

1.2 Examination Reforms in Indian Universities (1994)

Historical Perspective

In India, establishment of a university dates back to 1857 when one each at Calcutta, Madras and Bombay started functioning. The examination system ever since has been criticised for its purpose, relevance and effectiveness. The *Indian University Commission* in 1902 painfully observed:

It is beyond doubt that the greatest evil from which the system of Indian University education suffers is that teaching is subordinated to examination and not examination to teaching.

Examination Reforms in the Post-Independence Period

A *University Education Commission* (1948) was set up to look into the system of education and examination and make suitable recommendations. The Commission stated that "if members were to make just one recommendation to reform education, they would identify the area of examinations as one in which urgent need and top priority for reforms would necessary". Some recommendations made in the area of examination were the following:

- i) A thorough study of scientific methods of educational testing and appraisal be undertaken by the Ministry of Education and at the universities with a view to applying these results in Indian educational practice.
- ii) Each university should have a permanent full time Board of Examiners with a small staff of assistants for clerical and routine work. All the members of the Board (not exceeding three) should have at least five years teaching experience and at least one should be an expert in the field of testing and statistics.
- iii) One-third of the marks allotted to each subject should be reserved for work done during the course of instruction.
- iv) Standards for success at the examination should as far as possible be uniform in the various universities and should be raised.
- v) The system of awarding grace-marks should be abolished for the first degree and all higher examinations.
- vi) Viva-voce examinations should be employed only for PG and professional degrees.
- vii) University education should be placed on the concurrent list.
- viii) The University Grants Commission should be set up for allocating grants to the universities.

Almost at the same time, the State Governments became increasingly conscious about improving their system of education. Around this time, the Mudaliar Commission (1952-53) also gave specific recommendations in regard to examination reform (especially for secondary education).

Following the Mudaliar Commission Report, the Union Ministry of Education established an All India Council for Secondary Education (AICSE) and later (around 1956) created an expert body called the Central Examination Unit. While this provided the real impetus to examination reform at the school level, the absence of such an organised unit for the University Examination System accounted for a delay of more than a decade for systematic implementation at the university level.

Seized with the problem of implementing reform, the Ministry of Education in 1957, invited Dr. Benjamin Bloom, then Chief Examiner of the University of Chicago, to advise on the Examination Reform Task. Through discussions, workshops, etc., he assisted the Ministry in developing the required Plan of Action. Some recommendations made were as follows:

- i) Periodical tests given during the year by the teacher should count as part of the final work assigned to the student.
- ii) Consideration should be given to methods of internal assessment which will limit abuses and favouritism on the part of both teachers and students.
- iii) As far as possible, the examination should measure the significant learning in a subject rather than hold the student for memory work on the less significant details of the subject.
- iv) If examinations can be used to develop better methods of study and increase independent learning by the student, this would be a major gain to be sought.
- v) If students are not really capable of university work by reason of lack of ability or motivation, they should be identified as early as possible so as to reduce the burden on the university and the time and expenses on the student and their parents.
- vi) There should be a greater variety of evaluation procedures used in both internal and external assessment.
- vii) The chance elements in present examination procedures should be reduced and the student should be expected to learn the entire subject rather than just a few portions of it.
- viii) A few selected members of the different subject groups should be given additional training in evaluation theory and practice and be appointed as members of a Central Examinations Unit.

In 1959, AICSE and CEU were absorbed in the Ministry of Education. In 1961, the NCERT was established and the Cell became a part of NCERT.

Strong impetus was given for the examination reform movement when the Kothari Commission was set up by the Government of India in 1964. It gave concrete recommendations on examination reform for all stages of education. Some of its recommendations with regard to higher education were:

- i) A new approach to evaluation should be developed to attempt

- a) to improve the written examination so that it becomes a valid and reliable measure of educational achievement; and
 - b) devise techniques for measuring those important aspects of the student's growth that cannot be measured by written examinations.
- ii) External examinations should be improved by raising the technical competence of paper setters, orienting question papers to objectives other than the simple acquisition of knowledge, improving the nature of questions, adopting scientific scoring procedures and mechanising the scoring of scripts and the processing of results.
 - iii) The internal assessment should be shown separately from the external examination marks.

