

**Report of the Task Force
on
Faculty Shortage and Design of Performance
Appraisal System**

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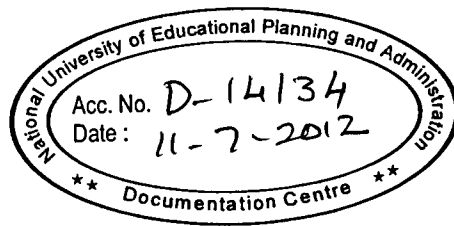
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**Ministry of Human Resource Development
Government of India
New Delhi**

July, 2011



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**Task Force on Faculty Shortage & Design of
Performance Appraisal System**

**Printed : July 2011
1000 copies**

Printed and Published by : **Secretary, University Grants Commission,
Bahadur Shah Zafar Marg,
New Delhi - 110 002**

Printed at : **Computata Services, 42 DSIDC Shed, Scheme-I,
Phase-II, Okhla Ind. Complex, New Delhi 110 020**

LETTER OF PRESENTATION

Mr. Kapil Sibal
Minister of Human Resource Development
Government of India
New Delhi 110 001

Dear Sir,

On behalf of the Task Force constituted by the Ministry of Human Resource Development, Government of India, and on my own behalf, we wish to submit to you the report of the Task Force.

The issue of faculty shortage is indeed a major challenge in moving forward with an ambitious plan of expansion of higher education in India. We have, therefore, studied this problem, in detail, and come up with a number of recommendations for addressing this problem. We sincerely hope that successful implementation of these recommendations will help reverse the situation of faculty shortage in India.

Appraising the performance of faculty was another major reference assigned to the Task Force. We are happy to submit to you, Sir, a template detailing as to how such a performance appraisal can be undertaken by an academic institution. Once again, the successful implementation of this measure is the key to the transformation of quality of higher education in India.

The Task Force strongly feels that every academic institution should have a dedicated office of faculty induction and promotion. Furthermore, the group also feels that a standing mechanism is needed to collect the detailed data on existing faculty strength in various institutions and also to monitor the situation about the faculty resource in the country for the next 10 to 15 years.

We are indeed thankful to you and your colleagues, Sir, for giving us this opportunity to carry out the task. Please permit us to submit this report.

With kind regards,

Sincerely,

Sanjay G. Dhande
Chairman
Task Force on Faculty Shortage
and Design of Performance Appraisal System

LETTER OF PRESENTATION

We have great pleasure in presenting the Report of the MHRD Task Force on Faculty Shortage and Design of Performance Appraisal System.



Prof. Sanjay G. Dhande
Chairman



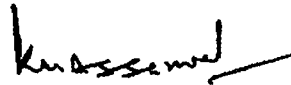
Prof. Devi Singh
Member



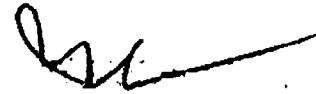
Prof. Chiranjib Sen
Member



Prof. V. Kannan
Member



Prof. K.K. Aggarwal
Member



Dr. R.K. Chauhan
Member Secretary
(until 28.02.2010)
Special Invitee



Dr. Niloufer A. Kazmi
Member Secretary
(w.e.f. 01.03.2010)

ACKNOWLEDGEMENTS

Chairman and Members of the Task Force would like to express their heartfelt thanks , first, to the Ministry of Human Resource Development, Government of India, particularly to Shri Kapil Sibal, Hon'ble Union Minister for Human Resource Development for entrusting it with the task of examining the issues of shortage of quality faculty in the technical and professional education and university education and also designing a system for performance appraisal of faculty.

Members of the Task Force availed themselves of this opportunity to review not only the existing faculty strength and shortage as also the performance appraisal systems in the above mentioned sectors of higher education but also to analyse the shortcomings and deficiencies in the system relating to these aspects. This facilitated the Task Force in not only making significant recommendations in respect of remedying the situation both for quality and quantity of faculty strength but also in proposing an analytical framework for doing so.

Members of Task Force would also like to thank respectfully Mrs. Vibha Puri Das, Secretary, MHRD, Mr. Sunil Kumar, Additional Secretary, MHRD, Mr. Upamanyu Basu, Director, MHRD and their colleagues for the guidance provided to the members of the Task Force from time to time during the entire period of this work.

We would also like to place our special thanks on record to Prof. Sukhadeo Thorat, ex-Chairman UGC, Prof. Ved Prakash, present-Chairman UGC, Dr. R. K. Chauhan, ex-Secretary, UGC and Dr. Niloufer Kazmi, present-Secretary UGC. Special mention is needed to thank Dr. R.K. Chauhan for continuing his services in spite of his personal difficulties and changes of service conditions.

We also would like to thank enthusiastically the support provided for this work by Dr. Manju Singh, Joint Secretary, UGC, Ms. Diksha Rajput, UGC and their colleagues at the office of UGC. They were excellent in providing all the logistics support for our work.

Thanks are also due to Shri M S Yadav, Chief Statistical Officer; Shri Rajbir, Shri Y.V. Pantulu, Shri Dwarka Prasad, Shri Kham Chin Lian Tombing, Smt. Chandra Kanta Sharma and Shri Hitesh Manik, all of the University Grants Commission for providing all the logistics support to our work.

Professor Narang remained a rock pillar in coordinating the entire work. We wish to thank him for his unstinted support for the work of the Task Force. His vast experience in the field of education was indeed strength for this work.

We would like to thank the representatives of all regulatory bodies and the heads of all academic institutions who took time out from their busy schedules and gave input to this task force.

Our group was also an interesting lot and all need to be appreciated for the special skills that they brought in the work of this Task Force. Professor Aggrawal has rich experience of management of technical education at state as well as national level. His views based on this experience were very valuable. Professor Sen contributed as a “think tank” for the group. His incisive analysis of the socio-economic situation related to faculty resource in a democratic, liberal society was an eye-opener. Professor Devi Singh was always a managerial guru. He was able to analyze the market forces and indicate the pragmatic solutions quickly. Professor Kannan remained a spiritual mind of the Taks Force. His graceful hospitality, simple life-style and pin-pointed observations will remain as a memory for a long time for us.

The Chairman and members of the Task Force, while submitting the Report, are reasonably hopeful that their recommendations in respect of the shortage of

quality faculty as well as the system of performance appraisal would help strengthen the system of higher education in imparting quality education to the students.

I would like to record my sincere appreciation of the courage and determination with which Government of India is moving ahead in the field of higher education. A time has come for all of us to transform the education system in India. The first step in that direction is to transform the faculty resource. We hope that this report will help that effort.

(Sanjay G. Dhande)
Chairman,
Task Force

PREAMBLE

In independent India, one can count three major waves of expansion of the higher education system. Soon after Independence, Government of India established a number of national institutions like Central Universities, IITs, AIIMS, IIMs, RECs etc. for promoting quality education. The second wave came along in mid-80s when several private professional colleges came up in the states of Karnataka, Andhra Pradesh, Maharashtra and Tamil Nadu. This made private enterprises enter the field of higher education in a big way. The population explosion and the liberation of economy in the 90s brought about the third expansion during late 90s and the first decade of this century. As a result, new universities as well as technical institutions came up in both public as well as private domain. This explosion - it was primarily quantitative - was, unfortunately, not matched by appropriate inputs of quality particularly in terms of faculty resource. The situation has resulted in higher education in India that is patchy and uneven in quality. This Q-2 or Quality-Quantity problem has now become a central issue of higher education in India.

The fact that there is a huge shortage of teaching staff or faculty in the higher education system in India is not a surprise. What is, however, surprising is that this perception is not substantiated by factual data. There is no standing mechanism to collect this information regularly. Furthermore, the management of many institutions recruit staff in an ad-hoc and inappropriate manner and declare that they have filled the vacancies. The ad-hoc manner of hiring faculty is rampant in both private and public institutions on a large scale. If the situation persists for too long, it will result in not only India lagging far behind world standards

in higher education but will also see teachers reacting strongly against their exploitation through ad-hoc and irregular appointments. It was, therefore, only appropriate for MHRD-UGC to constitute a Task Force to assess the extent of shortage of faculty in the higher education system for recommending strategies to redress the situation. The Task Force so formed was also asked to evolve a Performance Appraisal System for the faculty.

In its very first meeting, the Task Force realized that issue of faculty shortage has been addressed by several committees and individuals earlier in various ways but without any single focus approach. Various Committees for recommending the revision of pay scales of faculty members including the Sixth Pay Commission headed by Prof. G.K. Chadha had also noted and made observation on the issue of faculty shortage. However, the lack of authentic data is indeed a serious drawback at present. In fact, the task force feels, rather strongly, that there should be a standing mechanism for monitoring the size and quality of faculty resource. Rather than collecting the data once in a while, it is essential that an agency is empowered with the task of collecting and analyzing the data related to faculty resource regularly, the practices used for the development of this resource and the quality being maintained for this resource.

The present shortage of 3.8 lakh teachers or faculty members in the higher education system of India comes to over 50%, which is critical. It is likely to grow to 13 lakhs in the next 8 to 10 years. Indeed these are only rough estimates, since the data available is neither accurate nor up to date. However, the shortage of faculty is a fact and needs to be addressed urgently on several fronts.

The Task Force feels that the data on faculty resource should be available on the web site of every academic institution. The process of ad-hoc and contract recruitment, if necessary after regular appointments have been made, must be standardized and streamlined. The details of such suggested actions are given in the report. However under the pretext of urgent need, such recruitments should

not be exploitative and sub-standard in nature, as appears to be the case at present.

The Task Force has also strongly recommended that the recruitment and promotion of faculty members should be managed by an exclusive office or section in an academic institution. Such an establishment should be headed by a senior, well-respected faculty member who shall report to the head of the institution directly. The Task Force feels that a calendar of recruitment and promotion exercise should be drawn up by every academic institution and strictly adhere to. The faculty strength needed for an institution should be arrived at on the basis of the student strength. Once the number of required teachers is available, it should not be difficult to arrive at faculty shortage, based on the existing strength of teachers.

The management of an institution must ensure that an adequate number of well qualified teachers are available and these teachers are provided proper remuneration without any kind of exploitation. Any deviation from such a standard should affect the accreditation evaluation of the institution. In short, all the information relating to faculty strength and shortage should be transparent and available on the website of the institution.

It is becoming increasingly clear that the government is likely to limit its obligation to provide salary support to only those positions which have been administratively approved. At the same time, the government has agreed for “self financed” academic programs, wherein the financial remuneration for faculty members has to be supported from such “self finances”. However the management needs to ensure that the salary and other benefits of teachers hired for such courses should be at par with those given to regular faculty members. They may, however be on a contractual appointment.

As has been stated above, there is a need for a large number of teachers in the country. However, all of them cannot and need not be research faculty. In fact, a

pragmatic way out is to consider some incentives for those who are carrying out research work besides their teaching responsibilities. Those who are doing teaching work at the undergraduate level efficiently and successfully should be compensated appropriately.

Women, who form nearly half of the nation's population, should be encouraged to join the academic profession. It is strongly felt by the Task Force that a scheme for encouraging women to enter the academic and teaching career at the higher education level should be devised and implemented to bring the percentage of women teaching faculty at par with their demographic profile. Similarly, the percentage of women research faculty which is uneven - high or low according to the popularity of various disciplines with women students - should be raised substantively to about 33 per cent, if not more.

Besides women, the higher education system in India should also consider seriously, ways and means to increase the participation of minority and reserved category persons in the teaching profession. As the number of both students enrolling for higher education and the institutions imparting such education is increasing, it is necessary to ensure that a balanced growth of faculty takes place that is also inclusive.

The Task Force held discussions with several regulatory bodies, governing the imparting of technical and professional education. Discussions were also held with Vice Chancellors and Heads of academic institutions, governing general education. While these discussions yielded a reasonable idea about the perceived situation vis-à-vis faculty shortage, no quantitative data were available for backing these perceptions. Some data were, however, available from University Grants Commission. This information did not cover all academic institutions and was also incomplete and outdated even in the case of institutions whose data were available. The Task Force had to therefore piece together an analysis based on these data. However, what the Task Force has done besides the analysis is to present an analytical framework developed by a member of the Task Force. This

is indeed very unique and important. It highlights clearly that in a situation where strong regulatory and economic constraints exist, the Quality - Quantity problem of faculty resource is indeed a complex one. The measures suggested in the framework flow from the conclusions drawn by the analysis of the available data. It is felt that both the framework modeling and analysis exercise should be pursued further by collecting data on a regular basis and corroborating the results of the analysis with the available data.

Performance appraisal of academic institutions, in general, and of faculty members, in particular, is one of the most neglected aspects in the administration of academic institutions, excellent work being done by NAAC notwithstanding. This can be improved by having an exclusive establishment for faculty induction and promotion. The performance measurement quantification for a cadre of intellectuals like the faculty is a difficult task. However, the quantification of performance is the need of the hour. In order to carry out the performance appraisal work as objectively as possible, the Task Force has once again proposed a model. While this is indeed closer to the model proposed earlier by other agencies, it also takes into account the ground reality of faculty shortage in higher education. The successful implementation of any performance appraisal model is an important aspect of management and therefore, the management of academic institutions should lay out the policies clearly and the office of faculty management should carry out the task on a yearly basis.

Finally, the Task Force wishes to record its sincere appreciation for the support and cooperation of all concerned with the higher education system in India. It is hoped that some of the recommendations will be implemented in a short term while others may need some long term planning. In any case, the issue of faculty shortage and quality is a major challenge for the higher education system of India. It is hoped that this report will help in addressing the same.

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Chapter I

INTRODUCTION

Challenges and Opportunities

Higher education in India is passing through a critical phase in its evolution. As a significant instrument of bringing about societal development—economic, political, ethical and cultural—Indian system of higher education has to face challenges on many fronts— simultaneously. The biggest of these is perhaps the urgent need for transforming India into a knowledge society so that it can withstand competition—primarily economic but also socio-political—not only from other developing countries like China but also from various developed nations of the West. As a result, there is a sudden spurt in expansion in all directions—more central universities are being set up, more technical and professional institutions, including IITs and IIMs have come into being. There is a proposal to start some world class or innovative universities. More private universities are being established and even foreign universities are being permitted to set up campuses in various parts of the country. The student enrolment has gone up, particularly from socially challenged sections of the society and so has the budgetary allocation—both annual and plan period. Clearly, with over 500 universities and more than 30000 colleges the higher education sector is on the move.

The Legacy and After

Historically, the present system of education in India is a legacy of the British Empire which had set it up to subserve its own colonial interests—both political and administrative. A number of universities, colleges and technical institutions

including Engineering and Medical Colleges were started by them. These, however, were found to be grossly inadequate as people's aspirations rose suddenly after the independence and the nation embarked on the path of planned economic development. As the National Policy on Education formulated on the basis of the Report of Education Commission headed by Professor D.S.Kothari(1964-66) put it–

The great leaders of the Indian freedom movement realized the fundamental Role of education and throughout the nation's struggle for independence, stressed its unique significance for national development.

