that the choice of evaluation technique and the very nature of examination questions directly depends on clear formulation of objectives in more than topical form (*see* Recommendations numbers 2,3,4 and 5). There was some misunderstanding of Recommendation 9, which was mistakenly thought to mean no change was desired at present in the external examination system! There were also some misgivings concerning the Indian team's rigid prescription

of the minimum length, in pages or lines, of a master's thesis (Recommendation number 11).

The difficulty anticipated by the Indian team in introducing new types of test techniques, such as objective, multiple-choice tests or observational ratings of student performance (Recommendation number 6), probably lies more in the present lack of acquaintance by teachers (and students) with these improved techniques, rather than in any intrinsic feature of these methods. The American team found that teachers are not generally aware of the advantages and potentialities of these new methods of evaluation; many teachers still believe that objective tests are exclusively true-false tests of atomistic facts, although such primitive forms of the objective tests have already been demonstrated to be inadequate and are quite obsolete.

This team found that an excellent investment of discussion time, largely at the insistence of its listeners, was to describe the process of defining objectives in terms of desirable changes in student behavior, and in terms of more valuable, long-range abilities than mere memorization of facts. Such general objectives as "critical thinking" were defined in terms of specific, observable student behavior; teaching techniques for accomplishing these objectives were discussed; and, finally, appropriate evaluation techniques for measuring student progress toward these objectives were considered and specimen test questions for this purpose were demonstrated to the group. It was, of course, impossible for this team to carry out a real workshop type of conference at each place visited.

As mentioned earlier, the American team made it a point to talk with secondary school principals and teachers whenever time permitted. These contacts ranged from rather hurried visits to several secondary schools, with informal talks with principal and teachers, to more formal meetings with collected principals or even general meetings with entire associations of secondary school teachers. At more than one meeting the guest

team was presented in advance with a set of questions which the teachers wished discussed. This made the meetings more fruitful. In one large city, a meeting with principals was preceded by a detailed discussion with the Director of Public Instruction and his staff of assistants in teacher training and in evaluation and guidance. It appeared, generally, that like the university teachers the secondary school teachers had a lively interest in examination reform and were well versed as to the outstanding defects and abuses of the present system of external examinations. They discussed freely and frankly such problems as the overcrowded classroom, over-emphasis on pupils' memorization of facts to prepare for the examinations, excessive workload of teachers, and so on. However, there was a pessimistic note when implementation of desired changes was discussed—a general feeling was expressed that the individual secondary school teacher had little opportunity or means of shaping the syllabus, of improving the external examinations so they would measure the more significant objectives, or of doing a satisfactory job of day-to-day pupil assessment and guidance when the major goals were the factually oriented external examinations, immutable as they now seem to be.

Actually, there was considerable evidence that the secondary schools are making notable progress: cumulative student records are in use in several schools and school-systems, and "internal" evaluations are evidently being made along other lines than merely academic, intellectual achievements. In one city, the training of secondary school teachers now includes not only a grounding in the preparation and use of such records, but also in the principles of evaluation and guidance.

The Central Institute of Education had sponsored for Delhi secondary school teachers an extensive workshop in the development of improved objectives, teaching techniques and evaluation methods; similar, but less elaborate workshops have been carried out by the Department of Education, Muslim University, by the R. N. Training College in Cuttack, and by the Extension

Services Department of Patna Training College. There doubtless have been others. The published reports of these encouraging efforts have, however, not been widely disseminated. It would be of great benefit to university teachers if they could peruse these reports, but even better if they could participate in well-planned workshops directed toward university-level subjects and teaching.

### III

#### PROBLEMS OBSERVED IN THE CURRENT SITUATION

##### A. Obstacles to Change

ONE of the chief problems confronting higher education in India currently is that of overhauling or translating a system of education from one based upon the training of an intellectual elite, the aim of which has been to provide a means of supplying an administrative cadre, to one that better reflects its newly-won position as an independent nation in the scientific world of today. The fundamental issue involved is raised as a question by Dr. K. G. Saiyidain:

Shall we remain content with an education which, at its best, transmits to the younger generations the accumulated culture and acquisitions of the past and tends to fix and predetermine habits of thought, belief and conduct by teaching . . . "the already known solutions of past and present problems," *i.e.*, an education which places its greatest emphasis on passive assimilation and unquestioning conformity to what is given? Or, do we require an urgent re-interpretation of our educational philosophy and practice so as to develop creative intelligence and adaptive thinking in the students, giving them the will and the capacity to evaluate critically the existing institutions and social processes and to take part actively in that "continuous reconstruction of experience" which is the basis of all progress?<sup>2</sup>

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2. K. G. Saiyidain, *Education, Culture and the Social Order* (Bombay, India : Asla Publishing House, Second Edition, 1958), p. 79.

India still largely perpetuates many of the traditional Cambridge-Oxford aristocratic concepts of higher education. Great Britain, on the other hand, has been modifying its system of national education in an attempt to bring it in more harmony with its social and political democracy. So one might say, in this connection, that India is more British than the British !

However, there is currently astir in India an intense dissatisfaction with the educational lag between what is and what ought to be. An increasing number of educators are less and less prone to defend, or even accept, the forces of inertia, vested interests, and the uncritical complacent attitudes of the Old Guard. Apart from a keen desire to raise academic standards, modernize the curriculum and sharpen the tools of appraising learning outcomes, there exists a feeling of adventure and partnership in the building up of a nation on the foundation of old roots and modern science. Progress along these lines is geometric rather than arithmetical.

## **B. Need for Technical Knowledge and Skills**

In order to effect a successful change of any kind, it is essential to have a knowledge of the advantages and limitations of many possible schemes, and once a scheme has been selected from the available choices, to have the skills required to put the chosen scheme into operation. For example, in order to evaluate properly the appropriateness of an existing examination system or to adopt a new method, it is necessary to review and consider many different techniques for assessing student learning. Once the appropriate method or methods are selected, it becomes a matter of knowing how to go about devising the questions or tasks. And since the efficiency of the method chosen must also be studied to determine whether it is indeed serving its purpose, it is important to know how to evaluate its results.

The degree of such knowledge and skill in evaluation varies

greatly in the group of universities visited by the American team. At one university, for example, there was considerable interest in effecting a change in the present examination system. However, no one at the university was fully informed on how to go about the formulation of objectives, which is a first and essential step in selecting the appropriate techniques for assessing student learning. And while the teachers realized there are many methods for evaluating learning, they were conversant with but not proficient in the writing of various kinds of examination questions.

At the other end of the range of knowledge and skill observed, one university has gone far in outlining objectives and in reaching some tentative decisions as to internal and external examinations they consider appropriate for measuring how well students have achieved desired outcomes. However, they are now puzzling as to how to go about devising the kinds of questions they would like to use in their proposed evaluation scheme. And while they see the merits of "testing" their present and proposed examinations, they have neither the training nor the facilities for accomplishing this objective.

The needs and lacks in evaluating knowledge and skill may thus be summarized as follows:

### *Definition of Objectives*

The need to define educational objectives in concrete behavioral terms was generally recognized. However, proficiency in this important technique of defining objectives varies considerably. All universities would benefit from some guidance in this process.

Except for the work at one university, however, little systematic effort on this problem was observed. At that university, an Examinations Committee consisting of about nine subject experts and a Convenor is drawing up in detail

the objectives for each major subject in the syllabus. In a very few other universities this type of study is being carried on by isolated departments. However, in most other instances such efforts are undertaken solely by interested individuals; the objectives for a specific subject are reviewed by the teacher of that subject, rather than by a departmental group of teachers.

Proficiency in this important technique of defining objectives varies considerably. All universities would benefit from some guidance in this process.

### *Writing of Examination Questions*

At all universities there is great need for counsel in writing examination questions of all kinds for both internal and external examinations: essay, objective, practical, oral, open book, and other types. The present essay examinations are not only inadequate in that they do not measure teaching objectives, but they also do not meet the minimum requirements for good examination questions. For example, very frequently the student is asked to “discuss”, or “tell all you know about . . .”, or “describe” the influence of an individual or culture, a scientific law, an economic condition, a work in literature, or some broad concept. Such undefinitive questions require considerable guessing on the part of the student as to what the examiner expects and lead to unnecessarily high unreliability in the examiner’s marking.

Another indication of the need for counsel in writing examination questions was found in the erroneous concepts of objective testing which were commonly expressed. In almost every discussion of the values and limitations of objective tests, such questions were alluded to as being of the true-false type or as measuring only factual information. Both of these concepts of objective questions are outmoded. Present objective examinations rarely employ the true-false question; other types of questions—multiple choice, matching, interlinear, situational,

etc.,—are more typical of present-day objective tests. Also, the objectives of such examinations are to measure the student's grasp of goals of education that are broader and more important than the mere acquisition of factual information.

In summary, then, the questions used in present examinations and the concepts expressed regarding other methods indicate a need for increased familiarity with the nature, purpose, scope, values, and limitations of the large variety of evaluation techniques which can be employed for examination purposes. This broader knowledge is one basic and immediate need for the improvement of the present examination system and for the planning of reforms.

### *Evaluating Examination Papers*

The evaluation of examination papers also requires immediate attention. At present, most of the systems for evaluating examinations which are used by the universities visited by the American team are such that the results cannot be considered reliable. At times the procedure is such that the ultimate decision as to a student's mark rests solely in the hands of one person. Even where more than one examiner is involved in marking a paper, usually the reconciliation of any differences in marking will in the last analysis be determined by one person.