The Report of the Education Commission (1964-64) made several recommendations for the improvement of teaching and evaluation. The important ones pertaining to evaluation were:

- i) In all teaching universities, external examination should be replaced by a system of internal and continuous evaluation by the teachers themselves.
- ii) The UGC should set up a Central Examination Reform Unit to work in collaboration with the universities. Special units for examination reform should also be set up in some universities who can be persuaded to organise **examination reform in a big way**.

The most significant landmark in the history of Examination Reform in Higher Education was the National Seminar organised by the then Inter University Board of India and Ceylon (now the Association of Indian Universities) in January 1971. Many important issues were thoroughly discussed and a plan for vigorous and sustained action was evolved. A set of the following practical and practicable recommendations were made and a document entitled *Examinations in Higher Education was brought out*.

- i) With regard to the major area of 'Tools of Assessment', it was recommended that respective Boards of Studies should clearly define objectives in each subject - in terms of the course content and also in terms of qualities that a student is expected to develop at the completion of the course.

Among the tools recommended were essay type, short answer/structured type, objective type, and it was strongly recommended that a 'pool of questions' (now called, 'Question Banks') be developed in every major discipline/subject.

- ii) Moderation in respect of question papers was suggested and also review of questions and question-papers. It was felt that paper-setters and moderators should be trained.
- iii) For the first time, this seminar called attention to the very purposes of practical and oral examination and suggested ways and means of achieving them.

- iv) It recommended that 'open book' tests be given only at the PG level and the quality of questions must be entirely different for closed book test questions.

The other important issues discussed were the semester system, internal assessment, scoring, scaling and moderation of results, the grading system, unfair practices during examinations, etc.

The seminar also called upon the UGC and the Inter-University Board to organise a well-staffed Unit at the national level for research into problems of examinations. Such an organisation can also promote the establishment of similar units in the various universities and colleges and also undertake training of people in the new techniques, locally as well as nationally.

Among the universities which pioneered the introduction of Examination Reforms, two stand out as the most effective ones: Gauhati and Calicut. The VC of Gauhati University, Dr. Taylor himself, initiated very pioneering studies and investigations two decades before any concerted action in the form of Examination Reform could be devised. Randomisation of answer-scripts, scaling of marks of different examinations, improvement of essay questions, design of question papers scientifically are some of the reforms introduced by Gauhati. In 1971, the University of Calicut under Its VC Dr. Gani introduced various reform measures under the expert guidance of Dr. Walker Hill, Fullbright consultant on Examination Reforms. A Plan of Action was developed which involved the following basic issues relating to Examination Reform:

- Frequency of examination
- Importance of instructional objectives
- Design of question papers
- Types of question
- Optional questions
- Language of examination
- Internal assessment
- Scaling of marks
- Grading, etc.

A small booklet entitled *Improvement of Examination* was prepared and circulated as resource material. An Examination Reform Unit was also established.

A very important landmark in the history of Examination Reforms in Higher Education was the endorsement by the UGC (in August 1972) of the recommendations contained in the document: Examination Reform - A Plan of Action' prepared by a working group set up by the Ministry of Education and Social Welfare.

A small booklet with the same title was published in 1973 and this was followed by a revised edition in 1976. The period between 1973 and 1976 was a significant period in the history of Examination Reforms.

A dozen or so universities were chosen to initially implement the Examination Reform procedures contained in the document with the financial support from the UGC for maintenance of core staff (co-ordinator/statistician/secretarial assistants) and conduct of training workshops/seminars, etc.