As a result, the Government of India undertook massive expansion of education—particularly higher education—by setting up new universities, Indian Institutes of Technology(IITs), Agriculture and Medical Colleges, Indian Institutes of Management(IIMs) and Autonomous Institutes for Research in Science and Technology across the country within a couple of decade of the attaining national independence. The objective was, as is enshrined in the Constitution of India, to transform India into a modern egalitarian society.

The Impact

Various initiatives undertaken in the field of higher education and as outlined in the above cited policy statement 'a continuous effort to expand educational opportunity; a sustained and intensive effort to raise the quality of education at all stages' (xv-xvi) by the government of India soon began to bear fruit and the nation could boast of a quality base in the field of human resource that made seminal contribution to the development of India in various fields of science and technology ranging from atomic energy to space rocketry—something that was visible to the whole world which earned us their envy and, at times, rivalry.

Problems and New Challenges

However, overall development notwithstanding, these prominent fruits of general and technical higher education as well as research have still not reached the majority of Indian population. The planning witnessed in the field of economic activities was not replicated in the field of education, particularly higher education, despite the fact that education had been recognized by the state as the prime mover in the process of overall national development. Many of these initiatives were introduced in an ad hoc and haphazard manner and, at times, in a knee jerk reaction to meet the populist demands of the people who were plagued with deep fissures of differentiation at various levels—linguistic, ethnic, religious, regional and above all caste.

The new challenges lie in ensuring the expansion of the base of education, particularly higher education, exponentially so as to meet the ever growing needs of a highly skilled base of human resource that will help us move faster towards the objective of becoming a developed nation by 2020. However, the system has to ensure that it must be an inclusive growth wherein no sections of the society are left behind. Additionally, it should also enable to meet the challenges of global competition in social and economic development. This would, therefore, necessitate a thorough relook at the various problems that confront our system of higher education.

Reviews and Reports

Commissions and Committees have been appointed from time to time to review the state of education, list the major problems confronted by the system, particularly in the field of higher education, and suggest solutions. Almost all of them have pointed out, among others, that teachers—both in terms of numbers and quality—are the key to the success of education. Radhakrishnan Commission, for instance, pointed out as early as 1948 that newer and better pay scales as well as provision of other facilities were necessary for bringing the

teaching profession at par with other professions. Similarly, another Education Commission –appointed in 1964 under the chairmanship of Professor D.S.Kothari and which had outstanding educationists from all over the world as its members–had observed–

Even at present, our universities and colleges produce a small number of outstanding Indian scientists and scholars who, if they were to enter upon an academic career under the right conditions, would be able to make a great contribution to the improvement of our academic standards. But, apart from the fact that they are too few compared to our inherent national capacity and our population, they are unfortunately scattered thinly and at random over the entire system of higher education and have to work in comparative isolation and under unfavourable conditions; the burden of a heavy teaching load; large classes of unchallenging students; apathetic or intellectually unambitious colleagues; and an administrative system which intentionally or unintentionally does not encourage and, in some cases, even actively discourages high intellectual vitality and motivation.

Observations made nearly 50 years ago and yet very valid.

Recently, another committee appointed under the Chairmanship of Professor GK Chadha–Committee to Review the Pay Scales and Service Conditions of University and College Teachers–also observed in its Report:

In fact, if higher education is the key to our all round development, teachers seem to be not only its prime movers but also its catalysts. If the pyramidal edifice of higher education needs to be strengthened both at the base and at the top, that is, both in terms of quantity and quality–simultaneously–then the right solution lies in not only recognizing the pivotal role of the teaching community in this process but also in rewarding them with suitable incentives.

Recent Policy Initiatives

Taking cognizance of the fact that although the Indian Education system with nearly 500 universities and around 30000 colleges is one of the largest in the world, its gross enrolment ratio(GER) is still very low, the Government of India has taken, recently, a number of policy initiatives, primarily through the XI Five Year Plan in which higher education was made the primary focus and was allocated over 19% of the total funds. These initiatives include, among others, new central universities, world class universities, more IITs, NITs, IIITs, IISERs, IIMs and SPAs, at least one college in each district of the country and capacity expansion in all existing institutions—both government and private. Besides, it was also proposed to allow quality foreign universities and institutions to set up their campuses in the country.

The Need for Additional Faculty

All these initiatives have, however, highlighted the urgent need for additional faculty, while the fact of the matter is that there is a gross deficiency of qualified and quality faculty in existing institutions—both general and technical. As the Report of The Pay Committee for Faculty and Scientific/Design Staff of Central Technical Institutes under the Chairmanship of Professor Goverdhan Mehta observed:

Establishment of new Institutes of higher learning, particularly in the area of technical and professional education as is being envisaged by the Government of India would need huge inputs in the form of faculty resources and infrastructure. This would mean large scale recruitment of teachers at various levels -particularly the entry level. However, it is going to be quite a challenging task, given that a very limited number of Ph.D and other graduates with professional degrees are being produced annually by the various institutions in this country. Even among those, very few opt for an academic career..The fact is that even among those

who have the requisite and also the inclination to join the teaching profession, not many are actually taking the plunge and coming to teach in these institutions.

Design of Performance Appraisal

Another challenge before the various committees in the past, including the Pay Review Committees has been the designing and implementation of criteria for appraising the performance of faculty both in universities and colleges. This became more crucial after promotional avenues were made available to teachers through various schemes: earlier through Merit Promotion Scheme (MPS) and now through Career Advancement Scheme(CAS).

Not only had this to be done at the time of promotion of the faculty but their performance needed to be assessed regularly.

Various criteria were evolved and implemented by the UGC, most which were general and non-specific in nature and included, among others, self-assessment reports submitted by the teacher himself at various periodicities—every semester or every year or only at the time of promotion. There was no uniform, standard format or parameters and it was left to individual institutions to devise these. In fact, the whole exercise of self-assessment became a routine if not a farce.

However, various committees continued to lay stress on the need for a set of more objective, transparent and quantifiable criteria that would judge the merit of a teacher not only per se but also comparatively.

Chadha Committee, for instance, had observed in this regard:

As for the modes of evaluation, nearly all types of participants wanted transparent, concrete, precise and uniform parameters to be evolved for such evaluation and assessment and wanted them to be applied across the board to all categories of teachers—lecturers, Readers and Professors.

A Committee under the chairmanship of Professor Thyagarajan was appointed by the UGC for evolving such a set of Performance Appraisal criteria. Its recommendations have since been accepted and circulated by the UGC to all universities and colleges for implementation.

The Task Force

A Task Force with the following members, was appointed by the MHRD vide its Notification No.F.No 4-482009-UI(A) dated 14th September 2009, to examine the issues of shortage of quality faculty in technical and professional education and university education and also the design of performance appraisal: (Annexure 1)

Professor Sanjay Dhande,
Director, Indian Institute of Technology, Kanpur

Professor Devi Singh,
Director, Indian Institute of Management, Lucknow

Professor Chiranjib Sen,
Indian Institute of Management, Bangalore

Professor V. Kannan,
Pro-Vice Chancellor,
University of Hyderabad, Hyderabad

Professor K.K. Aggarwal,
Former Vice Chancellor,
Guru Gobind Singh Indraprastha University, Delhi

Dr. R.K.Chauhan,
Secretary, University Grants Commission, New Delhi

The terms of reference of the Task Force were as under :

- (i) to assess the existing faculty shortage in the country in regard to technical and professional education and university education
- (ii) to assess the requirement of quality faculty in regard to technical and professional education in the remaining period of the Eleventh Plan and the twelfth Plan considering the need to achieve the Gross Enrolment Ratio by the terminal year of the Twelfth Plan

- (iii) to suggest remedial policies and other measures to meet the estimated shortfall in quality in quality faculty
- (iv) to design and develop a robust, objective, transparent and multi-source Performance Appraisal System to provide a framework to enable performance appraisal of faculty throughout the country in regard to technical education, professional education and university education

The Task Force: The Methodology of work

As a part of its methodology to examine the twin questions of faculty shortage as well as performance appraisal, the Task Force members decided to hold discussions with Chairpersons of governing councils to which these institutions were affiliated.

The Task Force also decided to set up the following sub committees to pay more focused attention to various aspects of the issues involved:

Prof. Devi Singh and Prof. Chiranjib Sen	<ul style="list-style-type: none"> (i) To assess the existing faculty shortage in the country in regard to technical and professional education and university education (ii) To assess the requirement of quality faculty in regard to technical and professional education and university education in the remaining period of the Eleventh Plan and the Twelfth Plan considering the need to achieve the targeted Gross Enrolment Ratio by the terminal year of the Twelfth Plan.
Prof. Sanjay Dhande and Prof. V. Kannan	To suggest remedial policies and other measures to meet the estimated shortfall in quality faculty.
Prof. K.K. Aggarwal and Dr. R.K. Chauhan, Special Invitee	To design and develop a robust, objective, transparent and multi-source Performance Appraisal System to provide a framework to enable performance evaluation of faculty throughout the country in regard to technical education, professional education and University education.

The Questionnaire

A questionnaire was developed by the Task Force for eliciting detailed information relating to various aspects of faculty strength and the appraisal of their work (Annexure 5). It was proposed to send the same to all universities, colleges and technical and professional institutions.

However the plans to administer the questionnaire had to be abandoned, primarily because of the limited time at the disposal of the Task Force. The Task Force, instead, decided to work with whatever data was available with the UGC and other similar organizations.

The Report: Structure

It was decided that the structure of the final Report of the Task Force shall be as under:

Chapter I	Introduction
Chapter II	Interaction with Regulatory Bodies and Universities
Chapter III	Faculty Resource: Analysis of available Quantitative Data
Chapter IV	Faculty Resource: Analytical Framework
Chapter V	Faculty Resource: Recommendations for Quantity and Quality
Chapter VI	Design of Performance Appraisal System
Chapter VII	Summary of the Report
Chapter VIII	Annexures:

Interim Report

It was also decided to submit an interim report to the MHRD, which was duly submitted in August 2010.

Chapter II

INTERACTION WITH REGULATORY BODIES AND UNIVERSITIES

As stated in Chapter I, one of the first decisions that the Task Force members took was to interact with the Heads of various Affiliating Bodies of University Education, Technical Education and Professional Education, to familiarize themselves with the ground reality about not only the faculty positions -sanctioned strength as well as actually filled positions—but also about the manner of recruitment and various problems, if any, relating to it.

Heads/Chairpersons of Affiliating Bodies were, therefore, invited to make presentations and also interact personally on various aspects of the issues relating to the faculty in the institutions governed and regulated by them. Following is the list of such Bodies invited to make presentations before the Task Force:

1. University Grants Commission(UGC)
2. All India Council for Technical Education(AICTE)
3. Medical Council of India(MCI)
4. Dental Council of India(DCI)
5. Pharmacy Council of India(PCI)
6. National Council for Teachers' Education(NCTE)
7. Bar Council of India(BCI)
8. Distance Education Council(DEC)

Besides these, select Vice Chancellors from Universities in and around Delhi were also invited to interact with the members of the Task Force.

Reproduced below are the high points of discussions with the Heads of these All India Bodies and the Vice Chancellors of select universities.

University Grants Commission

Professor S.K. Thorat, Chairman, University Grants Commission met the members of the Task Force on the 8th February, 2010 and made a detailed presentation about the various issues relating to the faculty in universities and colleges.

At the very outset, Professor Thorat underlined the alarming situation of faculty shortage in universities and colleges governed by both the central government funding and the state government funding. He held the ban imposed on new recruitment as well as on filling of existing sanctioned positions lying vacant as the primary reason for such shortages. As a result of these bans, positions had remained vacant for years, in some cases for decades.

Even after the ban on recruitment of teachers had been lifted by the Union Ministry of Human Resource Development and the University Grants Commission, many centrally funded institutions continued to ignore the recruitment of faculty. In many states, such bans continue even now. He cited the examples of the states like Madhya Pradesh, Rajasthan and Bihar that had neglected the sector of higher education for long, resulting in an almost crisis situation as far as shortage of faculty was concerned. There was shortage of faculty even in self-financing courses which was anomalous. All this, according to Professor Thorat, led to enormous deterioration in the quality of higher education in the country.

Another reason for shortage of supply of quality teachers has been the budgetary constraints on the number of fellowships and scholarships for merited doctoral and post-doctoral students.

Since no authentic and complete data on faculty shortages in colleges and universities under various state governments was available, Professor Thorat suggested that the Union Ministry of Human Resource Development may be requested to intervene and obtain such data from the states.

As for the remedial measures for overcoming such shortage, Professor Thorat suggested the following measures:

Short Term Measures

The retirement age of faculty members in institutions funded by state governments that varies, at present, generally between 55 years and 60 years, should be raised to 65 years to be at par with the age of retirement in centrally funded universities and colleges.

A Scheme for Emeritus Professors and Fellows with flexible terms may be introduced to continue the involvement of superannuated faculty.

Private resources may be attracted for funding teaching positions as suggested by Amit Bhandari Committee.

Foreign talent may be tapped for making up the shortfall of faculty as has been suggested in the 'Brain Gain Policy' initiatives.

Eligible foreigners may be recruited as faculty members and restrictions, if any, on their employment may be eased.

INSA scientists may also be involved in teaching at appropriate levels.

Medium and Long Term Measures

Incentives to bright Post Graduate Students may be enhanced to encourage them to pursue research leading to Ph.D so that the eligibility pool for academic positions is enlarged. Similarly, the number of post-doctoral fellowships may also be increased substantially.

Existing recruitment policies, service conditions and reward systems may be reviewed to bring them at par with international practices. This would induce faculty from abroad to flow into India in the higher education sector.

National Council for Teachers' Education (NCTE)

In his interaction with members of the Task Force, Professor M.A. Siddiqui, Chairman, National Council for Teachers' Education(NCTE), observed that there was about 25% shortage of faculty in the institutions supported by public sector, conducting programmes in Teachers' Education. He also observed that the central and state governments have been withdrawing from the field of Teachers' Education and most new institutions are coming up in the private sector.

As for the performance appraisal of faculty, the same norms apply to them as are enforced by the UGC from time to time.

He also made a strong plea for opening Departments of Education in those universities and colleges where such departments do not exist.

Medical Council of India (MCI)

In his presentation, Lt Col(Dr.) A.R.N.Setalvad, who is the Secretary of the Medical Council of India(MCI) drew the attention of the members to the fact that under a new provision permission from the central government is required for opening a medical college. He also mentioned that more medical colleges were coming up in the private sector.

While he mentioned that there was a shortage of faculty in what he called 'established' medical colleges, he could not provide an estimate for the same. As for the age of superannuation in medical colleges, it varies between 60 and 65.

Pharmacy Council of India (PCI)

Ms. Archana Mudgal, Registrar-cum-Secretary of the Pharmacy Council of India observed in her presentation that the institutions engaged in education relating to Pharmacy–Diploma courses, B.Pharma and M.Pharma–were under the dual

control of PCI and AICTE and that had given rise to many anomalous situations. This, she observed, needed to be rectified.

She was not in a position to provide any concrete data relating to faculty shortage in the Pharmacy education sector.