Since the student's academic, social, and vocational fate now hinges on the results of the external examination, the lack of reliability of the marking system is even more serious than it would be if the examination results were less decisive. The need for procedures to correct this situation is urgent.

### *Assessing the Effectiveness of the Examination*

Little has been done to assess how effectively the examinations measure the student's educational achievements. The values of the examinations are accepted on faith and tradition

rather than on the basis of experimental or empirical evidence of their accuracy and worth. For example, students are accepted or rejected by a college on the basis of marks on external examinations. However, virtually nothing is known about the relation of these marks to the student's success or failure in college. And although there was a great deal of discussion at every university regarding the problems of using teacher assessments, only one university told of any attempt to study the relationship of such assessment to marks on external examinations.

Unless examinations are "tested" for their usefulness for the purposes for which they are administered, the path to improved evaluation will remain unknown. Present practices and future reforms must be studied to discover what evaluation methods are fair to the student and efficient for the university's purposes.

The observations of the American team of the knowledge and skill in evaluation at the universities they visited confirm the Indian team's recommendation that each university set up an evaluation unit. Such a unit could provide the necessary guidance in the writing of tests and provide needed technical assistance in the statistical and research aspects of evaluation. The development and conduct of a good examination system requires the careful and continuous attention of people trained in the art and the science of evaluation. And since the system should reflect and be an outgrowth of teaching objectives and methods, it must be subjected to periodic scrutiny to guarantee that it is in accord with current educational goals and practices.

### **C. Blocks to Inter and Intra Communication**

Another further serious problem, but more readily remedied perhaps, is the lack of communication among the teaching staff and administrators on a university-wide basis at virtually every place visited. At several it was remarked that the team's visit

was the first occasion for a get-together of Vice-Chancellor, principals, deans, department heads, and teachers concerning examination reform (or even concerning any other topic of general university interest). Despite geographical distance or administrative echelons, it seems very important that a continuing facilitation of such interchanges of views and discussion of plans be provided. The Indian Examinations Reform Team representative and/or the Registrar served as liaison person for effecting the present meetings, ordinarily in groups of related interest, *e.g.*: science faculties, or arts faculties, or post-graduate and professional faculties, with representatives from all campus and neighboring colleges.

Similarly there is an even greater lack of communication between secondary school and university people, especially between teachers from both levels. Except for those rare, and often perpetuated rather than rotated, representatives from both levels on Boards of Studies, there is no general mechanism to assure healthy interchange of views and discussion of mutual problems on a recurrent basis. University people are generally unaware of the progressive thinking and actual improved evaluation practices already taking place in the secondary schools—yielding information on each school graduate which should be eagerly sought and used by university teachers and admissions offices.

Secondary school teachers and college teachers alike, especially the younger ones, decry the lack of representativeness of the bodies which serve on Boards of Studies, Moderator Boards, Paper-Setters, and Examiners (Graders). Apparently, these groups and the examiner groups in particular are often “closed corporations,” mutually interlocked and on a self-perpetuating basis because of the financial attractiveness of such positions. Teachers did not generally feel that the syllabi or external examinations fairly reflected current teaching objectives, largely because of the great difficulty of change through lack of communication with those responsible.

A related but more fundamental problem is the present unsatisfactory form of syllabus statements. Typically, these lack properly formulated objectives for the teaching of each subject. In the first place, with only two or three exceptions, no degree-granting teaching institution visited by this team had available any written statement of its major purposes. One all-India diploma institution for advanced studies and research listed ten specific objectives, but these did not include any statement of behavioral outcomes desired in its students. Another post-graduate school had a brief statement of objectives which mentioned that it aimed to develop certain knowledge, skills, and attitudes in its students, but these were not described in terms of recognizable student performance.

At the departmental level, only a few teachers in a very few scattered departments have attempted to spell out their teaching objectives. At the secondary school level, however, newly-trained teachers at various training colleges are *learning* the importance of, and general procedure for, defining their objectives in terms of desirable pupil changes. With the syllabi fixed in terms of specific items of knowledge, however, it is no wonder that virtually *all* classroom teaching is limited to the *knowledge* aspects of education, rather than to the understanding and application of knowledge, problem-solving, critical thinking, or creative thinking in the particular field of study. Any teacher who attempts to improve avenues of learning through applicatory exercises in terms of everyday life, or through pupil-selected optional projects, is doomed to meet with discouragement because his students are motivated only to master the syllabus by memorization for factual examinations! Even if the teacher introduces up-to-date materials for teaching the fundamental, classical topics, the students lose interest knowing that "it won't be on the exam."

As a consequence, the external examination with its topical syllabus is a restrictive force upon the teacher. This effect becomes greatly augmented when the teacher realizes that

the quality of his or her school's product is measured solely in terms of examination marks and per cent passing. Large charts greeted this team in many a school principal's office, showing proudly a record of pupil success on the school-leaving examination. Teachers recognize that by this one yardstick their own teaching proficiency is at stake in the eyes of the principal, pupil, and parent. No wonder their classes degenerate into final cramming sessions, with the aid of subject "guides" to the essential facts, and with question-spotting on a probability basis.

A not-often recognized limitation to planning improvements in the existing system of evaluation is the notable lack of data—factual or quantitative information—concerning present examination results. Percentage passing each examination is the usual datum. Very little study is being made of the *distribution* (spread) of marks by school or college group on each examination, *or* by examination compared with examination especially where similar groups take more than one, *or* by questions within an examination. Opinions are many but facts are few. It is very likely, on the basis of numerous glaring instances, that unreliability of marking of essay tests, that is, the lack of agreement between independent examiners—is common. Few definitive studies of these questions have been made. Least of all, but highly important, have any studies been made of (1) the relation of examination marks and pupil success at a later stage of education, or (2) the relation of examination marks (a single sample of student behavior) and good teacher-evaluation on a more day-to-day basis throughout an entire term or two. It would seem to this team that those responsible for the system are unwilling to put it to a critical test; it is extremely important, however, that this be done before carrying out changes, in order to observe any evidence of improvement after changes. Studies of this nature are an essential part of all large-scale examination programs and serve as a basis for planning for further improvements.

One Vice-Chancellor had gathered data to show the

comparative results of internal assessment by his several colleges. Distributions of the number in each marking class, by college, were prepared, also the pass-fail rate for those colleges on the external examinations. These data were compared with the discrepancies between internal and external marks by pupils. Interesting conclusions and inferences could be drawn from such data, and they will serve as a basis for future planning.

#### **D. Unselective Admissions Practices**

Many of the problems faced by college teachers and administrators are intensified by an unreliable and inadequate procedure of student selection or admission. Dr. S. K. Mitra of the Indian Statistical Institute states the crux of this problem succinctly: "When the number of applicants for admission is much greater than the number of seats in a college, the problem is one of choosing those who are likely to succeed in college. Various methods of selection are used, but it appears from indirect evidence that they are not much better than what would have happened if selection was based on the throw of a coin."<sup>3</sup> Increased pressure on the colleges to admit more students is clearly inevitable. There is an immediate need to develop procedures for the selection of students which will more adequately determine the probability of success of applicants in a program of higher education.

Even in a democracy, going to college is not inherently a legal right but, rather, a privilege earned by those students whose past performance and future promise give reasonable assurance that society's investment in their further education is justified in terms of results obtained. Surely no one can expect the colleges to resolve the tremendous wastage of educational resources

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3. S. K. Mitra, "School Boards and Universities," *Indian University Administration : Proceedings of the Vice-Chancellors' Conference on University Administration Convened by the Ministry of Education and Scientific Research from July 30 to August 1, 1957*, Publication No. 359 (Delhi : Ministry of Education, 1958), p. 120.

unless the principle of the selective admission of students is recognized and administered more objectively.

The dilemma in which colleges and universities struggle is complicated further by a government employment system which inappropriately looks to higher education for the certification of those who are to fill clerkships and minor administrative posts. Speaking to this point in a Convocation Address at Bombay University, the Chairman of the University Grants Commission, C. D. Deshmukh, said that "here is the cruel dilemma of the Indian universities, which drives the authorities to value quantity more than quality, commercializes the attitudes towards education of the young persons in colleges and universities, and floods the employment markets with young men and women who have imbibed hardly anything out of a general educational experience."<sup>4</sup>

A partial amelioration of this unfortunate situation is being effected through the gradual upgrading of high schools to higher secondary schools and the conversion of high schools into multipurpose schools. Quite properly these topics were accorded high priority on the agenda of the reconstituted All-India Council for Secondary Education at its first meeting in New Delhi, July 27, 1959. If the state governmental authorities could accelerate these trends, much real advantage would accrue. Moreover, once the secondary schools are built up to provide these services, the Government Employment Agency and the Private Sector would not have to insist that applicants for positions have the qualifications of a university degree. The Higher Secondary School Certificate should prove sufficient for minimum qualification for minor positions. Where further specialized training is desirable, this might be provided either by semi-technical and professional schools or by a program of in-service schooling.

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4. C. D. Deshmukh, "Commercial Attitude to Education" (Delhi, India : *The Sunday Statesman*, August 30, 1959), p. 7.