UGC Guidelines from the Examination Reform: A Plan of Action

i) Internal Assessment

- a) A system of internal assessment should be introduced as a supplement to the external examination, based on periodical evaluation. The results of these assessments should not be mechanically added to the external marks, but kept separate and both should be shown side by side in the final certificate.
- b) To avoid deliberate tendencies towards high or low marking:
 - All internal assessment should be 'open' (marks or grades should be immediately known to the students).
 - The assessed answer-paper should be returned to the students so that they can complain/seek a clarification regarding their grades.

ii) Marks and Grades

- a) There are several uncertainties regarding the 101 point marking system:
 - The thing to be measured, Viz. the candidate's performance is invariably ill-defined. (Is it memory or intelligence or power of expression or a combination of one or more of these characteristics that is measured?)
 - It is assumed that there is a 'true mark' for each script. However, the actual examiner, at best only makes an estimate of the 'true' mark. This estimate is a 'raw' mark and is subject to considerable error.
- b) The only scientific way of sorting out candidates taking an examination is through a system of grading.
- c) If an overall grade is to be awarded, the grades in individual courses may be weighted according to the credit hours of the courses concerned, e.g. if the grades are g_1, g_2, g_3 , etc. and credits for courses are c_1, c_2, c_3 , etc., the average grade would be:

$$\frac{g_1c_1 + g_2c_2 + g_3c_3 + \dots}{c_1 + c_2 + c_3 \dots}$$

iii) Question Banks

- a) An examination is meant to test the achievement of a student in a subject and a student who is being examined must know how he/she is going to be examined. Our examination papers often cause a variety of surprises to a student taking the examination and make him/her write his/her answers under abnormal conditions. Reform on priority is necessary for removing {his serious defect in our examination system.

- b) Defects often creep in the examination papers set by a board of paper setters within a limited time.
- c) Ordinarily, a few people are appointed to draw up a syllabus. A few others maybe appointed as members of boards of paper setters. The majority of teachers do not enter the scheme of examination at any stage in anyway. This lack of participation creates frustration and loss of a sense of responsibility. Their sense of participation must be increased.
- d) The concept of Question Bank has been evolved to eliminate the glaring defects pointed out in (a), (b) and (c) above. With the availability of Question Banks (QBs) it will become possible to obtain uniformity of standards in question papers.
- e) The operation of the scheme of QBs is also spelt out in detail in the guidelines.

The QB assist better preparation and the setting of a well-designed question papers.

Such QBs are expected to be revised every year even when the syllabus remains the same. The revision may consist in dropping a few questions, modifying a few QBs on the basis of comments received from teachers or adding new questions. Therefore, the QB will continue to be a live component in the academic framework.

During the year 1973 to 1976, the UGC convened four workshops at Madurai, Ahmedabad, Chandigarh and Bhubaneshwar to discuss problems relating to Examination Reforms. These workshops broadly endorsed the UGC Scheme of Examination Reform and accepted the philosophy outlined in *Examination Reform: A Plan of Action*.

A series of workshops were later held at some universities to discuss the details and prepare guidelines regarding 'grading'.

Several universities have already taken steps with regard to internal assessment, question banking, grading, semester system, etc. All these measures form an integrated core and therefore should not be taken one in isolation from the other.

Inspired by the proceedings of the National Seminar convened by the then Inter University Board of India and Ceylon, (the Research Cell (now called Research Division) was established and fully financed by the Ministry of Education primarily to undertake research and development in the areas of examinations. A concrete direction to their effort was made in the year 1975 when a series of activities namely research, development, case studies, training and extension, and consultancy work relating to examinations was started in right earnest.

The *Plan of Action* of UGC (1973-76) recognised the shortcomings of written examinations (viz. emphasis on memorisation, subjectivity, poor content coverage, invalid questions, etc.) and suggested a series of measures and steps for implementation by several universities. The Research Division of the AIU supplemented these by actually working with the faculty in different universities to primarily train them in writing of better quality questions/items of different kinds to test not only recall of facts and information, but also higher order intellectual abilities.

In a recent National Seminar on Examination Reforms, a *Minimal Reform Programme* was drawn up for a large number of universities not yet adopting any such reform. It was strongly recommended that they must have clearly defined institutional objectives, content, blue prints for papers and good quality questions of different types to prepare meaningful, valid and reliable examination papers.