Dental Council of India (DCI)

In his interaction with the Task Force members, Maj. Gen (Retired) P.N. Awasthi, Secretary, Dental Council of India (DCI) observed that there were 290 dental Colleges in India of which nearly 88% were in the private sector domain and this is where the problems of dental education lay.

The DCI had no control over the appointment of faculty in these privately run institutions. Even the information relating to the existing strength of faculty at a particular point of time was not available since the Council is not kept informed about the faculty members when they leave the institution. He observed further that the mobility in this sector was very high.

The second major problem relating to the faculty was that a faculty member was shown to be working -on permanent basis- in more than one college some of which are located not only in two different districts but in even two different states, lying thousands of miles apart.

Also a specialist—any specialist—is considered eligible for appointment as a faculty member. Most of these specialists are from metro cities but are appointed as faculty in institutions across the country.

As a result, on paper, there is no shortage of faculty, while the actual shortage could be to the tune of 30 to 35%, particularly at the level of senior faculty—Professors and Associate Professors.

With extremely limited staff at its disposal, the DCI is not able to monitor and regulate the dental education in terms of students admitted and the faculty appointed in dental colleges. Also, the DCI has no teeth—no penal provisions—with which to regulate the dental Education in the country.

Distance Education Council (DEC)

The members of the Task Force had an interaction with Dr. Dev Kant Rao, deputy Director, Distance Education council(DEC). He observed that besides IGNOU, there were 14 other State Open Universities and 200 distance education institutions.

He observed that while 20 to 25% of educational needs of the country were being met by the distance education mode, the requirement of the faculty in this sector were less—for obvious reasons—and one programme in a particular discipline could be run efficiently with three faculty members only.

He observed further that one of the major problems of distance education was the absence of funding from the UGC. Even the funds generated by distance education departments were being diverted to support regular education mode within the same institution.

All India Council of Technical Education (AICTE)

Dr. S.S.Mantha, acting Chairman, All India Council of Technical Education, in his presentation before the Task Force members observed that there were nearly 1.5 lakh teachers employed in institutions imparting education in disciplines of Engineering, Management, Pharmacy, Architecture, Hotel Management and Catering and Applied Arts. The total requirement, however, was nearly 3 lakhs. Thus, there was a shortfall of 50%. The shortage was very acute at the level of senior faculty, particularly Professors, as there is a big dearth of faculty with M.tech. and Ph.D qualifications.

Bar Council of India (BCI)

Professor Rahul Singh, Associate Director, Bar Council of India, made a presentation about the imparting of legal education in the country. There were 913 law colleges and universities in the country with an estimated enrolment of 80,000 to 1,00,000 students.

He observed that while there was no quantitative shortage of faculty, finding qualified faculty was a serious problem. The BCI was incentivizing the enrolment for LLM course in various ways, including through the proposed reduction of time duration of the course to one year.

BCI had taken the following steps to focus on the problems of faculty shortage, both in terms of quality and quantity:

1. BCI now sends a representative to oversee all faculty appointments.
2. Imparts Teacher Training to members of the faculty.
3. Not insist on LLM, as an essential qualification for appointment as faculty.
4. Encourages practicing Advocates to teach.

While members of the Task Force reiterated the need for meeting the requirement of post-graduate qualifications appointment as faculty, they suggested the introduction of Adjunct Faculty in law colleges and universities. It was also suggested that the research aspect should also be kept in view as the purpose of higher education was also to generate knowledge.

Interaction with Vice Chancellors of Select Universities

Besides interacting with the Heads of various regulatory bodies, members of the Task Force also had an interaction with vice Chancellors of some universities, primarily from Delhi and neighbouring States. The following Vice Chancellors or

their nominees representing the universities mentioned against their names interacted with the task Force members:

1. Dr. G.N.Qazi, Vice Chancellor,
Jamia Hamdard, New Delhi
2. Prof. Mool Chand Sharma, Vice Chancellor,
Central University of Haryana, Gurgaon
3. Lt. Gen. D.D.S. Sandhu, Vice Chancellor,
Guru Jambheshwar University of Science & Technology, Hisar
4. Prof. Rajen Harshe, Vice Chancellor,
University of Allahabad, Allahabad
5. Prof. Hanumaiah, Vice Chancellor,
Babasaheb Bhimrao Ambedkar University, Lucknow
6. Prof. Mohd. Mian, Vice Chancellor,
Maulana Azad National Urdu University, Hyderabad
7. Prof. S.C. Lakhotia, Dean Faculty of Sciences,
Banaras Hindu University, Varanasi

The first point that the Vice Chancellors made was that there had been no recruitment in most universities for decades, thanks to a ban on all recruitments. To emphasize the point, the Vice Chancellor of Allahabad University mentioned that the youngest faculty member in his university was 55 years old.

There was no way of testing the aptitude of a candidate for teaching while recruiting him/her. Nor was there a mechanism in place for imparting them training before induction. Even post doctoral degrees were research- oriented and do not provide opportunities for teaching. One way of overcoming this situation was to provide teaching opportunities to students while they are pursuing their doctoral degrees.

Inbreeding in appointment of faculty, that is candidates being absorbed in those very institutions from which they had obtained their degrees has affectly adversely quality teaching. In fact, finding quality faculty is yet another major problem.

The absence of clear guidelines about reservation policy in faculty recruitment has made it difficult to implement the reservation policy, resulting in such positions also lying vacant over long periods of time.

Similarly, faculty positions reserved for differently- abled also lie unfilled because of absence of suitable candidates.

While the overall faculty shortage is around 35 to 40%, the real problems lies at the senior faculty levels. One possible way out could be to encourage lateral movement from industry/research institutions. Also, concurrent appointments should be encouraged.

Compulsory web-site advertisements for faculty positions can increase the catchment pool for quality faculty.

Employing ad-hoc and temporary faculty against sanctioned permanent posts lying vacant has compromised quality teaching further. The only solution is in filling such posts immediately after they fall vacant.

State funding for education that has remained static over very long periods of time, needs to be increased substantially, as also the central financial support to state funded educational institutions of higher learning.

As for performance appraisal of faculty, a robust system needs to be put in place. Student feed back should be an integral part of that appraisal.

Chapter III

FACULTY RESOURCE: ANALYSIS OF AVAILABLE QUANTITATIVE DATA

The most challenging task before the Task Force was to obtain the data on sanctioned posts and the existing faculty strength relating to universities, colleges, research institutions, Engineering and Technical colleges, Professional institutions in Medicine, Pharmacy, Dentistry, Architecture, Business Management, Law, etc. Despite repeated requests and reminders, no data was provided by any of the bodies governing technical and professional education, namely, AICTE, MCI, DCI, BCI, etc.

As for the data relating to universities—Central, State and Deemed—and colleges—constituent, affiliated and aided— available with the UGC, it is not only grossly incomplete but also sometimes dated. In fact, it is so scanty with prominent gaps, both relating to the sanctioned strength of the faculty and the filled positions that the figures based on the analysis of this data—as have been provided later in this chapter—could be way off the actual mark.

For instance, with respect to the state of Bihar, data relating to only T.M. Bhagalpur University was available. Similarly, from U.P., data in respect of only Bundelkhand University, Jhansi and M.G. Kashi Vidyapeeth were available. While data for Jammu University was available, no data relating to the Kashmir University was available.

Also, given the limited time frame at the disposal of the Committee, it was not possible to have the latest data in respect of existing faculty shortages obtained

from the institutions across the country. With nearly 800 universities and around 30,000 colleges including technical and professional institutions, the exercise of collecting data afresh would also involve huge inputs in terms of financial resources too. In fact, the Task Force had developed a detailed questionnaire relating to the collection of this data but had to abandon the idea because of the constraints mentioned above.

It was, therefore, decided to work with whatever data was available with the UGC. On the basis of this data—that has been provided in different sets at different times, some of which have an obvious overlap—the following general inferences can be drawn about the existing faculty shortages in various institutions—both centrally funded and state funded.

Central Universities

Data upto 31.3.2010 relating to sanctioned faculty strength and the existing faculty in respect of only 24 universities across 16 states is available, while the total number of central universities according to the figures provided by the UGC is 42.

As per the above data, on an average nearly 35% faculty positions are lying vacant in these institutions.

In 5 of these universities, over 50% positions are lying unfilled and in addition in 2 more universities the vacant faculty positions are more than 40%.

Thus in 7 out of 24 central universities, the faculty deficiency is more than 40%.

In Guru Ghasidas Vishwavidyalaya, Chattisgarh, more than 65% positions are lying vacant whereas the percentage of unfilled positions in the University of Allahabad is over 58%. The third highest number of unfilled teaching positions among the central universities is in the University of Delhi where the percentage of such positions is over 53%.

Among those that have the least number of unfilled teaching positions are Assam University(8.9%), Jamia Millia Islamia(14.5%), Aligarh Muslim university(15.3%) and Viswa Bharati (15.7%).

In terms of gross number of unfilled faculty positions, while Delhi has the highest with 910 such positions, BHU is the next highest with 905 vacant positions. Tripura University (22) and Mahatma Gandhi Antarrashtriya Vishwavidyalaya (26) were universities with the least and second least gross numbers of unfilled faculty positions respectively.

Out of a total sanctioned strength of 13514 faculty positions, as many as 4662 are lying unfilled.

State Universities

UGC has provided the Task Force with data in respect of faculty positions up to 1.5.2007 for 77 state universities spread across 23 states, while there are 264 state universities, as per the statistics provided by the UGC.

Of these, 19 universities have more than 50% posts lying vacant, whereas another 14 have over 40% posts vacant. Thus, 33 state universities out of the 77 have more than 40% faculty deficiency.

Statewise, most numerous deficiencies were in the state of Rajasthan with 1173 posts out of a total sanctioned 1899 are lying unfilled. Maharashtra with 815 out of 1855, West Bengal with 649 out of 2423 and Gujarat with 581 out of 1537 were the next three most teacher- deficient states in respect of higher education.

Speaking of individual universities, North Bengal University had a whopping 94.7% teachers' positions lying vacant. Gujarat University, Dr. H.S. Gaur Vishwavidyalaya and RTM Nagpur University had more than 70% posts lying

unfilled. With 69.8% posts unfilled, Rajasthan University is the next most deficient university in this respect.

19 Universities have more than 50% faculty deficiency and in addition, another 15 have over 40% faculty shortage.

While Annamalai University, Kannur University, National Law School of India, Bangalore and Sri Sankaracharya University of Sanskrit with 0% vacancies were the least deficient, Kannada University, North Orissa University and Rabindra Bharati University had 10% or less vacant faculty positions.

Overall, of the 23915 sanctioned posts in these 77 universities, 15861 posts have been filled, making it 66.7%. Thus, 33.3% posts are lying vacant.

In addition to these 77 state universities, the UGC has also provided the Task Force with the data for another 109 university teaching departments (2009-10) that has apparently some overlap with the earlier data on 77 universities analyzed above. For instance, Goa University and Himachal Pradesh University included in this list of 109, have been mentioned in the earlier list as well. However, this data appears to be a mix of universities imparting general education and technical and professional universities.

According to this data, 19 universities have 50% or more of sanctioned faculty positions lying vacant. In addition, another 22 universities have 40% or more faculty deficiency.

Of the total sanctioned strength of 20155 teachers in these institutions, 4449 positions are lying vacant, making it around 22% faculty shortage.

With 3772 posts filled out of sanctioned 3790, Tamil Nadu seemed to be the most comfortable state as far as faculty strength in its 14 universities mentioned in the list is concerned. Maharashtra with only 834 filled posts out of a sanctioned

strength of 1369, appeared to be, numerically, the most deficient state with 535 positions lying unfilled. Madhya Pradesh had 48% posts(72 out of 152) lying vacant.

Deemed Universities

Data in respect of only 8 deemed universities is available, while the current number as per UGC figures is 130—and this does not include technical and professional universities. On its basis, only Gujarat Vidya Peeth has a faculty shortage of nearly 35%. All other deemed universities have deficiencies of 20% or less.

Affiliated Colleges

The UGC has also provided data in respect of teaching positions in 1887 colleges located in only 5 states, namely, Chattisgarh, Haryana, Himachal Pradesh, Madhya Pradesh and Maharashtra. However, as per the UGC's records, there were 31,324 colleges upto 2009-10, which number must have gone up since then. And here too, the data on the face of it, appears to be absolutely scanty. For instance, data in respect of 17 colleges affiliated to Maharish Panini Sanskrit Vishwavidyalaya has been provided from the entire state of Madhya Pradesh. Similarly, the data from Maharashtra relates to only 848 colleges affiliated only to 4 state universities.

On the basis of this data, deficiency of teaching posts in the colleges under consideration seems to be below 40%, the maximum being in Himachal Pradesh (33%) and Maharashtra (31%).

In terms of gross numbers out of 12150 sanctioned posts in these colleges, 8565 are filled and 3585 posts are lying vacant.

However, according to yet another set of figures provided by the UGC in respect of the growth of universities, the student enrolment in universities (2010-2011) and colleges(2009-2010) the current total enrolment of students in universities and colleges is 1,46,24,990 of which the enrolment of women students is 60,80,373, amounting to 41.6%. As for the growth in student enrolment, from the statistics provided, it has inferred that it has been growing at an annual average of 6%. In terms of gross numbers, only 4 states, namely, Andhra Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh, have more than 10 lakh students each. Of these, Uttar Pradesh has the most -22,18,341—enrolled students while Maharashtra is next with 18,28,341 enrolled students. Andhra Pradesh with 15,36,501 and Tamil Nadu 10,60,543 are the next two with most numerous enrolments. Lakshdweep with only 350 enrolled students and Daman and Diu with 810 are the ones with the least and under 1000 enrolled students.

As for the faculty strength, there were 6,99,464 teachers in universities and colleges in 2008-2009 as per the statistics provided by the UGC. Of these, 1,00,741 were in universities and 5,98,723 in affiliated colleges. This figure also includes part-time teachers, tutors, demonstrators and training instructors as well as Principals of colleges.

Analyzed on the basis of these statistics in respect to both student enrolment and the faculty strength, the student ratio per teacher works out to be 20.9 while the expected ratio as the per the UGC norms should be 13.5(average of 15 per teacher for undergraduate students and 12 for postgraduate and research students). Thus it is higher by 7.4 students per teacher for which additional faculty is required. On this basis, universities and colleges need another 3,83,868 teachers—in gross numbers—at various levels ranging from Assistant Professor to Professor. In terms of percentage, it amounts to nearly 54% more of the existing strength.

The student enrolment, we have mentioned above, has been growing at an average of 6% and projecting it to the of the twelfth plan—2017—another 36%

more faculty members would be needed. This would mean another 3,89,999 more teachers, taking the gross number of faculty strength needed to 13, 17,331.

General Observations

1. In terms of various categories of institutions, on the basis of the data available, state universities, with over 40% deficiency, are the worst affected in terms of faculty deficiency.
2. Central universities, with an average of 35% faculty shortage are the next affected.
3. Deemed universities—data for only 8 institutions is available—appear to be relatively more comfortable with only about 25% faculty shortage.
4. Affiliated colleges have an average of 40% faculty deficiency which ties up well the faculty shortage in state university data since most colleges are affiliated with state universities.