Another complicating factor in the efficient management of colleges and universities and the maintenance of quality education is the equivocal position of the English language. It appears that India is somewhat in the position of wanting to have its cake and eat it too. The basic problem is nowhere more clearly and emphatically stated than in the words of the Reverend Father H. de Souza, Principal, St. Xavier's College, affiliated with Gujarat University: "The fundamental fallacy underlying most courses of English in the universities of India is that having deposed English from primary to secondary place, we continue to teach it as though it were a primary language. On this assumption, we prescribe textbooks; on this assumption, we examine the answer-papers of the students; on this assumption, we bemoan the continual lowering of standards."<sup>5</sup>

The point to be observed is that whereas the teaching of English generally has been reduced about a third, students' proficiency in English is expected to remain constant. If this were not enough, students are, in addition, being taught a non-functional English based upon the admittedly beautiful but outmoded Shakespearean style of the Sixteenth Century, better suited for study by the specialist in the language at an advanced level than by the general college student.

All of the factors enumerated in the preceding paragraphs are interwoven and have contrived to create a set of conditions in the colleges and universities of India which makes extremely difficult, if not impossible, the realization of the appropriate aims of higher education. At all these institutions of higher learning—which are expected to produce the leaders of tomorrow—the teaching load below the post-graduate level

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5. Rev. Father H. de Souza, "A Suggestion for a More Effective Teaching and Evaluation of English at the Undergraduate Courses of the Gujarat University," a Paper presented at a Seminar on Evaluation Techniques, Gujarat University, August 24, 1959. Mimeo-graphed.

appears to be fantastically high. Not only are the lecturers expected to teach 18 to 20 periods per week, but—in addition—each class period is heavily over-loaded with students. Such conditions are quite apt to stultify enthusiasm for teaching and, perhaps even more important, make virtually impossible any allotment of time or energy for research—one of the prime functions of any real university.

An objective and careful appraisal or analysis of this total picture leads one inescapably to the conclusion that no real and lasting reform in the system of external examinations, as presently practiced, is possible without a concurrent alteration in the bases utilized to determine the selective admission of applicants to the colleges and universities. It seems quite evident that the present method of student selection, based upon the results of one “blanket” external examination, is not only unreliable but also ineffective toward realization of the ends for which it is used. At the same time, however, no college or university can be blamed for being cautious in the alteration of the present mode of selection. They need to be convinced on the basis of concrete evidence that more functional bases for student selection are possible and, as is true in an increasing number of schools, available.

Each year more and more schools are developing cumulative records that include a term-by-term and subject-by-subject report of specific marks obtained. Research in the United States shows conclusively that the pattern of actual school marks provides the single best criterion for the prognostication of academic success in college. There is no real reason why the colleges in India could not request the applicant for admission to have his secondary school provide such an academic record in addition to the results of the external examination. The academic record, moreover, could be forwarded early in the spring, thus giving the college an opportunity to study each such record, keeping in view the educational objective of the prospective student. In addition, the college would be in a

better position to anticipate the number of students each year.

Research has also proved that an even better prediction of probable college success is obtainable by combining the school record of marks with the results of scholastic aptitude, academic achievement, and diagnostic reading examinations. Except, perhaps, at a few of the colleges and universities in India that have already advanced in the use of cumulative records from the schools, most institutions of higher learning should initiate first the use of *academic* records from the secondary schools. Other criteria for the selection of students that are useful include a statement from the headmaster of the school and a personal interview of the applicant, where possible, at the college itself.

From the public relations viewpoint, the college can more easily justify its selection procedure if it is based upon a more inclusive estimate of the applicant's chances for success at college. And since the public too must be educated towards an acceptance of new procedures for the selective admission of students, this factor makes even more desirable the adoption of new criteria, even on a gradual basis.

If the academic record of school marks in discrete subjects be considered useful at the point of entrance to college, a similar record compiled at the college itself is equally useful for admission to post-graduate and professional studies. In addition, a record like this would more faithfully reflect the academic progress of any individual student and could be used for reporting such progress periodically to the student, the student's family, as well as to employers. Again, records of this nature can prove valuable in administrative research designed to determine both the suitability of admissions criteria and the effectiveness of teaching at the college itself. Constituent colleges especially are in a good position to take advantage of the scheme described.

Finally, a word needs to be said about the extreme

decentralization of student selection at the college level. One can rationalize such a procedure at the post-graduate and professional degree stages since numbers here tend to be relatively small and specialized, but its use at the point of admission to the college is rather questionable. The practice of referring applications for admission to the chairman of the particular department the prospective student wishes to enter lends itself to social and political pressures which most departments are unable to contend with adequately. Moreover, good administration in higher education elicits that kind of management which enables college teachers to do the job for which they are hired—namely, to teach—and not to attempt a task for which they not only lack the time, but for which they are ill-equipped as well.

Centralization of college admissions under the management of a specialized officer has many advantages in addition to those mentioned above. First, it protects the college by the non-admission of high school and migrant applicants whose qualifications do not give reasonable assurance of academic success. Second, it protects the unpromising student and his family from needless expense, squandering of time and effort, and the debilitating effects of probable failure in studies. The high student mortality in most colleges in India very definitely points to the need of providing a better scheme for the determination of those qualifications considered essential as prerequisites for enrollment. One final point: the best interests of colleges demand a continual study of their selection procedure in terms of their objectives and student survival. An Office of Admissions could focus attention on all such problems.

## IV

### CURRENT EXAMINATION PRACTICES

#### A. Use of Examinations "To Maintain Standards"

AT every university the American team was told that external examinations are essential for the maintenance of educational standards. The importance of this use of the examinations was given greater emphasis at some universities than at others. All of them felt external examinations are some guarantee that academic standards will be maintained.

The degree of importance given to this purpose of the examinations seemed to be related to the amount of confidence expressed in the professional competence and personal integrity of teachers. Where there was much discussion of the need for external examinations to maintain standards, there was also considerable expression of distrust of teachers. And conversely, where teachers were held in higher regard the use of external examination for the purpose of insuring standards seemed less urgent.

The implications of the principles of modern evaluation are that since evaluation practices are based on educational objectives and teaching methods, these practices therefore reflect the quality of educational standards. The external examination is at present the one type of evaluation which has any status or significance in Indian education. Indeed, this is the goal toward which students and teachers direct all their efforts. Since these examinations admittedly measure only knowledge of discrete facts, a reasonable inference would be that the acquisition of factual information is the primary goal of Indian education.

This warranted conclusion does not seem in harmony with the educational objectives expressed by many Indian teachers and administrators. At every university there was considerable mention of the need to educate students to think critically and to apply, analyze, synthesize, and evaluate facts and concepts. The external examinations were usually severely criticized as measuring only one limited educational objective: knowledge of facts. This criticism was found to be a valid one when the American team reviewed some of the recent external examinations.

Since the present external examinations restrict themselves to questions on factual information, they can serve to maintain only the most minimum standards of Indian educators and of thinking educators the world over. Hence the external examinations are viewed as a floor below which education should not be permitted to fall, rather than as an incentive to sound teaching and learning. Thus the present examinations impede progress toward loftier educational objectives. That is, because passing these factual examinations is now the major goal of students and teachers, they serve to suppress creative teaching and learning. Further, when non-Indian educators use these examinations as an indication of the goals of Indian education, they get an unfair picture of the objectives of Indian educators: the examinations do not reflect the desire of Indian educators to go beyond teaching discrete facts.

## **B. Paramount Role of Essay Tests**

The essay examination is the most widely-used method of evaluation in Indian higher education. The use of any other type of assessment is rare, with the exception of practicals. Here and there teachers and departments are experimenting with other types of examinations to evaluate classroom work. However, the written external examinations are almost exclusively made up of essay questions.

The essay question has a right and proper function in

student assessment. However, it is the most abused evaluation technique. The world over, it is all too commonly called upon to provide evidence of complex abilities or intangible personal characteristics which are difficult or impossible to measure, particularly within the usual limits of time which can be allotted to examinations. For example, some claim that an essay examination will provide evidence of creativity. Would it be fair to say that a poet of great reputation is not creative because he was not able to produce a poem on the examination day, at a specific hour and under the conditions of an examination ?

Many have made more modest claims for the essay examination, such as that it demonstrates the student's ability to organize and present ideas about a topic, rather than his ability to remember facts. However, if a student lacks the segment of information on which the question hinges, he is deprived of the opportunity to demonstrate his ability to arrange ideas in a logical and well-organized way. Were he asked a question on another segment of information within his sphere of knowledge, he might be able to demonstrate considerable ability of this type.

In addition to looking to the essay examination for the kind of evaluation it cannot provide very adequately, educators overlook the fact that there are other ways of evaluating students' learning. In many instances, there are probably other ways of assessing learning which are far better than the essay, in terms of the teaching objectives and practices. No one method of evaluation is suitable for *all* teaching. A method is suitable only when it is related to teaching goals and teaching methods, and these will differ from subject to subject, from class to class, from college to college, and from university to university. A recommendation of the Indian team is relevant to this point :

It should be possible for the examiner to employ as many kinds of test techniques as are necessary for an evaluation of student achievement *vis-a-vis* the

objectives in view. There should be variety and flexibility in an examination system, not rigidity and a dead uniformity. The examiner should have plenty of initiative in shaping his instruments of evaluation.<sup>6</sup>

Since the external examinations in Indian higher education are typically given at the end of two years of study, the use of the essay question introduces additional problems. Only a very small portion of what the student has studied can be covered within the limits of the examination period. Most of the questions which the American team reviewed required the student to write fairly extensive and detailed answers. For these reasons, the number of questions and hence the number of topics covered had to be limited. And in effect, the amount of teaching covered by the examinations was further limited because the student was permitted to choose among a number of options. Thus the student had to know only a small amount of what was taught in class and what was prescribed by the syllabus to receive a pass mark.