UGC Programme of Examination Reforms in Universities

The UGC has been implementing a major programme of Examination Reforms since 1974. The main emphasis of this programme has been on the following aspects of examination reform:

- i) Continuous internal evaluation should supplement the existing final examinations.
- ii) Question banks should be developed in order to eliminate some of the shortcomings in the setting up of examination papers and as a means for revision and modernisation of courses of study.
- iii) Introduction of the grading system in place of the existing marking system in order to increase the reliability of assessment and to bring about better comparability among different subjects.
- iv) Introduction of the semester system in order to ensure greater flexibility.

In order to implement these measures, the UGC has been, from time to time, assisting the universities in the formulation of guidelines, organisation of seminars, and orientation of teachers for the implementation of the reforms.

Examination Reforms Units

The Commission has also been assisting the universities in setting up 'Examination Reform Units'. Such Units are presently functioning in twelve universities/ institutions in the country, and similar units are likely to be set up in other universities/institutions. The functions of these units are to:

- collect data to evaluate internal assessment scheme and other examination reform measures
- monitor information to the academic community as a feedback
- standardise procedures for moderation or scaling of internal assessment scores
- analyse examination results and prepare reports

- organise workshops, seminars, training programmes, etc, on topics relating to examination reform
- publish material on topics like grading of students, scaling procedures for moderation of internal examination marks, maintenance of cumulative records of students' achievements, etc.

review standards of education and examinations in different courses.

Present Status

As a result of the steps taken by the Commission during the last 10-12 years, the position as on 1989, to implementing of various measures of examination reforms is summarised below:

- i) Continuous internal evaluation at different levels has been introduced by 52 universities, 18 institutions deemed to be universities and 23 agriculture/technology universities.
- ii) Question banks have been or are being developed in 18 universities, 8 institutions deemed to be universities and 5 agricultural universities.
- iii) Grading system is in operation in 23 universities, 12 institutions deemed to be universities and 22 agricultural /technological universities.
- iv) Semester system is in operation in 51 universities, 13 institutions deemed to be universities and 19 agricultural/technological universities.

The progress in the implementation of reforms in examinations has been slow. It is mostly the unitary universities and those which are mainly offering courses in professional fields (agriculture, engineering, technology, applied sciences, etc.) which have implemented any worthwhile examination reforms. The general run of universities, especially those with a large number of affiliated colleges, have, by and large, not implemented these reforms in any significant manner.

Observations

- i) Examination reforms would not be practicable or successful unless there are reforms in the design of courses, their structure, etc.
- ii) Active involvement of teachers is a necessary condition for the success of examination reforms.
- iii) Organisation of orientation courses and training programmes to motivate teachers should be arranged.
- iv) A distinction should be made between continuous internal evaluation and external examinations, both of which measure different skills and abilities. Internal

evaluation should be open and the scripts should be shown to the students. While continuous internal evaluation worked well in unitary universities, it had not worked so well in colleges where it sometimes led to unhealthy competition among colleges.

- v) Question Banks should be developed by universities on their own.
- vi) The objective of the Question Banks is to improve upon the existing question papers and they should be available to the students in time.
- vii) Grading system should be introduced in the universities by converting the numerical marks into grades as an interim measure. Progressively, numerical marks should be dispensed with. In practice, however, the universities which have adopted the grading system are reverting to marking system mainly because no equivalence was available between marks and grades.
- viii) For the effective implementation of the semester system, it should be linked with unit courses to enable students to have greater flexibility in the combination of courses and to offer courses on an interdisciplinary basis.