These data of faculty shortage are vis-à-vis the existing sanctioned faculty strength and do not take into account the UGC prescribed norms for teacher-student ratio.

However, it must be reiterated here once again that educational statistics are a must for proper planning in the field of higher education. While separate bureaus for statistics have been created by both the Ministry of Human Resource Development and the University Grants Commission but both work with other methodologies and the data available with them are not upto date. The data collection by the UGC is still not online, as a result, it takes 4 to 5 years for the data cycle to be completed and by the time it is available, it becomes obsolete. Since statistical data collection is an important component for planned development of higher education, the UGC needs to give a priority to introduction of on-line submission of data by various institutions.

Similarly, the union Ministry of Human Resource Development also needs to take initiatives for coordinating with various State Governments since majority of educational institutions are located in the state sector.

The Task Force made an effort to collect the required statistical data on faculty shortage from all educational institutions imparting higher education. A questionnaire was also developed but the time frame at the disposal of the Task Force was limited and it was not possible to complete the task within that time frame. The Task Force, therefore, relied on secondary data provided by the UGC.

Copies of the data analyzed above are placed at annexures (Annexure 3) at the end of the report.

Chapter IV

FACULTY RESOURCE: AN ANALYTICAL FRAMEWORK

I. Faculty Shortage and Allocation Decisions of Higher Education Institutions

The Task Force recognizes the central importance of inadequate supply of faculty personnel in the phenomenon of faculty shortage. Our recommendations therefore have focused on steps to increase the availability of faculty through short term, medium term and long term measures. All policy recommendations would, however, be effective only insofar as they are acted on by the institutions that deliver higher education services. Regulatory measures and policy guidelines that might be effective in a 'command-and control' economy would face opposition and possible evasion in a post market reform scenario if these are not incentive-compatible. Thus, it is important to analyze the issue of faculty shortage within the larger context of the functioning of the higher education sector, from which this problem has emerged.

This larger context is complex—comprising of long-term determinants of the demand for higher education, as well as factors that impact the behaviour of academic institutions that provide higher education. These factors include government policies, regulatory norms and requirements, the revenue generation possibilities, other non-revenue sources of funds, institutional capacity and reputations. Decisions concerning recruitment, deployment and nurturing of faculty resources are all made by academic institutions. Hence, the effective impact of any policy or other ameliorative action depends on how this affects the decisions of academic institutions. Moreover, there are significant differences

across academic institutions with regard to their operating context, which affect their behaviour. In this chapter, we present a simplified analytical framework to appreciate the different configurations of context that influence the academic institutions' decisions regarding supply of higher education services and demand for faculty.

Most available estimates of faculty shortage in Indian Higher Education, as mentioned above, are typically expressed as a proportion of sanctioned faculty positions. However, there are really no solid empirical grounds to assume that sanctioned faculty positions actually reflect the underlying demand for faculty. Hence these estimates are at best tentative. In the absence of systematic data, it is difficult to derive reliable estimates of faculty demand, particularly relating to specific broad academic fields such as humanities and sciences, management, engineering, medicine and so on.¹ In the era of high economic growth, with rising participation of private sector providers of education services and the trend towards higher tuition fees, decisions made by suppliers and demanders of higher education have an economic foundation. Hence the shortage of faculty is the result of underlying trends in the supply-demand configuration of higher education services. For example, the discipline-wise demands for faculty depend on the underlying pattern of demand for higher education from students. In this section, we develop an analytical framework that sets out the inter-relationships between the key economic determinants of faculty shortage and quality of higher education in a systematic manner. The framework presented below is kept simple. However, it may be useful in illustrating the nature of systemic interconnections that underpin some of the problems affecting faculty shortage that have been identified from our deliberations with stakeholders. The insights so obtained may be useful in the strategic choice and prioritization of policy interventions.

I(A) Demand & Supply for Higher Education

Faculty Shortage represents a mismatch between the demand and supply of faculty resources. Faculty resources are required only as one of several inputs in

¹ In fact, an important recommendation of the Task Force is that detailed and systematic data should be collected and disseminated on a regular basis by official agencies.

the production of higher education services. Hence, the demand for faculty, in both in absolute terms and in composition, is derived from the underlying demand for higher education. This latter demand can be analyzed in two parts. The first is the aggregate demand for higher education, and second aspect is the composition of this aggregate into its components—i.e., different types of disciplines. The former is shaped by long term factors and is a function of certain key macro-trends in the economy. These factors include the following:

- Demographic trends: The size and age-structure of the population determines the number of student-age individuals that forms the population pool from which the demand for higher-education will occur.
- Economic growth trends: This is the crucial factor governing the (expected and actual) economic returns to higher education, as the prospects for employment and incomes change. These factors affect both the ability to pay for higher education as well as the disciplinary composition of the demand for higher education. Courses and disciplines where job prospects are bright and expected incomes are high would be in greater demand. This would be reflected in higher enrollments (if seats for admission are available), as well as in the trends in student applications. To the extent that commercialization (or other forms of price flexibility) of higher education is permitted, these sectors would command higher student fees. In addition, social status factors govern job aspirations, which are to some degree independent of the pure economic calculation of the net benefits of higher education by students.

To summarize, the aggregate demand for higher education is a function of the following factors:

- the number of student-age population and
- the 'desired gross enrolment ratio'.²

² Not every person in the student-age population may want to enroll for higher education. Thus the low GER that is observed is *not necessarily* due to shortage of educational opportunities (supply constraint). This phenomenon is clearly evident in the advanced economies such as the USA. We have not attempted here to statistically estimate the desired GER as a function of its determinants, but rather to explicitly delineate the logic of the relationship. However, from a policymakers' point of view, it would be desirable to conduct regular surveys and use the data to estimate reliable statistical projections of the desired GER.

The 'desired gross-enrolment ratio' in turn is a function of following factors:

- trends in per capita income;
- the cost of higher education (tuition fees, etc); and
- sociological trends linking social status with higher education attainment

The above factors determine the broad total demand for higher education. The discipline-specific demands for higher and professional education are components of the aggregate demand for higher education. The discipline-wise composition of the aggregate demand for higher education stems from the economic choice made by the prospective students. This reflects the relative attractiveness of different academic disciplines. Factors which enter the expected benefit-cost calculations of the potential student population reflect the evolving labour market conditions in different types of professions and employment opportunities.³ The key variables are:

- average entry-level salaries in the respective fields after the degree is obtained.
- average level of tuition fees received by private sector institutions in each of the major fields.

The demand trends would be apparent to the providers of higher education by observing enrollments and applications received in different disciplines of study. In addition, signals from education policy makers provide additional information to academic institutions regarding the demand patterns in higher education.

Based on the above determinants of the demand for higher education, higher education providers (viz., universities, public and private colleges, professional education institutions etc.) make two related choices. They first decide on the *quantum (and composition) of higher education that they will provide* during the year.⁴ Once this is decided, they then make effective decisions about

³ For example, there has been a sharp rise in the demand for software engineers in recent decades, which has impacted the demand for courses in engineering and other related disciplines from students. By contrast, courses in humanities and liberal arts and sciences have witnessed a sluggish demand.

⁴ The quantity of higher education is measured in this framework by the number of degrees that are given during the academic year. It is closely related to the number of students that are enrolled.

acquiring and allocating faculty resources. These decisions in turn determine the *demand for faculty* in the academic market space. We assume that the recruitment and other faculty-resource enhancement decisions are made on the basis of an economic logic that is consistent with the institutional goals of these institutions. What is the logic on which higher education institutions make their decision? An economic logic seems appropriate. We assume that these institutions are essentially economic organizations because they utilize human and other resources (that are purchased from the market) and they also provide higher education services which have a significant economic value to individuals and to society at large. Hence, we shall suppose that these institutions operate rationally as economic agents to maximize an 'objective function'. This objective function should reflect the appropriate context in which they operate. They must satisfy the conditions for their economic survival and institutional growth, and they must meet the expectations of their major stakeholders (e.g., government, owners, funders, faculty, students, recruiters, peers, etc.).

What are the elements of the objective function of higher education institutions? We assume that academic institutions, through their allocation decisions seek to find the *optimum combination* between two independent objectives. These are (1) *Net Operating Income*, and (2) *Institutional Reputation*. These objectives represent short run and long run dimensions of institutional success. The importance of generating a net surplus in terms has become increasingly important after economic liberalization for all higher education institutions because of rising costs as well as stagnant or shrinking grants. It is relatively easy to measure, being the difference between income flows and recurring costs. Income accrues from tuition and other fees paid by students, other sources such as endowment investment income, grants, funded research projects and consulting activity. The ability of institutions to generate incomes from each of these sources varies considerably, and hence there is a difference in their relative importance in different types of institutions. Institutional reputation, on the other hand, is difficult to measure directly. However, its importance as an institutional objective of institutions providing higher education can hardly be questioned.⁵

⁵ A similar argument could be made for hospitals. These institutions offer services, whose quality and effectiveness are not obvious to the users. Hence reputation serves as a signal for quality and institutional capacity.

Institutional reputation is a more complex entity. It is typically created over a period of time through a combination of activities that includes consistently providing high quality education services. Also important are the job market performance of its graduates, and the recognition of the institution's research and faculty quality. Institutional reputation can be acquired through expenditure of resources over extended periods. Among the key inputs that lead to high institutional reputation are the quality of faculty resources, an attractive working environment for academic activity and good infrastructure. Each of these items has cost implications. At the same time, institutional reputation is not merely an item of cost. It can also significantly enhance the capacity of the academic institution to earn a higher income. This arises from their improved ability to attract students, charge higher tuition fees, innovate and create new academic programmes and/or courses, to win research projects and to earn consulting incomes.⁶ Last but not least, high reputation also makes it easier to attract high quality faculty. The nature and quantity of faculty resources that are demanded by the institutions therefore depends on how they choose to allocate their budgetary resources between net income generating activities and building institutional reputation.

The operating contexts are normally quite different for different types of academic institutions. For example, the nature of infrastructure available to large centrally funded universities is very different from state universities and both differ from private sector institutions. In addition they must conform to the relevant regulatory norms. Regulatory norms govern cadre ratios. Government policies are an important determinant faculty emoluments in public sector supported institutions.⁷ It is clear that the underlying context in which the academic institutions make their faculty-related decisions can and does vary over time and across the type of institution. Unlike commercial firms, they do not mainly seek to maximize profits.

⁶ The Task Force was informed that that older established and reputed institutions have had much greater success in starting revenue earning self-financing courses and distance education courses as compared to institutions. This is an example of the differential economic value of reputation in the academic market place.

⁷ The demand for permanent faculty may be viewed in economic terms as being similar to the acquisition of an investment good by a firm. In other words, like infrastructure, permanent faculty is a stock which yields a stream of faculty services over a long period. Its quality and productivity can be enhanced by further investment. In this discussion, we have abstracted from this aspect of faculty demand and treated faculty resources as a variable input.

It is also true, however, that in the era of market reforms, commercial considerations have grown in importance. Apart from 'pure' economic objectives, the actual demand for faculty is shaped by different characteristics of the operating or 'business environment' faced by higher education institutions. For example, in a system in which all institutions are government-owned and fully funded without major budget constraints, the decisions on faculty deployment would be taken without an explicit economic consideration in mind. Alternatively, for a private sector college without a major endowment support for backup, reliance on tuition fees is high, and this would impact its faculty-related decisions. Apart from the financial and ownership aspects, there are other important elements that influence the decision-making by academic institutions. These elements include constraints placed on their operational freedom and flexibility by means of regulation and/or government policy.

There could be a trade-off that between the two objectives and institutions must choose the appropriate balance between maximizing net income or reputation. In the initial analysis we shall abstract from this aspect, and assume that they are maintaining a balance between these objectives in a manner that is optimal from their standpoint. In the latter part of the analysis, we shall discuss the choice between the two—in terms of the choice between quality and quantity of higher education.

The relationship between the demand and supply of higher education, and the perceived shortage of faculty is explained schematically in the following diagrams. The gap between demand and supply of higher education is commonly attributed to faculty shortage. However, this need not always be true. We examine below a few illustrative scenarios, where the cause of inadequate availability of higher education varies.

Situation 1: Excess Demand for Higher Education without a Faculty Constraint

Figure 1 : Excess Demand for Higher Education Services without Faculty Shortage:

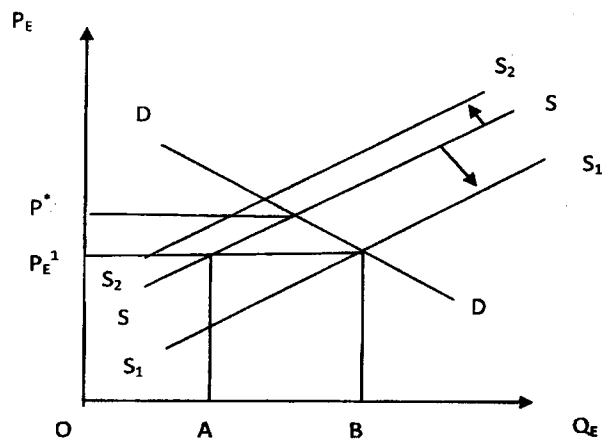


Figure 1 illustrates a situation of excess demand (or shortage) of Higher Education. DD is the demand curve for higher education. The horizontal axis measures the ‘quantity of higher education’ (Q_E). This represents the demand for degrees/diplomas from students. Thus, the quantity measured on the X-axis is the number of degrees/diplomas demanded and/or supplied during each academic year. The price of higher education (tuition fees) is measured along the Y-axis (P_E). As explained above, the demand is a function of the tuition fees (price of higher education). Other parameters affecting demand include the number of student-aged population with adequate pre-college qualification, and the ‘desired gross enrolment ratio’.⁸ The SS curve depicts the initial supply of higher education as a function of the price of higher education.⁹ Apart from the tuition fees charged, the supply of higher education depends also on other sources of income, and/or financial support received for provision of higher education (grants from government, and/or non-government sources, endowment income, etc.), the price (salary) of faculty inputs to deliver teaching services, and the policy and regulatory requirements that must be fulfilled by the educational institutions.¹⁰

⁸ Changes in any of the other variables, e.g., the desired GER, would cause the demand curve to shift in position.

⁹ We assume that the market for higher education has many service providers who compete with each other. None can exercise monopoly power to influence the market price. Following standard economic logic, for any given level of price P_E , net-income maximizing providers of higher education services would supply education quantity up to the point at which the price equals the marginal cost of supplying an additional unit of education. Hence the supply curve coincides with the marginal cost curve. Increasing costs of faculty resources would raise marginal costs and make the supply curve less price-elastic (i.e., steeper in slope).

¹⁰ We assume in this case that faculty services are in relatively elastic supply. If salaries are raised moderately, faculty may be recruited in the academic market place.