If advances are to be made in Indian examinations, evaluation methods other than essay tests will have to be considered, and adopted where they are appropriate. And where essay examinations are selected as the most appropriate measures of student learning, attention must be given to the better writing of such questions. Essay questions must be written with care if they are to provide adequate information about student learning.

One of the primary considerations in writing an essay question is the amount of freedom a student will be allowed in his answer. For example, a student in an English class might be given a question which says, "Write . . . ." This might appear to be a proper question since the major objective of an English class is to teach students to write. Obviously, however, such a question allows the student freedom beyond any practical and

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6. *Report of the Committee on the Indian Examinations Reform Project, op. cit.*, p. 26,

reasonable bounds. Another degree of freedom might be represented by the question which asks the history student to "Discuss Democracy." Although this question is somewhat more restrictive, it still provides the student too much scope for his answer. Indeed, just what should he discuss? Should he discuss the principles or development of democracy, in a specific country or in general? From the directions he has been given, he could challenge the examiner's mark, almost without regard to his answer, because the question has allowed him freedom to discuss *anything* on the topic of democracy.

If the student is to know what is expected in his answer and if the answers are to be marked with any consistency, the question must be restrictive. That is, it must specify to the student more precisely what points, concepts, relationships, etc., he is to cover in his answer. Following are examples of good and poor essay questions:<sup>7</sup>

*Poor* : Explain why you think the United Nations has been a success or a failure.

*Better* : An important function of the United Nations is to help settle disputes between nations. Describe how one dispute was handled successfully, pointing out how the settlement illustrates a general strength of the United Nations. Describe also how one dispute was handled unsuccessfully, pointing out how this illustrates a general weakness of the United Nations. Your essay should be about 300—400 words in length (2 or 3 pages in longhand).

As the American team reviewed recent external examinations at several of the universities visited, they found that the questions quite consistently allowed the student a large amount of freedom.

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7. *Making the Classroom Test : A Guide for Teachers* (Princeton, N.J. ; Educational Testing Service, 1959. Evaluation and Advisory Series, No. 4), p. 23.

Indeed the freedom was so great in some questions that it would appear the student's mark hinged on how well he could guess what the paper-setter had in mind when he wrote the questions, or what the examiner would look for when he marked the papers. Such questions can only create anxieties on the part of students, compelling them to scramble for copies of past examinations and cram books, and to exert pressures on their teachers for clues to forthcoming examinations. They do not encourage the continuous day-by-day study of the broader and more important concepts and relationships.

The freedom allowed in the external examinations directly affects the reliability of the marking: the greater the freedom allowed by a question the more likely it is that different examiners will give different marks for an answer. Since so much depends on the results of the external examinations in Indian education, this is a serious problem which needs immediate attention.

The Indian team's *Report* contains at least two relevant comments on this particular problem:

... In point of reliability and validity, as well, the essay type answer tends to be a confused response which we proceed to evaluate in an equally confused and confusing manner.<sup>8</sup>

... The directions given to examiners should also be clarified to the maximum so that the student and the examiner have little doubt regarding what the student is asked to do.<sup>9</sup>

From the last comment quoted, the Indian team goes on to indicate some immediate and minimal steps which might be taken to increase the reliability of marking.

The marking of essay questions *can* be made more reliable.

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8. *Op. cit.*, p. 33.

9. *Ibid.*, p. 34.

As has been indicated in the quotations from the Indian team's report and in earlier paragraphs of this report, allowing less freedom in the question will contribute to consistency in marking. A further way of insuring that papers will be marked the same way by more than one examiner is to have the examiners meet and discuss and agree upon the marks to be assigned to different kinds of answers. Once they have agreed upon the answers, they should all then read the same sample of papers selected from all those to be read. And if there is a difference among examiners in the marking of any paper, the discrepancy should be discussed. This procedure should be repeated with different samples of papers until differences in marking are essentially eliminated, or at a very minimum. The examiners should remain together until all the papers have been marked rather than returning home after they have read a sample, which is the practice of some universities.

Some of the universities visited have already taken steps toward reducing inconsistencies in marking external examinations. In some instances, a head examiner will meet with the other examiners and they will discuss the answers and marks to be given. Unfortunately, however, after this preliminary discussion, the examiners usually return to their own colleges or centers to mark the remaining papers. The head examiner may make a check of a sample of the papers when the examiner returns them, to see whether the papers have been marked in accord with instructions. If there are discrepancies, he may or may not return the papers for remarking. Too often, however, the procedures are such that the head examiner makes the final decision on the student's mark.

Again, because so much hinges on the results of the external examination, it is urgent that improvements be made in the essay questions not only so that these questions will reflect teaching goals and practices but so that the marks will be reliable. Extensive research on essay questions indicates that very high consistency in marking *can* be achieved. However, this goal

cannot be reached by the minimum recommendations of the Indian team. It can be achieved only at the expense of an even greater increase in the time spent by more examiners.

Because teaching loads are already heavy, it does not seem appropriate to recommend that more time be spent on the evaluation of the current essay tests without also recommending that other methods of evaluation be considered. At every university visited by the American team, there was considerable discussion of the values and limitations of objective tests. Many common misconceptions about this type of examination were enunciated. Perhaps this is one reason why objective questions are now being used to such a limited extent.

Objective questions are no longer limited to the true-false type. Indeed the true-false question is rarely used in the United States because of its many limitations. Present-day objective questions are of many types. The most commonly used type is the multiple-choice, which consists of a question or an incomplete statement that the student is to answer or complete by selecting from the four or five suggested answers to the question, or completion of the statement. This type of question is very versatile and can be adapted to measure a large variety of abilities. Examples of its possible forms and uses may be found in a number of books on testing.

Another common misconception about objective questions is that they can measure only factual information. Knowledge in the field of evaluation has progressed to a point where this is no longer true. Objective questions can measure not only knowledge of facts but ability to analyze, interpret, synthesize, and evaluate,—as well as other complex abilities. Because it is a tool of education, objective measurement has of necessity progressed and developed to serve the more modern concepts of learning and teaching.

Some teachers fear that objective questions permit too

much guessing. If all of the student's answers are only guesses, he will then answer correctly only a small fraction of the total examination. Furthermore, there is a simple formula that can be applied to marks to adjust them for this possibility.

And one considerable advantage of objective questions is often overlooked: they do not require the student to write. At first this may appear to be a limitation. However, upon further consideration, the advantages become quite clear. No matter how conscientiously the examiner may attempt to restrict his evaluation of a student's paper to his knowledge of the subject, he will be influenced by the way in which the student writes. As Professor Menon says, "The scoring of answers is highly subjective and is influenced largely by the quality of hand-writing, the presence of phrases and references which the examiner recognises as familiar . . ." <sup>10</sup> Thus the student's mark is partly an assessment of his ability to express himself and partly an evaluation of his knowledge of the subject on which he is being examined.

At every university visited by the American team, teachers lamented the fact that students lacked facility in the English language. Teachers who have worked with students studying foreign languages know that of all the skills involved in using the language proficiently, writing fluency is the last to be achieved and the most difficult to accomplish. The essay question method in India requires the student to use a most difficult language skill to demonstrate his subject-matter knowledge.

The objective test, on the other hand, requires a language skill which students typically master earlier and more expertly than any other: reading comprehension. It therefore places a lesser handicap on the student who has mastered the subject-matter on which he is being examined but has not developed

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10. *Examination Reforms in Maharaja Sayajirao University of Baroda, 1950-1957* (Raopura, Baroda: M.S. University of Baroda Press, N.D.), p. 3.

high proficiency in the use of the English language.

Objective tests, then, have many advantages which would provide solutions to some of the criticisms of present essay examinations as they were described to the American team. Some of these advantages are as follows:

Educational objectives and teaching methods are by principle and philosophy the basic sources for the questions in objective examinations.

High levels of reasoning such as are required in inference, organization of ideas, comparison, and contrast, as well as knowledge of facts and concepts, can be measured by objective questions.

Wide coverage of a subject is possible with objective questions because a large number of them can be answered within a reasonable examination period.

More reliable evaluation is made possible because objective examinations provide larger samples of the student's learning and because marking is consistent.

Students are encouraged to build up a broad background of knowledge and abilities, rather than to study only segments of a subject on which they expect to be examined.

Students are motivated to study throughout the year because objective examinations allow greater coverage of what is taught in the classroom and from outside assignments.

Ability to write has a minimal influence on the student's mark when he is examined for his knowledge of a subject.

Optional questions can be eliminated because objective examinations can provide a sufficiently large number of opportunities for the student to demonstrate his grasp of a subject.

Teachers can spend their time on the more creative aspects of examinations—the writing of questions—and delegate to others the tedious and uninspiring aspects of examinations—the marking of papers.

Improving essay questions or adopting different types of questions will not remove all the problems of the present examinations. The awarding of marks must also be investigated. When the University Education Commission made a survey of educational problems and opinions, it asked a question regarding this matter. Those who responded to this question generally expressed some dissatisfaction or concern about prevalent practices<sup>11</sup>.