Programme of Minimum Examination Reform

In 1983 the Commission had advised all the universities and institutions deemed to be universities to implement the following minimum examination reform programmes relating to syllabus/question paper and conduct of examinations:

- i) The syllabus in each paper should be demarcated into well-defined units/ areas of content alongwith a topic-wise break-down. The units may be numbered.
- ii) Examiners should be free to repeat questions set in previous examinations. This is necessary in order to ensure that students do not leave out important portions of the syllabus. Instructions to paper setter should be amended accordingly.
- iii) There is often a very wide choice given to students for answering questions, say, 5 out of 10. Such over all choice restrains the area of knowledge with which a student can pass an examination and is, therefore, undesirable. If there is choice, it should be provided by alternate questions in each unit of syllabus.
- iv) No examination should be held without fulfilling the requirement of a minimum number of lectures/tutorials/laboratory sessions, etc., and this should be clearly laid down by the university.
- v) The university must take all steps for the proper conduct of examinations such as, effective security measures, proper supervision and invigilation, cordoning off the examination centres from the range of loudspeakers and other interference, flying squads and stern action in all cases involving copying and use of unfair means.

Progress of Implementation of Minimum Examination Reform

From the available information, the progress of the implementation of the minimum examination reform programmes relating to syllabus/question papers and conduct of examinations is summarised as follows.

- i) 89 universities/institutions have taken or are taking steps to demarcate the syllabus in each paper into well-defined units/areas of content alongwith a topic-wise breakdown.
- ii) 85 universities/institutions have decided tha examiners should be free to repeat questions set in the previous examinations.
- iii) 84 universities/institutions have decided that the choice for students should be restricted to each unit of syllabus instead of giving wide choice to students for answering of questions.
- iv) 81 universities have supported the view that no examination should be held without fulfilling the requirement of a minimum number of lectures/tutorials/laboratory sessions.
- v) 86 universities/institutions have informed that they are taking steps to ensure smooth measures, proper supervision and invigilation, and stern action in all cases involving copying and use of unfair means.

NPE and Examination Reform

The Programme of Action for implementation of the National Policy on Education outlines certain short-term and long-term measures for examination reforms. These measures also emphasise the lace of continuous institutional evaluation, introduction of grading system, efforts at improving the conduct of examination by universities which have a large number of affiliated colleges, etc.

Among the long-term measures proposed are development of an alternate system of evaluation in place of the existing external examinations, establishment of some universities functioning purely as examining bodies, implementation of major academic reforms like flexibility in combination of subjects, modular structure, provision for accumulation of credits, redesigning of courses, decentralisation in the evaluation process, etc.

These measures were extensively discussed in the joint meeting of the Coordinators of Examination Reform Units and the members of the UGC Implementation Committee on Examination Reform held on March 23, 1988 in the UGC office, New Delhi. The Committee noted that most of these measures were covered under the "plan of action " drawn by the UGC for the purpose.

As regards the progress of Implementation of the Examination Reform Programme, it is noted that the programme had not failed entirely. In fact, it had succeeded well and got institutionalised in IITs, IIMs, and the unitary university departments. Many of the concepts such as, objective and short- answer type questions had been widely accepted and incorporated into the examinations held at the university, state and national levels. However, the programme did not have the expected success in the affiliating universities; and the causes for the failure being as follows:

- i) The universities selected by the Commission at the time of launching this programme introduced various measures of reforms without adequate planning and preparation and motivating the teachers for the purpose.
- ii) The examination system prevailing in the universities is of century old and so deep rooted that the changes proposed did not get the favourable response from the teaching community in general.
- iii) The employing agencies including the Union Public Service Commission insisted on the marks secured by the students in their examinations, as a result the grading system, introduced in some universities in place of marking system, was given up subsequently.
- iv) The centralised nature of functions of the affiliating universities basically contradicts the 'decentralised nature' of the semester system.
- v) The present system of centralised university examination is convenient and beneficial to all the students, teachers and universities. Broadly, the students need to study only before the examinations, the teachers get examination remunerations and have not to face direct pressures or accountability, and the universities rely heavily on the examination revenue.

To sum up, the following hurdles are encountered in the implementation of the exam reforms:

- Inherent resistance to change by teachers, students and unscrupulous elements who use unfair means.
- Lack of information among teachers and educational administrators regarding subjectivity, unreliability and lack of validity of present examinations.
- Vested interests, i.e. economic benefits received by the teachers, and . university interests of existing exam machinery.
- Lack of suitable and successful models in the affiliating universities.

Inadequate training of teachers.