It is obvious that institutions can try to dilute the quality of higher education services in an effort to lower costs.¹¹ We shall assume initially that the academic institutions supply higher education services *at a fixed level of quality*. If the higher education sector operated according to purely market principles, then the market for higher education would be in equilibrium at price P^* . However, this market price might not be deemed socially acceptable on grounds of equity and the implied financial burden for an “essential” service may be seen as too high. Therefore policy makers and/or regulators may impose an effective ceiling price. The diagram illustrates what would occur if there were a *policy-determined* or *regulator-determined price* P_E .¹ In this case, there would be a *shortage of higher education of an amount AB*, since the supply would be OA and the demand would equal OB.

One way to close the gap between demand and supply of higher education is to restrain the demand for higher education by sharply raising the standards required to qualify for admission. This would cause the demand curve to shift to the left. This phenomenon may be observed in the case of certain types of professional education institutions focusing on law, management or engineering, where the excess demand is particularly obvious.¹² This solution may not, however, be optimal from the viewpoint from society as whole.

It is not unlikely that in this type of situation, the higher education institutions might argue that there is a faculty shortage. If faculty resources were more plentiful, their salary would fall, and this would enable the institutions to increase supply and close the gap. However, *this would be a wrong diagnosis* of the problem. What this actually reflects is the fact that there would be a faculty shortage *only if an attempt is made to lower the existing levels of faculty salaries*. The basic reason for excess demand for higher education in here is that the price for higher education is lower than equilibrium, and that at existing costs, higher education institutions have no incentive to supply the level required to eliminate the gap. As

¹¹ This can be done in a variety of ways. The most common methods are to increase the class size per teacher, lower the quality of academic infrastructure, and intensifying the teaching load of faculty.

¹² This year for example nearly 186,000 candidates appeared for the Common Admission Test (CAT). They were seeking admission to the Indian Institutes of Management which admitted just about 2800 students in all. In other words only 1.5% of the applicants were able to gain admission.

depicted in Figure 1, the supply curves of higher education are fairly elastic, indicating that there are no severe supply side difficulties in a structural sense. The problem can be addressed by *improving the incentives of the higher education institutions* by means of either freeing the tuition rates that they can charge, or alternatively *to provide subsidies and/or grants so that the supply curve shifts to S_1S_1* .

Under these conditions, if the policy response focuses instead on trying to improve the supply of faculty *by mandating better salaries and working conditions*, this would not ameliorate the situation. The problem might get worse if it raises the cost of production of the institutions, unless there are accompanying measures to relax the financial constraints of the institutions.¹³ This is depicted in the diagram as a shift to the left of the supply curve to position S_2S_2 . This would worsen the gap between demand and supply of higher education. Hence, *the ability to institutions to earn more revenue or to tap other income sources should be at the core of any solution* aimed at improving supply of education. In this connection, it is easy to understand the phenomenon of institutions attempting to introduce separate 'self-financing courses' with higher fees that was reported by many of stakeholders to the Task Force. A third approach to the problem would be to intensify the work-load of the existing faculty pool by mandating greater sizes of student enrolment, or by increasing the teaching load. This would cheapen the cost of faculty services to the institutions. As we shall see below, there are negative implications of such an approach for the quality of education.

Situation 2: Excess Demand for Higher Education under Conditions of Faculty Shortage and Restrictive Policy

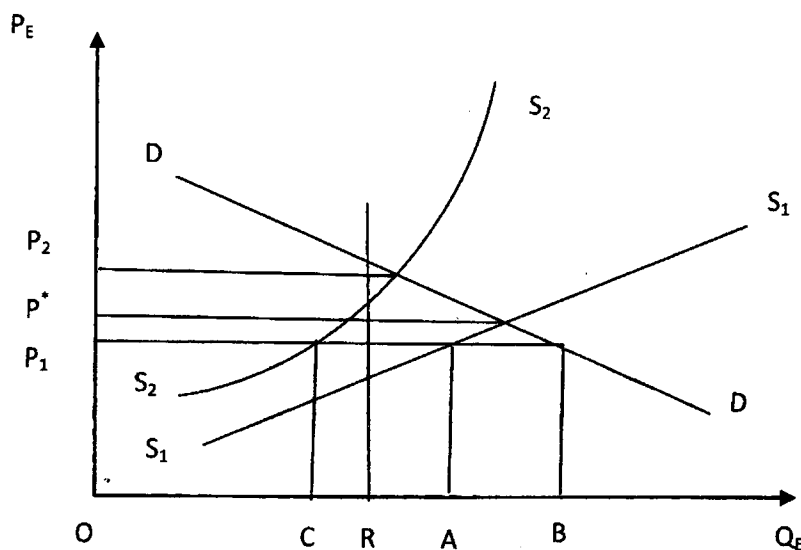
Figure 2 illustrates a situation where there are two different types of constraints on the ability of the higher education institutions to provide education services. The first is a scarcity of faculty available due mainly to the fact that alternative job opportunities are preferred by potential teachers and researchers. The figure shows two different supply curves reflecting alternative cost conditions faced by

¹³ Refer to relevant portion in Recommendations chapter

academic institutions. The S_1S_1 curve depicts the situation discussed earlier in which the supply curve is relatively elastic. This represents the condition where higher education supply can be expanded with modest increases in price because faculty resources are available in the market. The second supply curve S_2S_2 turns steep after a certain level of education has been supplied. The point of inflection marks the level beyond which the availability of faculty has become scarce, due to underlying structural factors.¹⁴ Beyond this point, the price of education would have rise to elicit additional supply, because marginal costs increase. We continue to assume that the price of higher education is subject to an upper limit due to policy and/or regulation. This price is P_1 , while P^* is the market-clearing equilibrium price when the supply curve is S_1S_1 . When supply becomes inelastic the market clearing price is even higher at P_2 .

Figure 2 shows that when the supply curve is relatively elastic (S_1S_1), the excess demand for higher education is $AB (=OB-OA)$. But in the case where the supply curve is less elastic due to faculty resource scarcity, the gap is larger given by BC . We see that there is an increase in the level of excess demand for higher education in the case where there is a scarcity of faculty. In other words, BC is larger than AB . Thus *faculty scarcity exacerbates the excess demand for higher education, but does not create it*.

Figure 2: Excess Demand for Higher Education with Faculty Shortage and Policy Constraint



¹⁴ There could, however, be some reasons other than faculty scarcity for the supply curve to become inelastic. This includes constraints in expanding academic infrastructure, which could be due to funding constraints.

Apart from faculty scarcity, there could be other reasons why higher education institutions cannot increase the supply of higher education. *Policy induced restrictions may be a distinct and separate barrier.* Among the problems that were brought to the attention of the Task Force was the fact that several Central and State universities had to impose a “hiring freeze” for an extended period. This was related to strained fiscal conditions of government budgets. There could be other sources of similar constraints. For example, there could be long delays in obtaining regulatory clearance to open new campuses or institutions or courses of study. *The important task from a policy standpoint is to recognize which of these two types of constraints is binding.* In Figure 2, OR represents the limit to provision of higher education posed by such a policy constraint.¹⁵ When the supply curve is elastic (S_1S_1) the supply will be OR, indicating that now the effective constraint is the policy constraint, and thus the excess demand will RB, which is higher than AB. In other words, faculty shortage is not the reason for the observed excess demand for higher education.

As far as remedies are concerned, we can see from the figure that *efforts to increase the supply of faculty will have little impact on the core problem when the policy constraint is binding.* Unless the binding constraints can be relaxed, the problem of excess demand cannot be mitigated.¹⁶

What would be the situation when the policy constraint is not binding?

Figure 2 also illustrates this situation. Consider what happens when S_2S_2 is the supply curve. In this case, OR (the policy constraint) exceeds OC, which is the market supply at price P_1 . *In this case the policy constraint is not the binding constraint, but rather the relative shortage of faculty.* At the mandated price of higher education, the supply of education is OC and the demand is OB. Hence the excess demand for education is amount BC.

¹⁵ For the sake of expositional simplicity, we have depicted OR as a rigid barrier. It may still be possible to increase the supply of higher education in this situation by increasing faculty work-loads and/or reducing education quality.

¹⁶ We do not deny that there may be good reasons for the policy or regulatory constraints. Our analysis suggests that these require prior resolution if the larger objective of providing an adequate level of higher education services is to be met.

What are the appropriate remedies in this situation? In this situation, relaxing the policy constraint on expanding higher education services will not be effective. The immediate steps should address ways of relaxing the faculty shortage through a variety of short term measures that have been detailed elsewhere in the Task Force report. This will improve the supply of education to some degree, and the supply curve would shift to the right, while still remaining inelastic. There may still be a persistence of some excess demand. Alternatively the price ceiling can be lifted, and this will reduce demand. However, the danger in this approach is that the demand for higher education can tend to get skewed towards those courses of study where the potential economic returns are high enough to justify the higher fees paid by students.¹⁷ The long term solution would be to take steps to improve the entry of larger numbers of qualified professionals into the teaching/research careers, and ease infrastructure constraints so that the supply curve for higher education assumes the elastic shape of S_1S_1 , while it also shifts to the right. Some relaxation of the ceiling price for education might be needed if the entry of new faculty also requires higher salaries and other institutional costs towards providing better academic environments, unless this is feasible through grants or endowment income.

In this sub-section we have discussed the essential features of the market for higher education, in relation to both demand and supply. We have analyzed the economic logic of decision taken by academic institutions with regard to the supply of higher education, as they try to maximize their net income subject to a variety of constraints. We have seen that the core problem of excess demand for higher education can arise from different sources, of which scarcity of faculty resources is only one source. The effective constraint on greater supply of higher education can vary depending on context. It could be faculty scarcity in some circumstances, but other effective constraints have been identified in the above discussion.

¹⁷ This phenomenon is quite evident in case of professional degrees/diplomas in management, engineering, law and medicine.

Academic institutions make both output supply and input demand decisions. We have in this section, examined the former. With regard to the shortage of faculty resources, it is the input demand decisions of academic institutions that are directly important. We now turn to an analysis of the market for faculty resources.

I(B) The Market for Faculty Resources

The Demand for Faculty Resources

To summarize the argument thus far, the demand for faculty is determined on the basis of the economic decisions made by the higher education institutions. These decisions reflect their economic and strategic objectives as well as the constraints of their operating environment. Since the mix of institutions that provide higher education services is quite diverse, we would expect that the nature of their demand for faculty would vary significantly. It is therefore necessary to take these differences into account in specifying the logic of their faculty resource decisions. Figure 4 illustrates the simple analytics of the demand for faculty resources. The assumptions underlying the diagram are as follows: (1) Academic institutions have made a prior decision (based on the logic discussed above) about the quantity of higher education services that they will provide during the year. (2) They have also decided to offer these services at a certain level of quality. (3) Certain quality norms have been set by regulators that they are expected to respect. This would imply (among other requirements) that they maintain a certain minimum level of faculty, with the appropriate levels of qualifications. (4) There are upper limits to the level of faculty inputs that are effectively set by policy makers/regulators. These may have to do with limits on the number of sanctioned posts, or with a fiscal crisis-induced freeze on recruitment, or with the permission to offer new courses. (5) Subject to all the above conditions, the academic institution attempts to maximize its net income. A diagrammatic representation of the demand and supply for faculty resources is shown in Figure 3.

In Figure 3, the quantity of faculty inputs is shown in the X-axis, while its price (faculty salary) is measured along the Y-axis. The demand curve $D_f D_f$ for faculty

services under the above assumptions, following standard economic analysis, is given by the Value of the Marginal Product curve.¹⁸ The curve depicts the demand for faculty resources as a function of the salary that is paid for them. As discussed above, other factors cause a change in the demand for faculty resources, which are taken as given parameters.¹⁹ These parameters are:

- The quantity of higher education supplied
- Regulatory norms and official permissions governing cadre structure, and infrastructure requirements
- Flexibility with regard to starting new academic courses²⁰

From stakeholder consultations, the Task Force has noted that in recent years the market for higher education has tended to get fragmented. The demand for professional education courses that promise higher income prospects has expanded much more rapidly relative to the liberal arts and sciences. This factor has affected the functioning of the sector. This has led to a corresponding increase in the demand for faculty resources in these fields. At the same time, the supply of faculty resources has also shown a differential trend. The pattern of supply seems to be as follows. There has been a general slowdown in the supply of faculty resources. For ease of exposition, we show this as a left-ward shift of the supply curve for faculty resources.²¹ In addition, the supply of faculty resources in the professional and technical disciplines has tended to contract more sharply than in other disciplines, so that the faculty shortage issue is more severe in these areas. We elaborate on the supply determinants of faculty resources below.

¹⁸ The diagram incorporates standard economic analysis of input markets. A key assumption is the law of diminishing returns, i.e., the marginal product of any input (e.g. faculty time) falls as more of it is utilized with fixed quantities of other inputs (e.g., class rooms and academic infrastructure). Net income maximization by the institutions will lead them to hire faculty inputs up to the point where the cost of 1 unit (the salary or wage) will equal the value of the marginal product yielded by that input.

¹⁹ When they change, this results in a shift in the position of the demand curve (to the left or right depending on whether the impact on demand is positive or negative).

²⁰ This flexibility depends on the extent of autonomy enjoyed by the academic institutions, their credibility and reputation as well as the financial position of the institution.

²¹ There is no hard evidence to suggest that the supply of faculty resources at any given salary level has actually shrunk in absolute terms, but this is the strong impression of most observers—particularly if we assume that the quality of faculty is kept constant.

The Supply of Faculty Resources

The supply of faculty may be viewed in relation to the (a) appropriate time frame and (b) both the quantitative and the qualitative dimensions. Faculty availability can be enhanced by actions that are effective in the short run, the medium and long term. The long term dimension may often tend to be neglected in order to address pressing requirements of the present. However, it is necessary to address the long term structural issues that are the fundamental contributory factors to the phenomenon of faculty shortage. Moreover, actions that expand the supply of faculty in the short run may not be adequate to ensure that the quality of academic faculty is maintained and improved. This consideration is strategically important in the context of India's aspirations as a "Knowledge Economy".²²

The long term supply of faculty is determined by structural features of the Indian economy, and also specific characteristics of the higher education sector. There is a general consensus among the key stakeholders that the basic constraint on the supply of faculty is the *relative economic unattractiveness of the academic profession* in the current circumstances. The incomes earned by faculty are below those available at the entry level in alternative professions for persons with comparable intellectual capability and educational attainment. The situation has been exacerbated in the post reform high growth rate scenario. This trend has affected professional and technical education sectors more severely. In the case of liberal education, the problem is less severe. However, the perception that programmes in humanities, social and natural sciences are not expanding in academic institutions has had a broad-based negative impact of faculty supply. Hence the long term supply of faculty needs to be addressed through policy measures that restore the attractiveness and status of the academic profession.