First, second, and pass classes and failure do not mean the same level for all universities, nor do they indeed mean the same for any one university from one year to the next. Examinations will be different from university to university, and within one university from year to year. To assign classes of marks and failures fairly, it will be necessary to study the results of examinations and to develop schemes for making them comparable from year to year at any one university.

### C. Practical Tests

Performance tests, such as the formal practical examination, can be *greatly* improved by applying the same principles of test construction which have been discussed for good essay tests. If it is an important objective that the student be taught how to

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11. *Report of the University Education Commission, December 1948—August 1949* (Delhi : Government of India Press, 1951), Volume II, Part I, pp. 331—460.

use his hands, how to respond to people, or how to perform various manipulations in the laboratory, it is then important to devise good measures of his progress toward those objectives. The important elements or characteristics of an excellent performance must be decided upon in advance and a simple rating scale—descriptive of, say five levels of performance from excellent to failing—should be established for each such element. The student should not only have a specific task, well-defined for him, but should also be told the basis for grading his performance. Multiple, independent examiners are essential for reliable marking. (See Lindquist, Chapter 12, and Michels and Karnes for specific methodology of developing good performance tests.) It is important that practical tests be sufficiently differentiatory of students so as to enable the teacher to rank-order the students, at least roughly, from high student to low student.

It has been observed that the *day-to-day-performance* of students in a complex situation, as in the clinical work of a medical college program, is rarely evaluated. Too much reliance is placed on the single, or at most two or three, practical examinations. The element of chance (easy or difficult problem, strange or familiar, etc.) plays too heavy a part in such examinations. Moreover, unless the practical test is graded well enough to differentiate the students as well as a written (*e.g.*, essay) test, the mere arranging of “marks” may give much less weight to the practical test than intended.

It has been observed that marks for different aspects of a subject, for example daily work and quizzes, laboratory notebook, written essay tests, and practical tests, are often averaged without regard for the variability of marks on each such aspect of the total grade. A component (for example, laboratory notebook) which has very little range of marks within the student group evaluated will, however, get *very little* weight if added and arranged “equally” with, say, a written test which has a wide range of obtained marks for the group of students.

The only simple solution is to determine the students' *rank* on each measure, *then* average the ranks. In this way, each component has equal spread of marks before averaging, or applying weights.

#### D. "Blanket Assessment"

One of the basic fallacies underlying the present long-term "blanket" assessment of students' learnings in Indian colleges rests on the mistaken assumption that the learning process proceeds best when the learner is evaluated in terms of large inclusive segments or blocs of subject-matter. Psychologically the contrary is true: learnings proceed more fruitfully and satisfactorily when the learner can see more immediate results, has continual knowledge of his status and progress, and when evaluation is geared to the teaching process in such fashion that the student achieves insights and understandings concerning his endeavors. To put it in another way, the learner is materially aided toward improvement by immediate information about the nature of a good performance, knowledge of his own mistakes, and awareness of successful results.

To motivate the student toward desirable habits of study and more effective learning, *marks* should be (1) functionally related to the learning process; (2) a natural outcome of the learning process; and (3) an inherent aspect of the learning situation, not artificial or imposed from without.<sup>12</sup> The basic principles outlined here are recognized by the Radhakrishnan Commission; *viz.* :

. . . Three years will be involved for the first degree. It is not desirable that all that work should be subjected to one examination at the end of the period . . . .

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12. For a more complete discussion of the general principles of learning and motivation, see William H. Burton, "Basic Principles in a Good Teaching-Learning Situation," *Phi Delta Kappan*, XXXIX, No. 6 (March 1958), pp. 242—248.

Sections of the course which are more or less self-contained can be made the subject of periodical examinations spread over the three years' duration. A scheme of such self-contained units of work should be prepared by each university and the student should be required to pass in all the units before getting the degree. Examinations should as far as possible be given in compartments, subject-wise and time-wise.<sup>13</sup>

Unfortunately, the Commission's recommendation has not as yet received the attention it deserves by Indian colleges and universities. But it is encouraging to note that in at least one university this important aspect of examination reform has been adopted and practiced with success for many years. At the M.S. University of Baroda, for example, one finds the "holding of periodical tests and setting of assignments, and fixing of proper weightage to these and the final university examination for purposes of the total evaluation of the student."<sup>14</sup> Furthermore, there has been the "adoption of [the] grade-credit system in some Faculties for the purpose of assessment of student progress and development, and for the award of diplomas and degrees."<sup>15</sup>

It has been rightly observed by many people concerned with higher education in India that until such time as no undue importance is given to a final *external* examination, the students as well as the teachers are slaves to rigid conformity.

### E. Topical Syllabi : "Knowledge Is Facts"

One of the cardinal principles of good modern evaluation is that it should be based on teaching objectives. This principle is well-stated by Salamatullah in a recent article on examinations:

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13. *The Report of the University Education Commission, December 1948—August 1949, op. cit., Volume I, p. 341.*
  14. *Examination Reforms in Maharaja Sayajirao University of Baroda, 1950—1957, op. cit., p. 7.*
  15. *Loc. cit.* The italics are ours.

In order to evaluate properly the outcomes of learning, the curriculum should be drawn up in accordance with well-defined educational goals. It is to be clearly stated what a given content of the syllabus is expected to do for the learner, that is, in what particular respect the mastery of that content is likely to modify his behaviour. The whole curriculum should be broken up into functional units indicating what each unit is meant for in terms of the learner's behaviour. This will greatly facilitate construction of appropriate tests to assess the outcome of learning and development of other adequate techniques of evaluation.<sup>16</sup>

At the present time, typically the only statement of objectives is the syllabus itself, and here they are normally stated in topical terms. Stated in these terms, the syllabus tells the teacher that his major objective is the dissemination of facts. This directive is reinforced by the fact that the all-important external examinations are based on the syllabus and they too are factually oriented. The teacher has no choice but to *teach* facts and the student has no choice but to *learn* facts.

In some subjects this unhappy situation is further intensified by the fact that the prescribed texts are inappropriate or outmoded. For example, in some English courses which presumably are to teach students functional use of the language, the texts prescribed contain essays and stories about situations and things which are quite alien to the environment and probably experiences of Indian students. Such material can hardly arouse interest, no less motivate students to read. And more importantly, it is an inappropriate vehicle for the achievement of the stated educational objective. Similar situations in connection with other subjects were described to the American team by teachers.

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16. Salamatullah, "Improvement of Examination (A Point of View)," *The Education Quarterly*, Vol. X, No. 38, (June 1958), p. 159.

A number of teachers told of important educational objectives they would like to achieve and modern teaching methods they would like to employ. Always, however, they indicated such changes were impossible because of the restrictions imposed by the syllabus—restrictions which are reinforced by the external examinations. The machinery for innovations exists but apparently it does not function.

Perhaps the solution to this problem lies in having teachers represented more on the Boards of Studies. One criticism of this recommendation will no doubt be that adding teachers to the present boards would make them so large that they would be unwieldy. It would not be necessary to have a teacher from each institution at all times. Three or four institutions might be so represented each year by a rotation system.

A similar recommendation was made by the Indian team with reference to the Board of Paper-Setters. They say in their report:

This Board should consist of two or three members drawn from among teachers in the colleges affiliated to the university concerned and two or three members drawn from among teachers in other universities.<sup>17</sup>

The next logical step in this discussion is to reiterate that because the external examinations are based on topical syllabi they must of necessity be measures of factual knowledge. And one could further decry the fact that because these all-important examinations are measures of the knowledge of facts, teaching and learning energies flow in this direction rather than toward the acquisition of more useful and more significant abilities and skills. Rather than repeat these already oft-stated problems and limitations, it seems more constructive to cite Salamatullah's observation on the relationship between educational objectives and examinations:

17. *Report of the Committee on the Indian Examinations Reform Project, op. cit.*, p. 27.

... Any improvement in examinations cannot be effected, unless the quality of education is improved. This is linked with the basic question of objectives that education must seek to achieve. It must be clarified as to what qualities must be produced in our young men through education. Further, educational objectives to be of any practical significance, must be reflected in the content of education and in the methods of teaching. Thus, the problem of improving the examination system does, in the last analysis, depend on that of the improvement in curriculum and teaching.<sup>18</sup>

It was frankly stated on several occasions by college and secondary school teachers that, because of the essentially factual nature of the learning process in most subjects, teachers not uncommonly supplemented their meagre incomes by doing a brisk tutoring business on the side—sometimes openly neglecting the day-to-day class-work in favor of individual tutoring; or the more ethical practice of postponing some intensive cramming sessions for the class until the last few weeks of the subject.

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18. *Op. cit.*, p. 159

## V

### PROPOSALS FOR IMPROVEMENT

#### A. Suggested Steps Toward Reform

THIS team has carefully considered the foregoing problems and shortcomings in the evaluation and closely related educational processes of Indian schools and colleges, where it was privileged to visit, observe, and enter into discussions. Despite significant cultural differences between India and the United States, the major goals of education in both democracies are quite similar; likewise the basic problems in devising the most effective methods of accomplishing those goals with limited resources are common to both countries. America, too, has overcrowded schools and a critical shortage of qualified teachers; and those who now devote themselves to the profession are overworked, underpaid, and accorded relatively meagre recognition. The differences are more quantitative than qualitative, and America has had the obvious advantages of, first, time to establish its educational and evaluation patterns since independence; and, secondly, financial resources to invest large amounts in the technical phases of new test development, experimental trial, and in the testing of these improved tests.