Monetary incentives are not the only, nor perhaps the most significant influence on the decision to take up an academic career. Apart from salaries, other important structural determinants of the supply of faculty resources include:

²² Provide reference to relevant portion of Recommendations chapter

- Service conditions (e.g., teaching work load, opportunities for research, administrative facilitation)
- Salaries obtainable in other professions and employment with comparable qualifications
- Career advancement prospects (e.g., promotion, skill up gradation programmes, possibilities for external recognition of research)
- Institutional reputation (i.e., faculty resources would tend to shift to an institution with a better reputation, and there would be less attrition)
- Better post-retirement benefits
- Providing prestigious fellowships for inducting talented scholars towards PhD work and academic careers

The above key steps would improve the attractiveness of academic careers and enhance the long run supply of faculty resources.

In addition, the supply of faculty resources may be enhanced in the short to medium term by certain other measures. Several of them would have a one-time impact of the supply of faculty resources. These include:

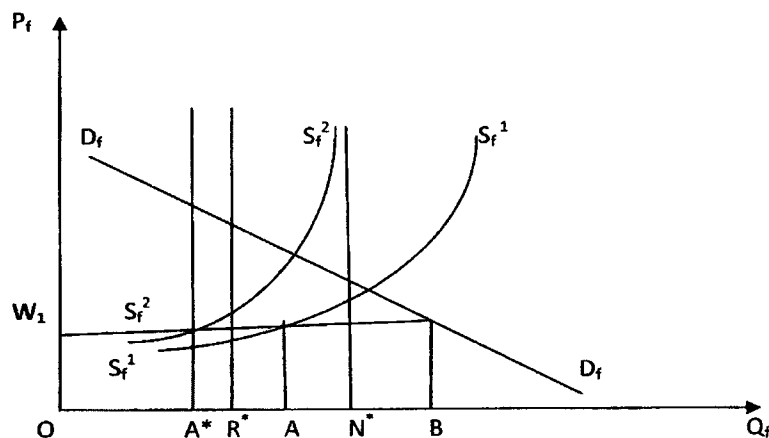
- Increasing the opportunities for participation in academic work by other potential teachers and researchers²³
- Relaxation of the age of retirement of faculty
- Creation of posts such as emeritus professor/fellow
- Creating policies for “brain gain” that attract NRIs and other international academic personnel

²³ There is a large pool of technically qualified researchers and practitioners who might be willing to teach part-time. But under current conditions they are unable to supply teaching and/or research services to academic institutions. Their potential to ease the faculty shortage is increasingly recognized. The UGC has instituted a scheme for the purpose. Typically, several categories of faculty appointments could be made that are more adaptable. These include adjunct faculty, visiting faculty, and international visiting fellows with more flexible terms and conditions. The Task Force has endorsed this approach, subject to the proviso that adequate safeguards be there to ensure quality standards.

The diagram (Fig. 4) depicts supply curve(s) for faculty resources as a function of the price (salary). Changes in any of the other parameters listed above would cause a corresponding shift in the supply curve.

Figure 3 illustrates the working of market for faculty resources. The quantity of faculty resources is measured on the X-axis and the price (faculty salary) on the Y-axis. The D_f line is the demand curve. As explained above, this corresponds to the “value of marginal product of faculty resources”. It is drawn on the assumption that other parameters affecting the demand for faculty resources are given. In particular, it corresponds to a particular quantity of higher education services that the institutions have decided to provide. Two illustrative supply curves are shown. They represent two different configurations of supply in two consecutive periods. S_f^1 and S_f^2 are the supply curves in periods 1 and 2 respectively. The supply curve in the latter period shows a shift to the left reflecting the general trend of shrinkage of faculty supply for reasons discussed above.²⁴

Figure 3: Demand and Supply of Faculty Resources



S_f^1 is the initial supply curve for faculty resources. The curve becomes steeper (more inelastic) as Q_f increases because beyond a point there is a growing scarcity of faculty services. In a free market, the market clearing price and quantity would occur at the intersection of the demand and supply curves. However, faculty salaries have been traditionally determined by administrative norms, and this

²⁴ To keep the diagram simple, we present this situation in terms of a given demand curve and shrinking supply curves. In reality, the demand curve is likely to have shifted to the right as the demand for higher education has expanded, whereas the supply curve has either shrunk or expanded much slower than the expansion in demand. In any case, the net effect is as depicted in the figure.

condition continues. The faculty salary is thus assumed to be given at the level W_1 . There are certain other regulatory or policy related bounds on faculty utilization. OR^* is the minimum level of faculty recruitment that is mandated by the regulatory authorities. This corresponds to quality specifications such as maintaining a minimum level of faculty-student ratio. Similarly ON^* shows an administratively set upper limit on faculty resources. This corresponds to the number of “sanctioned posts”.

The diagram indicates the following insights. We notice that the actual shortage of faculty resources when the faculty salaries are given at W_1 is equal to amount AB . This is the gap between faculty demand and supply. The *actual shortage is seen to be greater than the number of “unfilled” positions* relative to the number of sanctioned posts, which is given by AN^* . Hence the standard practice of measuring faculty shortage relative to sanctioned posts is inaccurate, and could be potentially misleading for policy makers. In period 1, there are no violations of any regulatory norms. The actual utilization of faculty resources is OA , which is within both the upper and lower bounds.

Consider the situation in period 2. The supply curve for faculty resources has contracted. Not surprisingly, the actual faculty shortage has increased to A^*B from AB . However, in this case *there is likely to be a violation of regulatory norms* because at the given salary level it is not possible to maintain the minimum required faculty resource level OR^* . The available supply is OA^* which is less. There would be a decline in quality of education supplied because faculty inputs to deliver the required standard cannot be obtained. What would be likely consequence? The institutions would attempt to effectively shift the supply curve back to its original position. Likely responses from the institutions would be some combination of the following: (a) under-supply higher education to maintain quality, but at the cost of creating a shortage in higher education;²⁵ (b) try to expand the faculty supply through short term measures such as use of temporary faculty and lowering of entry barriers into the teaching profession;²⁶ and (c) to lower the effective cost

²⁵ This seems to be happening in the case of engineering, law and management in the reputed institutions.

²⁶ Unless there are adequate processes in place for certification and quality control, this option also could diminish the quality of education supplied.

of faculty resources by intensifying the workloads of existing faculty by demanding more teaching hours per year.²⁷

It is possible to extend this analysis to the case where the market for faculty becomes fragmented due to differential trends in the patterns of demand and supply. The Task Force learned from its consultations with stakeholders that certain segments of higher education linked to professional education has experienced much sharper rise in demand compared to the arts and sciences. This is largely due to the perceived difference in income prospects. At the same time, the supply of faculty resources in those very disciplines has tended to decline. The reason is that there are better income opportunities outside academia in these disciplines, due to increased job opportunities and lucrative private practice. It would be more appropriate to analyze the two sub-markets separately rather than in the aggregate as done in Figure 3. Though a separate diagrammatic analysis is not presented here, it is easy to see that in such a situation, there would be a marked difference in the intensity of faculty shortage between the two segments of higher education, *if the faculty salary is the same in both segments*. We may term these as the “high shortage” and “low shortage” sectors respectively. Under such market conditions we would expect the “high shortage” segment to experience a great pressure to increase faculty salaries to enhance supply. They would also be inclined to charge higher tuition fees for these courses. If raising salaries and tuition fees in the high shortage segment is not permitted for some institutions, but is possible for others, this will lead to a fragmentation among the higher education institutions themselves. Institutions that can operate on commercial principles will tend to specialize in the high shortage segments. They would be tempted to “poach” faculty from other more regulated institutions, and this in turn would in turn lead to a secondary negative impact on the supply of faculty resources to the “low shortage” sector, because of relative disincentives. The response of institutions in this sector is likely to include lowering costs and enhancing faculty resources through lowering entry barriers, and endangering quality.

²⁷ This line of action would also have a negative impact on quality of education. Moreover, by pre-empting the time of the existing faculty members from research, this would eventually lower the academic reputation of the institution.

From the above discussion we can clearly discern the interrelatedness of the problem of faculty shortage with the quality of faculty resources and of higher education itself. It seems important therefore to examine the relation between quantity and quality in more depth. This is attempted below.

II. The Balance between Quantity and Quality of Higher Education

Higher Education institutions produce both a certain quantity of higher education as well as quality. Until now in this chapter, we have discussed economic decisions by academic institutions relating to both output (higher education services) as well as input (faculty resources) in *quantitative terms*, assuming that the quality is being maintained at a particular level. However, it is useful and more realistic to consider *quality of higher education as an element of conscious decision* made by institutions. Hence, we shall extend our framework to analyze the quality-quantity configuration as a joint decision. In situations of rising demand for higher education and associated shortage of faculty resources, there is an inevitable trade-off between quality and quantity. Typically the service providing institutions must make a choice, and strike the most advantageous balance between quantity and quality. This aspect of the problem confronting higher education is not explicitly recognized in the discussions of faculty shortage. However, this is a crucial aspect of policy because the effectiveness of higher education both for the students as well as for society as a whole ultimately depends on its quality.

During deliberations with stakeholders, the Task Force learned that the threat to quality of higher education arises from the choices made by the delivery institutions in different market situations. These deliberations are summarized in Chapter 2. Regulatory bodies often find that imposition of stricter quality norms is not easily enforceable.²⁸ This holds even where regulatory functions have been delegated to other academic bodies, such as the university vis-à-vis its network of affiliated colleges. The arrangement is not very effective. The universities are not accurately

²⁸ These norms typically relate to the maintenance of minimum teacher-student ratios, an appropriate cadre structure of faculty composition with respect to different levels of seniority, and adequacy academic infrastructure.

informed about faculty presence in the colleges. Quality is compromised in publicly funded institutions also qualified faculty members are 'poached' from older established public institutions by new more commercially run private institutions. Some higher education institutions attempt to meet the challenge of faculty scarcity by increasing the work load of existing faculty members. While this strategy might serve to increase the quantity of higher education, it typically leads to lowered quality.

In this section, we extend our analytical framework to sketch the key elements of this choice between quality and quantity of higher education. As we have seen above, the issue of faculty shortage. It is useful to conceptualize the activity of an institution as the production of both Quality (Q_L) and Quantity (Q_N) of higher education. Institutions produce Q_L and Q_N given a particular configuration of academic infrastructure and faculty resources, as well as regulatory and other institutional norms. Given its operating budget during any particular year, the institution allocates its resources in between Q_L and Q_N in order to maximize its net returns.²⁹ Thus the choice of the proper balance between quantity and quality of higher education is the key decision that institutional administrators must make. Indeed, the whole point of policy steps to increase faculty resources to relieve the gap would be lost if this were to be accompanied by a marked decline in quality.

We may measure Quantity of Higher Education (Q_N) terms of the number of academic degrees/diplomas produced. Essentially this reflects the throughput of students in the institution. The economic return from this activity can be measured by the payment received by the institution as tuition fees. The Quality of Higher Education (Q_L) is more difficult to measure precisely. However, it has several generally accepted elements. These include academic rigour in courses and instruction, the relevance of the content of courses in terms of being up to date and in consonance with what graduates would need as they enter

²⁹ The concept of returns to quantity produced is straightforward, but this is not easy to conceptualize in the case of quality. We shall discuss this aspect below.

employment, the ability to provide adequate choice to students through elective course offerings, the ability of the courses to build self-confidence in students so that they can think independently and creatively, and so on. Quality can be developed and enhanced through ensuring the presence of the following enabling factors³⁰.

- Attracting and retaining Talented Faculty members
- Academic Autonomy (to enable flexibility in curriculum design and delivery)
- Regular review and revision of the curriculum³¹
- Research Capacity (so that new knowledge is created and infused into teaching)
- Sufficient high Teacher-Student Ratio (to enable closer interaction with teachers)
- Improved examination systems that encourage continuous assessment systems throughout the academic year
- Moderate Faculty Teaching Workload (that allows sufficient time for research)
- Academic Infrastructure (libraries, laboratories, connectivity) that is upgraded regularly
- Schemes for training and skill improvement of teachers (e.g., paid sabbaticals)

All of the above factors that are positively associated with quality of education require careful planning and conscious decisions by institutions. More important, they require considerable commitment of resources. Some of these—such as faculty quality, academic autonomy and institutional mission and relevance are difficult to measure. They can be approximated by proxy indicators.

What can be said about the return to such investments? What is the motivation for institutions to incur quality-enhancing expenditures? Apart from the consideration that a certain quality parameters are mandated by regulators, there

³⁰ Most of these quality enablers are highlighted by the National Knowledge Commission Report in the chapters dealing with higher education. See, the Commission's *Report to the Nation*, 2006, pp 62-90

³¹ In the case of professional courses, the curricula should have inputs from external stakeholders to ensure contemporary relevance.

are several long term benefits from high quality. The most important benefit is the fact that quality is the most crucial input in building *“institutional reputation”*. A strong reputation is gradually built up over time through the long satisfactory experience of its stakeholders. A good reputation is of enormous economic value to academic institutions (in a manner analogous to the ‘brand value’ of corporations and products). Reputation enables them to: (a) attract larger numbers of talented students; (b) it allows them flexibility to begin new courses and to innovate; (c) it enables them to attract talented faculty members; (d) it makes it possible to raise funds from other sources—such as foundations, consultancy and research grants; (e) it enhances their credibility to enter national and international academic collaborations with other respected partner institutions; and (f) it also provides them with the capacity to charge higher tuition fees in the long run. These obvious benefits notwithstanding, it is difficult to measure both the “amount of quality” produced³² as well as the net economic returns to expenditure on quality. However, it is possible to regard these expenditures as a “long term investment” in reputation, for which the institution’s management receives an “expected return”.³³ It is a notional amount, but which is important in deciding whether or not quality enhancing expenditures should be incurred. We shall term this return on the additional rupee spent as the *“Value of the Marginal Product of Quality”*. Given the difficulty in measurement, the analysis in this section should only be taken as illustrative and *indicative of the broad directions of change*.

With regard to quantity, we shall measure it as before in terms of the number of degree granted per year. This enables the institution to earn an income through tuition and related fees. To deliver any quantity level costs resources. The return on the additional rupee spent on generating higher education quantity can be termed as *“Value of the Marginal Product of Quantity”*.³⁴

³² In principle it is possible to construct an index of the quantum of quality based on the levels of quality-enhancing indicators noted above. This exercise has not been attempted here.

³³ This return is analogous to Keynes’ idea of the marginal efficiency of investment—which is also based on the concept of an expected return.

³⁴ The Value of Marginal Product of Quality equals the ‘price’ received for quality multiplied by amount of ‘quality’ produced by the expenditure of the incremental rupee spent on quality. As explained above, this price is an expected amount that institutions believe a unit of quality to be worth. It should in theory be equal to the present value of the expected stream of future incomes that accrues from a unit of quality. The Value of the Marginal Product of Quantity may be defined in a similar manner, except that the measurement of both its price and magnitude is straightforward.

We assume that decision makers in an academic institution allocate their current operating budgetary resources in a rational manner towards the production of two distinct 'outputs', viz., quality (Q_L) and quantity (Q_N). Their decision results in producing a particular optimum combination of quality and quantity that maximizes their objective function based on the relative price of quantity and quality.³⁵ The price received for quantity is the tuition fee. The price received for higher quality can be approximated by the inflows from grants received, research support and consultancy income. It should also be noted that academic institutions can differ with regard to their ability to produce quality and quantity. This capacity depends on the existing levels of academic infrastructure, faculty resources commanded and operating systems for producing quality and quantity respectively.