This American experience is now readily offered to India, not for *adoption* but for *adaptation* by Indian educators to their needs. While major changes can be made only gradually, there are many ways in which contributory action can be taken immediately. Education is so vital to a nation's development and progress, and must precede by so many years its desired outcomes, that long-range improvements in the process must be started immediately, and adequate resources to underwrite the

relatively low cost of these first steps must be given a high priority. Our next generation of citizens, leaders, scientists, and humanists is already entering the elementary schools! As in the United States, their education must be the foremost business of today.

It is therefore strongly recommended that:

- (1) School and college teachers, and administrators, be forcefully presented the immediate task of getting together at the institutional, departmental, and at the subject level to develop a specific and realistic set of teaching objectives, *in writing*, and in terms of desired changes in student behavior. Appropriate consultative help in this process will be needed as outlined below.
  - (a) These objectives must take into account not only present-day but future national conditions, and the diverse roles of well-educated graduates, so that they may contribute maximally to society through individual initiative and self-realization. The ideas of non-educationists, such as national or community leaders, should be solicited for this purpose.
  - (b) These objectives must also take into account the aptitudes, abilities, and individual goals of those student groups as may be selected for education in these divergent institutions and programs. Appropriate consultative help and teacher-education may be needed for this process. Emphasis in phrasing objectives should be on significant changes in student behavior (knowledges, skills, attitudes, etc.), and *not* on textbook topics.
- (2) When adequate objectives have been thus formulated by skilled teachers, and concurred in by appropriate administrators and governing bodies, they should be

effectively communicated to all those directly concerned in the teaching-learning process: teachers, administrators, students, parents, and others. Boards of Studies, *reconstituted as necessary to include more representative teachers and teachers skilled in curriculum planning*, should then translate objectives into suitable outlines of required learning experiences (behavioral functions with respect to subject-matter content) at various levels in each subject field. The term "course of study" is to be preferred to "paper."

After adequate objectives have been developed, the next step is for teachers to meet together, as for developing objectives, to decide upon the most appropriate kinds of evaluation instruments in the light of the curricular arrangements of learning experiences.

As the Indian Examinations Reform Team recognized, a variety of evaluation devices may be desirable or even necessary in order to evaluate student progress toward all significant objectives. The *essay test*, for example, may be suitable for informal assessment of small groups by the teacher himself, but the essay test will very likely be inappropriate for most external examinations where large numbers of students are involved. In the latter case, the essay test may be useful only for testing in a language course where the primary interest is in determining the student's ability to write.

- (a) If essay tests must be used, they can be greatly improved in contrast to the present widely used essay questions of poor quality among existing examinations. Briefly, (1) a good essay question must carefully and completely define the problem for the student so that he does not need to *guess* what the examiner wants; (2) the student should be

informed as to the basis of grading of answers (characteristics and points for each); and (3) the desired answer specifications and assignable points for each aspect of answer must be spelled out in advance so that two or more graders will independently agree within five per cent in marking a representative sample of answers.

- (b) Practical tests of a formal (or informal) nature could also be markedly improved by employing sound testing techniques. Extensive aid is available in such treatments of the topic as in the books of Micheels and Karnes, or Lindquist.
- (c) Teacher observations of student performance can be employed for formal assessment but there must be careful prior definition of the aspects of student behavior to be observed. Observational rating forms are already incorporated in cumulative records in use in Indian secondary schools. See *Andhra Secondary School-Leaving Certificate Scheme*, pp. 32-33, 55-56 (Reference in Appendix).
- (d) Oral examinations are generally unsuitable for formal testing of large groups, but are suitable for informal testing of individuals or in a classroom where time is not too limited. Except on an alternative form of question-and-answer testing, oral testing of more complex behavior requires careful planning, multiple observers, and other conditions which must be met before it can be considered a sufficiently adequate and standard measure for formal evaluation purposes. It may be the only appropriate type of test of oral speech skills, interviewing skills, and similar behavior.

## **B. The Dissemination of Improved Techniques**

As has been mentioned earlier, considerable work is being done in India toward the improvement of examinations. However, there are few systematic efforts for bringing these efforts to the attention of others. Some pertinent articles were found in educational journals but these, of course, go only to subscribers, except for the interested person who discovers them in his library search for information on testing. Books on the current status and problems in Indian education also have relevant comments on examinations but these are often imbedded in large volumes which by their size alone are somewhat forbidding to the reader who is primarily concerned with informing himself on evaluation techniques.

Some means are needed for spreading information on current practices and thinking more widely. One way of accomplishing this might be to compile a list of the names of the people at each university and college who are officially or unofficially concerned with examinations and classroom evaluation. It should surely include the members of Boards of Studies and, wherever feasible, Boards of Paper-Setters. This list could then be circulated and anyone who is working in the field of evaluation might use it as a mailing list for published and unpublished reports of their work. It is the professional responsibility of every educator, regardless of his field of specialty, to keep his colleagues informed of his findings and contributions to his field of knowledge.

The Examinations Committee of the University Grants Commission might make an important contribution to the dissemination of information on current activities in evaluation. This might be done by publishing regularly a brief bulletin—perhaps only four pages per issue—which would concern itself with news about what colleges and universities are doing about examinations. The “short stories” might be solicited from colleges and universities. In addition to such brief reports on

evaluation activities, the bulletin might also provide its readers with references to the literature which are worthy of attention. Such an "Examinations Information Bulletin" should receive a wide distribution—to a mailing list of the type mentioned earlier—lest it rest forever on the desk of the busy administrator or lest it become buried in the mountainous reading pile on some one professor's desk!

The American team would not claim to be familiar with all Indian literature on testing. However, what they have been able to read within a rather brief period seems to concern itself largely with discussion of the possibilities or obstacles for reform, and the pros and cons of essay and objective testing. Very little was found which demonstrated in detail how innovations have succeeded or failed, how current examinations are useful or wasteful, how examination questions were revised, and the like. Much has been written on theories and thoughts but little about actions!

Another suggestion comes to mind, though it seems almost too small to mention among the many more important issues which might bear further discussion. Readability is an important factor in getting and holding attention. Much of the present material on examinations is lengthy and in a format which the busy teacher and administrator must find difficult to read. Short papers with important points emphasized by headings, underlining, or bold print help the busy reader get the most out of his reading.

Reading is of course only second best to personal interchange of ideas and to working together toward the solution of common problems. Workshops on evaluation, both inter- and intra-university, could facilitate considerably the interchange of functional knowledge and skills. Such workshops should not be mere discussions of matters philosophical but should have some concrete goal. Each participant should come prepared to *work* on a project. Depending on how the membership of the

group is constituted, his work might be on one phase of a larger problem that the group as a whole is considering, or he might work on a specific problem of his own which is in accord with the purpose of the workshop. For example, the teachers in a science department of a college might set as a goal of the workshop the preparation of a test for the assessment of student learning at the end of a specified period. In this case, each teacher might write questions on a different unit of the course and at the end of the workshop these units could be combined to form the examination. On the other hand, a number of colleges might hold a workshop on the general problem of writing objective test questions. In this case, each teacher might come from a different department and it would therefore be more appropriate for a teacher to plan to write a short examination for his particular subject.

The success of workshops depends not only on having participants actually work on a problem; it also depends on the preparation they bring with them. Before attending a workshop, each participant should prepare himself by thinking about the project he will work on, assembling pertinent materials he will need, and generally informing himself about what is already known on the subject. Indeed, the announcement of a workshop should make clear what is to be accomplished and those who are not sufficiently interested in putting forth the required efforts, should be discouraged from participating.

The original concept of a workshop was *work*! Today far too frequently "workshop" is applied to any small gathering set up merely to discuss some matter. Too often, then, the major outcome of "workshops" is the relief a participant may feel from having had an opportunity to air his point of view—a catharsis!

### **C. A New Look at Standards and Grades**

The essentially organic relationship that relates teaching

to learning is split asunder in Indian higher education by the "battle-axe" of external examinations. Teaching, in too many instances, takes the role of a mechanical oral rendition of a textbook—and this textbook is at times one which is out of date; while learning on the part of students becomes a game of guessing the topics and cramming the subject-matter for regurgitation when called upon to do so. The accent falls upon memoriter work, not *education*. Practically every study of the educational scene in India highlights this anachronism. "It is commonly acknowledged . . .," states the *Report* of the Indian General Education Study Team, "that one of the defects of the present system has been to produce university graduates, who are, though reasonably well informed in regard to factual knowledge, often not adequately trained to meet new situations and quite frequently turn out to be incompletely developed personalities."<sup>19</sup>

Dr. K. G. Saiyidain is even more emphatic in his indictment, asserting that "when students are inspired *not* with the love of knowledge or the desire for the intelligent study of human problems and the intelligent service of great human purposes, but with the hope of passing certain prescribed examinations, the entire object of university education is defeated."<sup>20</sup> It is difficult to escape the conclusion that these ills largely emanate from the separation of the teacher from the taught: the bifurcation of the learning process.

The objective observer is literally amazed by the expensive and complicated examination system of checks and balances characteristic of higher education in India. This situation, however, is probably inevitable when examinations are used as a tool both to measure students' learnings and also as a yardstick to gauge the efficiency of colleges in measuring up to some "standard." Teachers feel that they are caught between Scylla

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19. *General Education : Report of the Study Team* (Delhi : Government of India, Ministry of Education Publication No. 261, 1957), p. 55.

20. *Op. cit.*, p. 164.

and Charybdis: for there is loss of prestige on the one hand if students are not "taught" in such fashion that their passing of the external examinations is promoted, as well as loss on the other hand when teaching does not proceed hand-in-hand with learning. Thus the external examination system becomes a kind of ogre that devours its children.

It should be observed that some institutions of higher education in India have already taken steps to ameliorate the shortcomings of external examinations by allotting a percentage (usually 20 per cent, but sometimes 50 per cent) of the aggregate marks to internal assessment. Such a phasing of examination reform is in accord with the recommendation of the Committee on the Indian Examinations Reform Project, and it may be supposed that a slice of the loaf is better than none; but it would be unfair to anyone to expect significant results from such an arrangement.<sup>21</sup> Research conducted to study such a relationship is apt not only to be inconclusive but very definitely skewed—probably in the direction of negative correlation and to the disadvantage of internal evaluation. At the M. S. University of Baroda, where internal assessment has been vouchsafed a long trial, the former Vice-Chancellor, Hansa Mehta, observes: "After working out our new programme of examinations for five years, we find that we have no regrets to record for the steps we have taken; on the other hand, we are happy that these steps have brought in a healthier academic life among teachers, a more regular and intelligent student participation in curricular and co-curricular activities and a sounder judgment of the talents and achievements of students."<sup>22</sup> Hansa Mehta could just as well have added : *without loss of standards.*

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21. The full statement of the Indian Team's recommendation reads as follows : "The various tests administered by college teachers in the course of a year as well as the rest of the work like participation in seminars, discussions and tutorials and homework like tutorial exercises and term-papers should be credited to the extent of 20% of the total marks, subject to supervision by university authorities."

*Op. cit.*, p. 63.

22. *Op. cit.*, p. iv.

There is nothing at all wrong with the desire for standards; the problem is to maintain them without destroying the teacher-student relationship. Standards are needed basically so that there is promotion of good practices in all the colleges and universities as well as in the high schools. In the United States such standards are mostly "set by the practicing members of the profession whose judgments are implemented through an association of schools (colleges and universities) offering training for that profession."<sup>23</sup> Such an association is essentially its own inspectorate and its own "watchdog"; and such a method of guardianship over standards, at periodic intervals, does not interpose a barrier between teachers and students; moreover, it does not fail, through its accrediting function, so to set up requirements that quality education is imparted by quality institutions. In addition, this scheme of accreditation serves to bring closer together the teaching members of the profession and the practicing members in the field.

The University Grants Commission together with the universities might investigate the considerable advantages that accrue from the scheme described. If some such plan were adopted, there would be no need to utilize the external examinations for this purpose, since it would automatically create conditions which would place reliance upon the teachers for the evaluation of students' progress in learning—where assessment properly belongs.

Internal assessment, wherever practiced, is enjoined to follow assiduously two basic principles: first, the principle of professional responsibility which is a corollary of teacher freedom in evaluation; and second, the principle of periodic assessment of students' learnings—to the end that the sympathetic relationship between teaching and learning not be discontinuous, nor students' fates be decided upon "one throw of the dice of

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23. E. D. Grizzell, "Accreditation," in Walter S. Monroe, Editor, *Encyclopedia of Educational Research* (New York : The Macmillan Co., 1950. Revised Edition), p. 4.

chance" at the end of a term or year.

This brings us to a consideration of "marks" and their reporting. To begin with, most educators agree that evaluation of students' learnings is not susceptible to extremely fine distinctions or discriminations. The science of educational evaluation has not progressed to the stage—and it is doubtful that it ever will—where the measurement of individual differences in learning can distinguish minute differentials among students as learners. Nine of ten colleges and universities in the United States utilize a scheme of letter symbols, and the most favored is a system of five symbols (A, B, C, D, E), the first four of which are passing marks or grades. Marks, of course, are valid means of reporting the status of students in those behavioral activities which are evaluated by the teacher on behalf of the educational unit. They may be allotted upon small or large units of classwork, and may be a finalization of the work of a full course or half course—full year or one term. The weight given for the various components of the final mark may naturally differ from course to course depending upon the nature of the course. However, so that learners may be aware of the importance of continuous application to study, it is better pedagogy to allot approximately half of the final mark to daily classroom work, a quarter to a third for performance on short tests and examinations, and about one-quarter for the final term or year-end examination.

The periodic reporting of final marks to students provides them with a means for evaluating their progress. When a student has been kept informed that he is not "measuring up to the mark," there need be no apology for his forced withdrawal. The supporters of higher education should continue their support only if the financial support already being given is legitimately, effectively, and wisely used. Higher education cannot and should not be conceived in the role of an "Ayah"—a nurse for the care of those youth who, although unfit for advanced education, have nothing else to do, but need adult supervision nevertheless.

Another advantage of the final mark for a half course or full course is that students who fail in only one or two subjects may repeat only those in the next term before moving on to more advanced work in the subjects failed. At the same time, of course, such a student would be permitted full credit in the remaining subject areas where his progress has been satisfactory and his past performance indicates acceptable proficiency. Such a scheme in India could be uniquely appropriate for students who do not pass their supplemental examinations.

#### **D. The Role of Research**

Local and national studies concerning the existing examinations, and related studies, should be initiated on a far more systematic basis than heretofore. A central advisory agency, such as the University Grants Commission's Committee on Examinations, with the consultative help of a specialist in research on large-scale testing could give overall guidance to such studies. Local studies now in progress should be encouraged toward completion and publication where appropriate, but financial assistance through state or national grants will be needed for major local studies or for basic studies on a nationwide basis. Studies now needed for planning and for later comparative studies, after significant changes are made in evaluation techniques at the school and college level, are:

- (a) Studies of the relation between secondary school internal assessments, where available, and marks on the school-leaving (or "matriculation") examination. These should be *correlational* studies, and not merely descriptive statistics (*e.g.*, frequency distribution of marks by school, by college, etc.).
- (b) Similar correlational studies of the relation between school-leaving examinations and performance in college, as measured either by teachers' assessments or by

intermediate and baccalaureate degree examinations.

- (c) A thorough study of the factors related to student withdrawal from school and from college. Comparative studies need to be made of student groups in different colleges or curricula.
- (d) A study of the comparative aptitude for college study among students in different curricula. Verbal and quantitative aptitudes especially should be measured among well-sampled secondary and college students, with the data separately treated for different curricula programs and fields of study. There is some belief among alert educators that the physical sciences are attracting the best talent for advanced study, to the detriment of the humanities and social sciences. This can be investigated through the use of testing techniques now available.
- (e) Coordinated studies of internal *versus* external assessment should be made, especially where there are grounds for believing that both kinds of measures are relatively sound.
- (f) Detailed studies of the individual questions on existing external examinations should be made to determine the examiner-to-examiner reliability, distribution of marks by question, correlation of marks on questions with total marks on the paper, relative difficulty of questions, and so on. The matter of *options* on external examinations needs to be studied carefully, to see what options are chosen and avoided and by what kinds of students.
- (g) Studies of the characteristics of student groups admitted to various colleges should be undertaken, especially by the individual universities. Measures beyond

external examination results need to be investigated, such as age, place of residence, secondary school performance as revealed by cumulative school records, teacher ratings, and so on. Where adequate data are found, correlational studies of the kind proposed in (b) above should be undertaken with a view to determining whether these other data can supplement (or even supplant) existing external examination results for admission purposes, by providing better prediction of college performance.

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## VI

### RESOURCES : NEEDED AND AVAILABLE

#### A. Evaluation Centers

AT the universities visited by the American team, it was obvious that many teachers and administrators were interested in initiating reforms in internal and/or external examinations. At least one university had taken the first step toward innovations and was engaged in outlining its objectives. At other universities, there seemed to be sufficient interest to warrant the prediction that they too would wish to take some definite action in the near future.

In all instances, however, some technical guidance seems indicated to give the necessary impetus to action. This is particularly true with reference to test-writing techniques. Some university faculty members, for example, seem interested and ready to try their hand at writing better essay questions or at constructing objective tests, although they seem hesitant to move ahead without more concrete help in the actual writing of examination questions.

Where might this kind of assistance be obtained? The University Education Commission suggested one source of such assistance: "Some qualified persons are available at the present. The Commission encountered some in the course of its visits to the universities. More may be available and their services should be utilised in this connection."<sup>24</sup>

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24. *The Report of the University Education Commission: December 1948--August 1949, op. cit.*, Volume I, p. 338.

The American team also found this to be true. The Psychometric Unit at Aligarh, the Institute for Psychological Services at Patna, and the Indian Statistical Institute have been mentioned earlier in this report as possible sources of assistance in test construction and in research. These might serve as *immediate* sources of assistance.

From a long-range point of view, the Indian team's recommendation on this matter is well taken:

... Finally we recommend that there should be an evaluation unit in each university. Such units can contribute a great deal toward the building up of a nation-wide movement in the field of examination reform. They can prepare the ground for reorientations, psychometric studies and advisory programmes in each university. They can prepare statistical analyses of results which will serve a diagnostic function and acquaint the students with their strengths and weaknesses in a particular field.<sup>25</sup>

It will take time to establish such units. In the meantime, some steps can be taken toward the achievement of this goal. When the University Education Commission recommended that each university have a Board of Examiners which would serve some of the same purposes as the evaluation units recommended by the Indian team, it recognized that it would be necessary to get trained personnel to staff the Boards they recommended. In this connection they suggested the following: "For this purpose, we might enlist the services of competent experts in the field from other countries."<sup>26</sup>

The American team offers a similar recommendation: that the help of American specialists be used in starting an All-India

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25. *Report of the Committee on the Indian Examinations Reform Project*, *op. cit.*, p. 39.