Figure 4: The Choice between Quality and Quantity of Higher Education by Differently Endowed Institutions

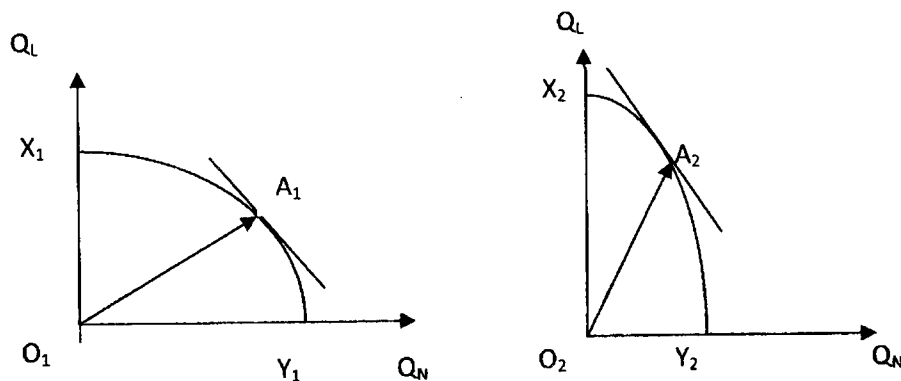


Figure 4 illustrates the logic of the framework thus far developed. The maximal combinations of quality and quantity attainable given the existing resource endowments, from a technical standpoint are given by the two 'production possibility curves' ($O_1X_1Y_1$ and $O_2X_2Y_2$). They represent the production capabilities of two different categories of academic institutions. $O_1X_1Y_1$ is the curve pertaining to Category I which has *relatively greater capability in producing Q_N* . On the other hand, the Category II academic institution has a *relatively greater competence in producing Q_L* . The convex shape of the curves reflects the economic principle of diminishing returns. In other words, it shows that as resources are shifted from say production of quantity and deployed in producing quality, the additional unit

³⁵ For simplicity, we may suppose that the objective function is the weighted sum of quality and quantity, where the weights are the 'prices' received for quality and quantity respectively.

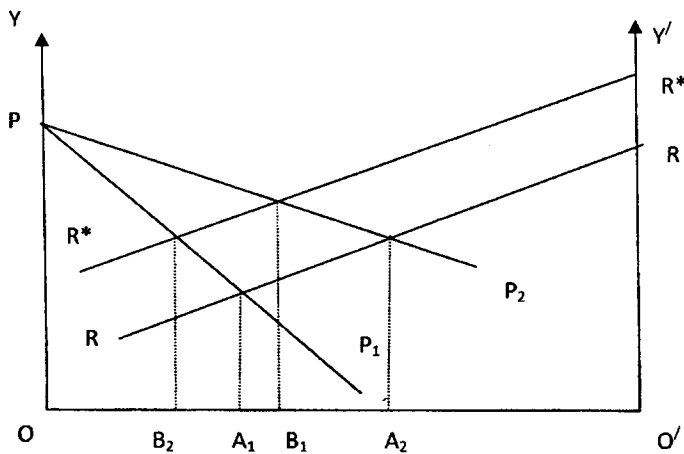
of quality is available at an increasing opportunity cost (in terms of how much quantity must be sacrificed). The difference in shape of the two curves clearly indicates this underlying difference in relative capabilities. Figure 4 also shows that *confronted with exactly identical prices for quality and quantity*, the optimum combination of quality and quantity chosen by the two categories of institutions will differ, in a manner that reflects their relative capabilities. The Category I institution would operate at point A_1 , while the Category II would choose the point A_2 .³⁶ It may be observed that the ratio of (Q_N / Q_L) at A_1 exceeds that at A_2 , as is evident from the difference in the slopes of the lines joining A_1 and A_2 to the origin. The policy implication from this observation is that even if the 'price' of quality were to be raised relative to quantity, the Category I institution would remain laggard in quality, *unless adequate steps are taken to improve their quality-enhancing infrastructure and faculty resources to bring about greater parity with Category II institutions*. These steps, as noted above, would include a range of investments that over time enhances the quality producing capacity of the Category I institution.

The analysis above concerns comparison of two types of institutions at a point in time. However, it is also possible to interpret it in terms of a comparison over time. *An institution which neglects to maintain quality and permits its research infrastructure and its talented faculty pool to decay will find that its production possibility curve shifts over time*. Thus an institution can over time be transformed from a Category II institution into a Category I institution. A case could possibly be made that some of our universities have undergone precisely such a transformation. They are much less of research hubs and have become much more of purely degree granting institutions than they were a few decades ago. A similar transformation would occur if the process of "poaching" of talented faculty members from older established public institutions by newly set private or newly licensed foreign institutions were to take place.³⁷

³⁶ The diagram shows A_1 and A_2 as the points of optimum choice by the two institutions. These are the points of tangency between the lines representing the objective functions with the respective production possibility curves. These are the highest values of the objective functions attainable. The lines of tangency are parallel to each other indicating that the relative price of quality to quantity that both institutions face is identical.

³⁷ As noted earlier, this phenomenon of poaching of faculty was cited by several stakeholders during deliberations with the Task Force.

Figure 5: The Allocation of Institutions' Operating Budget between Quality and Quantity



The allocation decision made by institutions with regard to their operating budget is explained by Figure 5, which is an alternative depiction of the choice shown in the preceding figure. Let us assume that both the Category I and the Category II institution have the same size of operating resources that they must allocate either towards producing Q_L or towards Q_N . This is given by OO' which is the X-axis. Any point on the line OO' represents a particular allocation of the operating budget between quality and quantity. Thus for example at point A, amount OA is allocated to Quality, and the remainder of the budget $O'A$ is allocated towards Quantity. The two vertical axes (OY and $O'Y'$) measure the *Value of the Marginal Product of Quality* (VMP_L) and the *Value of the Marginal Product of Quantity* (VMP_N) respectively.³⁸ The VMP_L curve and the VMP_N curve respectively are plotted in the diagram against the amount of operating funds that are incurred towards them. These curves are drawn on the assumption that P_L (price of quality) and P_N (price of quantity) are exogenously given to the institutions.³⁹ Here PP_1 and PP_2 are two curves for VMP_L that pertain to the Category I and Category II institutions respectively. The curves have a negative slope because of the principle of diminishing returns, i.e., given a particular stock of infrastructure and resources, the additional amount of quality of higher education produced by each successive rupee of operating expenditure falls. The slope of PP_1 is steeper than PP_2 because

³⁸ See footnote 29 for a discussion of the definition of the value of marginal product of quality and quantity.

³⁹ As noted earlier P_L is an expected price. The assumption reflects the idea that the institutions cannot themselves influence the price through the exercise of monopoly power.

by assumption the Category I institution has less of quality enhancing resource endowments the Category II institution. Similarly we can draw the curve for VMP_N . For simplicity let us assume that both institutions have the same VMP_N curve, but differ only in respect of production of quality. RR and R*R* represent two such VMP_N curves. Each of these curves is drawn with reference to a given price (P_L). R*R* refers to a situation where the price of quantity (tuition fees) is higher, and hence it is drawn above the RR curve ($P_N^* > P_N$). Both these curves also have a negative slope for the same reason discussed earlier.

It can be easily shown that the optimum allocation of operating budget between Q_L and Q_N that maximizes the total returns is given by the intersection of the two relevant VMP curves. In other words, the operating budget should be allocated so that the marginal returns from both quality and quantity are just equal. Thus in situation 1 where the price of Q_N is P_N , the Institution I will choose A_1 . It will allocate OA_1 of its budget towards quality and $O'A_1$ towards producing quantity. Similarly the allocation decision by Institution II would be OB_1 and $O'B_1$ respectively. *The diagram makes clear the fact that Institution I will allocate relatively higher proportion of its budgetary resources towards producing quantity compared to Institution II.* This not only confirms the conclusion drawn from Figure 4, *but also suggests that the future trend will be to further exacerbate the quality gap between the two institutions.* This is because it would spend relatively less of its internal funds on maintaining quality enhancing resources in each period.

Let us now compare situation 1 (with P_N) and situation 2 (with P_N^*). The optimum allocations by the two institutions I and II are B_1 and B_2 respectively. The diagram reveals the consequence of an upward shift in the VMP_N curve caused by a rise in P_N . This rise could be caused by a regulatory decision to allow increase in tuition fees or by allowing the institutions to start new high market value courses. A similar effect could also arise from sources other than higher tuition fees. If for example the institution was able to (a) intensify the teaching load of faculty members, or (b) to induct less expensive faculty resources (say ad hoc teachers),

or (c) use IT to lower the cost of education service delivery, the impact on the RR curve would be similar.

The impact of this shift in the VMP_N curve on the equilibrium allocation is evident. In both institutions, the result would be to *bias the allocation of budgetary resources away from quality and towards quantity*. If the size of the operating budget were to remain unchanged, the impact on quality would not be neutral. *Quality would actually become lower*. The situation is of course relatively more acute in the case of Institution I, but the direction of change in both cases would be the same.

The important question for policy and regulation is what could be done to maintain quality. There are several possible approaches.

1. One possible course of action is to *mandate a certain level of expenditure on quality* through regulation. There are, however, some potential obstacles to this approach. It can be easily deduced from the diagram that any allocation other than the perceived optimum would result in lower total returns. The institutions would consequently have a *strong incentive to evade* the regulatory mandate, implying the necessity of a credible enforcement mechanism. We should also note that the actual trend in *policy recommendations appear to be in the opposite direction*. In the face of rising demands, the policy makers find it more convenient to mandate or recommend *higher levels of quantity (say larger enrollments)*. While relieving the short term quantity constraint, the long term consequence of these would be to lower quality, unless careful counter measures were taken.
2. The second approach is to directly improve the perceived benefits of quality. In other words, steps should be taken to *shift upward the VMP_L curve*. This could be done in several ways. This line of action is likely to be more effective because it would be in positive alignment with their institutional objectives. The most direct method would be to financially support the

creation of quality enhancing infrastructure, talented faculty recruitment and retention, institutionalization of quality enhancing business processes and norms. Many of the recommendations of the Task Force with specific reference to faculty resources are along these lines. There are, however, certain other channels through which these actions could be reinforced. These are steps that ensure that the price P_L received by institutions for producing quality rises. The avenues through which high quality institutions are rewarded for their investments should be expanded—so that they can either earn a market premium or receive higher grants and support.⁴⁰

III. Resulting Insights

The problem of faculty shortage is generally recognized as a key problem confronting the higher education sector. In attempting to address the problem exclusively by means of steps to increase the supply of faculty resources, it is necessary for policy makers and regulators to keep in view the close connection of faculty shortage with other problems and features of higher education. These problems include the underlying demand and supply of higher education services from which the faculty shortage emerges, the regulatory and policy context, and the tension between providing adequate quantity of higher education services and maintaining high quality. This chapter has presented an analytical framework within which these inter-related problems can be examined. The analytical framework employs an economic logic to understand the behavior of academic institutions that provide higher education. Given an exogenously determined demand for higher education and the policy-cum-regulatory context, the decisions of academic institutions crucially determine the level of demand for faculty resources, as well as both the quantity and quality of higher education. Without their compliance, the effectiveness of policy and regulatory actions would be limited.

⁴⁰ There are several ways that this could be done. This would include stronger accreditation systems and linked-reward systems, among others. We do not develop these ideas here as it is beyond the scope of the Task Force mandate.

The objective of this chapter has been to situate the major recommendations of the Task Force in relation to faculty shortage and performance appraisal systems within an integrated context that take into account institutions' motives and incentives, and the economic choices that they must make. It has also sought to relate many of the qualitative insights provided to the Task Force by multiple stakeholders.

The analytical discussion presented here yields the following insights:

1. There is a close association between faculty resource scarcity and the excess demand for higher education services. However, it is not a rigid relationship. Even if there is no faculty scarcity in a structural sense, there could still be excess demand for higher education due to other reasons such as the controlled price of higher education services. If in these circumstances, efforts are made to improve the supply of faculty resources by mandating better salaries, it would be ineffective unless simultaneously there is an enhancement of the ability of higher education institutions to earn higher income.
2. There could be a different type of constraint on the ability of higher education institutions to increase their faculty resources. This is the 'policy constraint', which sets an upper limit on the number of faculty members a higher education institution can recruit at a given point in time. Hence it is important for policy makers to determine which is the binding constraint, and address this on a priority basis.
3. The market for faculty resources operates under a number of exogenously given parameters or norms. These include faculty salaries, the number of sanctioned posts and the minimum faculty-student ratio. Our analysis shows that under these conditions, the actual shortage of faculty resources could be significantly higher than the shortfall as conventionally measured in terms percent of unfilled sanctioned posts.

4. Under conditions of severe under supply of faculty resources, higher education institutions would find it uneconomical to meet the regulatory quality norms, and hence would be tempted to lower quality.
5. If some institutions have the capacity to charge higher tuition fees while some others do not, this would lead to a 'fragmentation' of the market for faculty resources. Phenomena such as 'poaching' of qualified faculty members by the more liberalized institutions from the constrained institutions may occur. This would worsen quality in the latter.
6. Our analysis of the balance between quality and quantity of higher education examines this trade-off as a conscious economic choice that academic institutions make. The capacity to deliver quality is the result of sustained investment by the institutions over a period of time. Hence there are likely to be differences in the 'quality infrastructure' across institutions. We find that under similar operating conditions, different institutions will allocate their internal operating budget differently between quality and quantity. This is likely to exacerbate the already existing quality gap between the differently endowed institutions. It is also possible that quality can decline over time even in high quality institutions if investments in quality are not sustained. This situation can arise if these institutions are not able to generate funding for quality investments, and/or have enhanced incentives (through higher tuition fees) or face policy pressures to increase quantity. Hence policy should take care to bolster the institutions' capacity for quality.

Chapter V

FACULTY RESOURCE: RECOMMENDATIONS FOR QUANTITY AND QUALITY

The Task Force, after having interacted with Chairpersons of various Regulatory Bodies and Vice Chancellors of various Universities reached a conclusion that issues of shortage of quality faculty and appraisal of faculty performance are as much related to issues of governance and administration as to those of academics. Any exercise to address only one major issue such as faculty shortage will fall short unless other related issues are also considered together with the issue of faculty resource. The task force also noted that the notification order of the Task Force has made specific reference to three issues, namely, accessing the extent of faculty shortage in different segments of higher education, recommending the measures for reducing or removing the faculty shortage and suggesting a mechanism of performance appraisal for academic staff of higher education institutions.