26. *Op. cit.*, Volume I, p. 338.

**Evaluation Unit.** The functions of this suggested Unit would be entirely advisory in nature. It would have *no authority to dictate* to universities what they are to do about external examinations or classroom evaluation. Rather, its activities would be such as the following:

Conducting seminars and workshops for teachers, members of Boards of Studies, examiners, and paper-setters on the construction and use of external and internal examinations of all types—essays, objective tests, practicals, orals, and others.

Providing guidance and counsel to existing evaluator or psychometric units as requested.

Advising administrators on the possible nature and uses of examinations, procedures for conducting examinations, and other matters related to external and internal assessment.

Training Indians who would eventually head up evaluation units in universities. (These persons should be on a part-time teaching schedule while working with the proposed unit.)

Training Indians who would be on the permanent staff of the All-India Evaluation Unit.

Helping universities design studies to assess the effectiveness of various types of examinations for their purposes, to investigate problems of classroom evaluation, to study the causes of student failures, and to gather further knowledge on other types of educational problems.

Arranging for statistical and other services which colleges and universities might require for examinations or research purposes.

Preparing publications that would aid in the construction, use, and administration of external and internal examinations and in the interpretation of the results of such measures.

Providing consultative services to individual institutions on their specific evaluation problems.

Arranging for state and national conferences of those concerned with external and internal examination problems, so they may hear and participate in discussions of evaluation experiences.

As far as personnel is concerned, it is recommended that one American evaluation consultant be asked to come to India to direct this unit for a period of at least two years, and preferably three years. Two or three promising and dedicated Indians should be assigned to work with this consultant for the purpose of receiving training in evaluation. One of these, the one most likely to head up the All-India Evaluation Unit after the American consultant leaves, should be sent to the United States for a year's intensive training in various types and aspects of evaluation and examination.

The American consultant and the Indian trainees should, of course, be given office space. Also, they should have secretarial and clerical assistance so they may direct their full energies to professional work and not dissipate their efforts with more routine matters.

This staff should be supported for at least a year, and preferably two years, by American consultants who are specialists in subject-matter fields but who are also competent in evaluation methods. There might be one consultant in each of the following fields: physical and natural sciences, social sciences, and humanities. The special function of these consultants would be to conduct seminars and workshops with teachers, Boards of

Studies, and examiners on the framing of curriculum objectives, the planning of teaching and evaluation methods, and the construction and evaluation of examinations. These seminars would result in the completion of specific tasks such as a written statement of objectives, and examination in the subject under construction, and procedures for marking the examination. Hence each of these consultants would have to spend several weeks at each center visited, and perhaps revisit each center to provide further help after the examination prepared in the seminar or workshop has been administered to the students.

The work of these curriculum-evaluation specialists would be coordinated by the head of the All-India Evaluation Unit. The Unit itself could quite appropriately be financially supported and immediately responsible to the University Grants Commission, with the UGC Committee on Examinations serving as its Advisory Board.

## **B. Reference Tools**

Another source of immediate help to school and college teachers (and administrators) who are interested and able to proceed on their own initiative are the valuable ideas, methods, and samples of improved techniques to be found in various reports published in India. (See Reference List.) In addition, certain other references to the techniques of improved teacher-prepared tests are given in the reference list. Attention is called particularly to the book by Micheels and Karnes which deals with *practical* examinations.

A brief but authoritative guide to the formulation of teaching objectives, with a discussion of their relation to teaching methods and materials, and to examinations is found in the booklet by Ralph Tyler. This should be in the hands of every school and college curriculum or examination committee.

## **C. Avenues of Communication**

A paramount problem in almost any large profession is that

of adequate communication between and among line and staff members. The problem is apt to be particularly acute in a democracy—especially one that has been established rather recently. In India, this problem is further accentuated by a background of colonialism as well as that of princely absolutism.

Everywhere we visited in India we found enclaves of groups or individuals busy at the task of examination reform. In most cases, however, they labored unaware of similar efforts elsewhere: most seemed genuinely surprised to learn that there are other workers already in the vineyard.<sup>27</sup> Valiant efforts towards effective communication are, of course, being made; and much has already been accomplished in a short time. Nevertheless, it seems clear that there is a need for speeding up the tempo toward improvement of inter-communication among the teaching profession.

The University Grants Commission, for example, might consider publishing a newsletter or journal for the reporting of activities in the field of evaluation. University registrars could derive considerable advantage by organizing an association for consideration of mutual problems; and also find it useful to have a publication of their own to exchange views on their special problems. There is advantage, too, in state conferences or symposia organized in terms of subject areas or a group of subjects. Many more similar organizations and other media of communication are possible. These are not luxury items: they are indispensable in the development of a sense of togetherness, *esprit de corps*, and a commonalty of approach toward the promotion of the cause of education as well as the advancement of the interests of the teaching profession.

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27. Of special interest to Indian educationists interested in examination reforms is: *The Education Quarterly*, X, No. 38 (June 1958). Practically the entire issue is given over to views on this subject by Indian workers in the field.

#### **D. Utilization of Teaching Staff and Physical Plant**

It is evident that new financial resources will be needed to carry out certain of the steps we have recommended, such as bringing some technical assistance directly to university faculties in their efforts to define teaching objectives, to experiment boldly with new teaching and internal assessment techniques, and to carry out essential studies. In some cases, because of the lack of people trained in educational measurement, considerable continuing help may be necessary on certain campuses; in other cases, where the trained people are now on hand, they will need to be freed from at least part of their current *workload* by the taking over of their teaching or administrative duties by supplementary personnel, possibly of a junior level. Major financial expense would be entailed if one or more experts were engaged on a full-time basis for one or two years, with responsibility for guiding the whole examination reform effort and giving direct assistance to universities undertaking significant changes and improvements.

A word should be said about the common complaint that teachers are too over-burdened to carry out any new ideas on a trial basis. It is our observation that full use is not now being made of great resources in the form of post-graduate students who could, as in America, with small stipends take on a major share of teaching—with minimal supervision by senior staff—in the elementary courses of their subject. This would serve, too, to give these embryonic teachers some valuable teaching experience. Another source of time for teachers is to free them from considerable paper-work, even from the tedious reading of relatively routine student home-work or other exercises, by using post-graduate students, or even women graduates who desire to supplement their incomes, to do such work under guidance of senior staff.

Another great resource of additional teacher time can be tapped by re-examining the curriculum to see if there is not

considerable unnecessary overlap between parallel programs, especially at the elementary levels, as for example the B.A. (Pass) versus B.A. (Honors). Perhaps, too, there are *some* subjects especially at the more advanced levels which are "luxury items" in a crowded curriculum.

An even more striking possibility noted by these observers is to reduce the number of contact hours of teacher with student by putting the student more on his own, to study outside of class for more hours than within the classroom. Typically in America, the student carries a weekly program of about 18 hours in contact with teachers in final class-periods. He is told, and expected, to put in about 36 hours of study each week outside of class-periods. The demand on teacher time is much less, then, as contrasted to a weekly class schedule in Indian universities of as much as 33 contact hours with the student. If textbooks are in short supply, multiple copies can be placed on a reserve shelf in the library—and the library can be kept open until 10 or 11 o'clock in the evenings throughout the week with only a skeleton staff of clerks during those evening hours.

With some ingenuity, teacher load can further be reduced by a few simple devices. A chemistry professor could distribute cyclostyled copies of formulas to accompany his lectures, so that the student is then free to concentrate on the teacher's discussion and not to be slowed or confused in note-taking by the sheer mechanics of much copy work from the blackboard.

One idea which is almost revolutionary, but has such merit that it is being adopted by several major universities in America is the rescheduling of the entire academic year so that there may be three equal and full terms rather than only two.<sup>28</sup>

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28. The University of Pittsburgh, Pittsburgh, Pa., established this type of academic year beginning with the fall semester, 1959. Interested educators in India are invited to write for details concerning this unique plan.

It is quite feasible to have three 15-week terms and still have about a month of vacation in the middle of the calendar year. This "trimester plan," permits the utilization of university facilities for an eleven-month, rather than a nine-month year, and thereby permits the adding of 50 per cent more students without increasing the number enrolled during any one term. For the student there is the major advantage that he can complete 4 years of college work in  $2\frac{2}{3}$  years, or college plus 3 years of post-graduate work in *less* than 5 calendar years. The plan is best carried out on an optional basis for both students and teachers. If 50 per cent more students are enrolled—and they might be admitted 2 or 3 times a year—then teachers' salaries can be increased at least proportionately for the two additional months of teaching within any calendar year. The plan has other advantages for the student: by graduating sooner he can begin earlier his earnings at a higher rate and pay for his education (if based on loans) more rapidly than if he takes work at much lower pay during the present vacations before graduation. The major gain from a plan such as this—and it should not require any real reconsideration or "acceleration" of actual teaching hours—is that it does make it possible to admit more students in this age of increased numbers, without having to increase the physical plant or teaching facilities by a proportionate amount.

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