The entire higher education system in India consists of three basic categories of institutions - affiliated colleges, universities and central institutions. A majority of the affiliated colleges are in the private sector. (In fact, the overall ownership of higher education by private sector may be around 85% in India.) The second category is, primarily, the state universities. A large number of students are enrolled in state universities. It must be mentioned here that education including higher education is a

subject on the concurrent list as per Constitution of India. As a result, the policies for management of faculty resource vary from state to state. The central institutions are reasonably well endowed. While these national level institutions are able to establish reasonably good quality infrastructure, these institutions also suffer at times from faculty shortage in terms of quality.

The Task Force, before making recommendations in respect of faculty shortage would like to take a positive note of some important steps that have already been taken by various government agencies:

1. The retirement age has been increased to 65 (sixty five) in all the central academic institutions. The same has been recommended to the states also, in the sixth pay commission report. Re-employment in deserving cases, has been made possible upto the age of 70 (seventy).
2. The UGC's ENCORE scheme has already paved the way for augmenting faculty resources. 750 adjunct faculty and scholars in residence to be specially supported by UGC is a laudable part of this scheme. The Universities in due course will reap the benefit under this scheme.
3. The DST's initiatives to attract the NRI scientists to serve as faculty in Indian institutions, is expected to yield positive results.
4. The upward revision of salary and the betterment of promotional opportunities as per the sixth pay commission recommendations, have provided an atmosphere that is more conducive than earlier, to attract and retain competent faculty in our system.

Faculty shortage starts when academic programs are approved and started with inappropriate or practically no permanent faculty resource. Once an

academic program is approved, one can estimate the critical minimum number of faculty members required, based on the number of students to be admitted in the program. Since regular faculty members are not available as per this required number, many institutions hire, to begin with, contractual faculty, ad-hoc faculty, guest faculty members. The proportion of these non-regular staff members to regular faculty in some cases is alarmingly large. The academic qualifications of these members may not be as per the requirements of the regulatory bodies. Once these non-regular faculty members start running the program, the urgency to hire the regular faculty is reduced and the process slows down. In fact, in some cases, it stops altogether. The Task Force is of the considered view that the UGC guidelines in respect of critical minimal faculty should be strictly adhered to.

The financial packages as well as service conditions for these non-regular faculty members are far from satisfactory. These faculty members are also not able to improve their academic qualifications since they are required to undertake enormous teaching load. In government or government aided colleges, the process of recruitment and promotion is delayed enormously for one or another administrative reason. In fact, the government departments control the process to such a minute extent that the administrative machinery of academic institutions have to pursue the files for many months and years. Then, the selection committees get into one or the other kind of controversy, the process gets bogged down due to litigation and the selection results are not announced and candidates not allowed to join their positions. In short, the problem of shortage gets compounded due to the procedural wrangles

Major Reasons for Faculty Shortage

- Massive expansion in higher education, with the starting of numerous new institutions
- Poor supply of Ph.Ds and qualified teachers
- Ban on recruitment by most institutions
- Lack of flexibility in the process of recruitment
- Procedural delays: infrequency in recruitment exercise
- Communication gap—poor publicity
- Absence of special training before induction: missing quality
- Absence of quality consciousness among a large number of applicants: they get rejected, dejected and create obstacles
- Court cases and legal injunctions, causing posts to be kept vacant over long periods of time
- Absence of a common forum to recruit faculty for various institutions together and frequently
- Over consciousness in recruitment because of no provision later to root out the incompetents

In view of the above, the Task Force makes the following recommendation for overcoming the problem of faculty shortage in the field of higher education—general as well as professional and technical.

The Task Force has categorized these recommendations in the following four categories.

- Administrative Reforms
- Academic Reforms
- Financial Reforms
- Miscellaneous Reforms

The details about each one of them is described now. The committee is aware that the faculty resource will be a bouquet of regular as well as non-regular faculty members. The committee is also of the opinion that the suggestions should be feasible from implementation view point. It is strongly felt that the implementation will be more effective if sufficient weightage is given to these suggestions in the process of accreditation of institutions.

ADMINISTRATIVE REFORMS

(i) Establish FIDC in every academic institution

Academic institution should consider the faculty resource as the most crucial input of an academic institution. Hence, all matters relating to the recruitment, appraisal, promotion and human resource management functions concerning the faculty members should be exclusively dealt by a separate unit. This unit is being termed as Faculty Induction & Development Cell (FIDC). It is recommended that every academic institution should establish such a unit.

It is felt that recruitment, promotion and other HR management functions of other staff members can be dealt by the establishment sections which are under the control of registry or administrative section of the organization. However, FIDC should be a separate unit and should be headed by a senior faculty member. The appointment should be done by the management of the academic institution in consultation with the head of the organization. Head, FIDC should be a faculty member who enjoys respect and support of all departmental Heads as well as other academic staff members. Head, FIDC should be appointed for a contractual period of 3 to 5 years. Head, FIDC should report directly to the head of the organization. FIDC should have a dedicated staff, the number of which will depend of the overall strength of faculty members. These staff members will report to Head, FIDC.

(ii) Improve the process of recruitment & promotion

The information regarding sanctioned posts, filled-in posts and vacancies should be made public and should be available on the website of every academic institution. This requirement should be checked at the time of approval / extension of the academic programs by the regulatory bodies. The strength and status of non-regular faculty should be checked by the accreditation agencies.

Once the posts are sanctioned, the process of recruitment should be carried out without any additional clearances from any other administrative offices outside the academic institution. Also, the requirement parameters for recruitment need to be standardized so that there are no inordinate delays due to frequent changes of goal posts. Head of the academic institution, with the support of Head FIDC, should ensure that a calendar of recruitment and promotion is declared at the beginning of every academic year along with the number of vacancies. The financial support for every sanctioned post should be ensured and be made available at the time of sanctioning the post(s). It should be made mandatory that at least one exercise of recruitment and one exercise of promotion be carried out every academic year so as to fill the vacancies. This calendar should be made public.

The process of advertising the vacant posts should be made simple. A rolling advertisement should be posted on the website of the academic institution. This requirement should be mandatory. The application form should be downloadable from the website of the academic institution. There should be no application fee and postal order requirements. The cost of processing the application should be budgeted in the overall budget of FIDC. Electronic submission of application forms should be admissible.

The process of selection should be done as per the rules of the organization and the law of the land. However, the list of experts should be approved by the management of the academic institution for a period of three years. For regular appointments, the selection committee composition based on the rules and based on the approved list of experts shall be proposed by Head FIDC and approved by Head of the organization. The Visitor's nominee, after the expiry of his/ her term, should continue to be available for selections until the new nominee is appointed. This is to ensure that there is no disruption in the recruitment calendar of the institution.

However, for non-regular appointments, every academic institution should have a standing committee. This committee should consist of Head of the organization, Head FIDC, Head of department and one senior member of faculty. The recommendations of the standing committee should get ratified by the management of the institution. The standing committee should be able to appoint the non-regular faculty on need basis on a fast track mode.

The reports of the selection committees should be approved by the head of management soon after the selection committee meeting. These approvals should get ratified in the subsequent meeting of the management. The practice of waiting for the approval in the formal meeting of the executive committee or any other agency should be done away with.

It has been observed by the Task Force that the process of promotion is delayed enormously. It is sad to see the frustration of many members of the academic staff that they have not been considered for promotion since the exercise is not undertaken on a regular basis. Promotions should be strictly on merit. No faculty member should feel frustrated due to a delay in the process of consideration for promotion. All academic institution should consider this as an important responsibility and all

regulatory / accreditation bodies should check the performance of institutions on this aspect.

(iii) Management of non-regular faculty members

Non-regular faculty members can be categorized as follows. It is strongly felt by the Task Force that as such the non-regular faculty strength in an academic program or institution should not exceed 25 per cent of the sanctioned strength. However, during the initial period of an academic program of about 5 years, this resource can be as high as 50 per cent of sanctioned strength. The Task Force strongly feels concerned about some practices where almost all faculty resource in an academic program consists of non-regular faculty members. Such practices should be considered objectionable and should be dealt with by both regulatory agencies as well as accreditation agencies.

It is also recommended that while all non-regular faculty members should be considered as academic staff members, they should not be given the titles of regular staff members. In other words, a faculty member on contract or a guest faculty member should be considered as Academic Faculty Member (on contract) and Guest Faculty Member.

Non-regular faculty members who are primarily engaged for teaching purposes can be categorized as follows.

- Faculty members on contract
- Guest faculty members
- Adjunct faculty members

Non-regular faculty members who are primarily associated with the research programmes can be categorized as follows.

- Visiting faculty members
- Distinguished mentor faculty members
- International Adjunct faculty members

It should be noted that the above classification is very general in nature. Some adjunct faculty members may also actively pursue research activities while some visiting faculty members may also pursue teaching activities.

It is strongly felt by the Task Force that a bouquet of regular and non-regular faculty members is to be taken into account while addressing the issue of shortage of faculty members. It is felt that non-regular faculty members should be acknowledged, based on their contributions and qualifications. Their performance should be available at the time of accreditation. If an academic institution is found exploiting the names of individuals without any tangible contribution made by them, then such an act should be considered as mal-practice and should be dealt with accordingly.

(iv) Faculty members on contract

It is noted that due to severe shortage of faculty members, many academic institutions have to engage faculty members on contractual basis. However, financial packages for such persons should be comparable to those provided for regular faculty members. Furthermore, such persons should be provided with benefits such as contribution for pension, medical allowance, travel allowance, leave facilities etc. Such contractual arrangements should be renewed on yearly basis. The contract agreements should be transparent and should follow all the legal requirements.

Institutions may also employ emeritus faculty and retired faculty members on contract basis.

A faculty member on contract can be on full-time basis or part-time basis. In the case of part-time faculty members, the salary amounts will be based on the work load. It is suggested that part-time contractual faculty appointments be considered at par with adjunct positions so far as financial aspects are concerned. It is also suggested that part-time contractual faculty positions should not be offered to persons who do not have any other professional engagement. Academic organizations should not, under any circumstances, not exploit the situation of unemployment in the society and provide a compensation far below what is necessary to ensure quality of academic environment.

(v) Guest faculty members

Engagement of guest faculty members should be based on the requirements of a specific course in an academic session. Such appointments should be approved by the standing committee based on the proposals of individual faculty members. Guest faculty members should be provided honorarium based on qualifications along with reimbursement of actual costs of travel, board and lodging. The role of a guest faculty is to be viewed as complimentary to that of the regular instructor and not as a substitute for a regular instructor of a course. If a faculty member is required to shoulder the full responsibility of a course while being an employee elsewhere, then the person should be appointed as an adjunct faculty member.

(vi) Adjunct faculty members

Adjunct faculty members are those individuals who are otherwise full time employees of some other organization. Many organizations, particularly new ones, request for the help of such individuals to teach one full course or part of a course or contribute towards some R&D activities. Such faculty members must ensure that their work in the parent organization does not

suffer due to their undertaking any additional work load. Hence, proper permission and clearance of the parent organization should be placed on record by the organization inviting such individuals.

Such adjunct appointments should be made for a period of one semester or one academic year. Extended continuation of such appointments should be discouraged. All such matters should be reviewed by the management as well as regulatory and accreditation agencies.

An adjunct faculty member should be provided honorarium proportional to the work assigned to them. In case of teaching, it should be based on the number of lectures and other work load. In case of research, it should be based on the time spent for such works. Besides the honorarium, the actual costs of travel, board and lodging should be reimbursed.

Besides faculty members of other academic institutions, an academic institution may consider appointment of scientists of research laboratories as well as managers of companies who have some passion and flair for academic work as adjunct faculty members. All such arrangements should be for a limited period of time.

(vii) Visiting faculty members

If a professional person wishes to take leave from his or her parent organization and spend some time in an academic organization, then such an appointment should be considered as visiting faculty appointment. The person should be able to retain his or her lien against the original appointment. However, the salary should be paid by the organization inviting the person as a visiting faculty member. Such appointments should be made on a yearly basis and should not be for more than three years at a stretch. All such appointments should be made by the standing

committee. It should be seen that the person gets proper clearance from the parent organization.

A visiting faculty member should be paid salary similar to a regular employee, depending on qualifications and experience. All visiting faculty members should be provided full benefits in terms of leave etc. All visiting faculty members should be accorded full freedom and status as regular faculty members so that he/she can contribute effectively to the academic programs and activities of the institution.

(viii) Distinguished mentor faculty members

If an academic organization wishes to seek the help of an eminent person as mentor for an academic activity in an organization, such engagements should be considered under the category of distinguished mentor faculty members. Such persons should be able to advise the academic groups or programs. It should be possible for such eminent persons to guide the academic organization in terms of measures to be undertaken for improving the quality of academic content.

Such arrangements should not be exploited by the academic institutions in terms of promotional activities. Such engagements should be considered as honorific in nature. Honorarium should be based on the period spent on the campus. Of course, all expenses of travel, board and lodging should be reimbursed. Such persons can be members of advisory committees for the organization. Contributions of such persons should be available in the form of reports. Such reports can be reviewed by the accreditation agencies.

(ix) International adjunct faculty members

It is felt that Indians engaged in academic activities abroad can be engaged effectively as international adjunct faculty members. Many such persons are keen to help their alma mater. Some of them are keen to engage with the academic world in India and wish to contribute genuinely for its development. In some cases, these individuals wish to spend time with their families in India, as also to remain engaged with a local organization during that period. For all such reasons, the committee feels, that a healthy practice of appointing such international adjunct faculty members will ultimately help address the issue of faculty shortage.

Once again, it is observed that such arrangements should not be exploited for promotion and advertisement. These arrangements should be critically evaluated from time to time for their effectiveness as well as impact. All such faculty members should be required to submit reports based on their contributions. Such reports should be available at the time of accreditation evaluation.

All such arrangements will not provide any travel support for international travel. It may be beyond the means of the organization in India. A modest honorarium based on the contribution can, however, be provided for such arrangements.

ACADEMIC REFORMS

(i) Academic Career Assistantship Program

The task force observed that many professions such as military, civil service, legal practice, medical practice, enable young people at the age of 21-22 to start their careers and progress through their professions. In the case of academics, however, the entry is provided generally when the student

is well past the age of 27 to 30 or even beyond. This late entry as well as the prospects of having a career with less attractive financial packages is a deterrent for young men and women to join this profession.

It is, therefore, proposed to launch a scheme called Academic Career Assistantship Program. It is basically a quality improvement scheme. It will provide a financial package much better than the present assistantship amounts. It will ensure employment in an academic institution after graduation. It will provide some training beyond the normal post-graduate education. The scheme is briefly described below.

After BE /B Tech or equivalent degree, a young person will be selected simultaneously by one academic institution as a prospective faculty and by another academic institution as a post-graduate student. This selection will provide the student the status of a faculty-in-waiting and will provide a financial support at the level of PB-3 plus GP of Rs. 5400. The financial support will be provided to such students through a central fund. Against this support, the student will be registered for a 3-year Post-graduate program as against the normal 2-year program. At the end of this period, if successful, the student will be provided with the regular Master' degree as well as a post-graduate diploma in higher education - PGDHE. In order to acquire the requisite credits for this diploma, the student will be asked to do the work of a teaching assistant, will participate in summer schools on education methodology, and the student will attend some courses on teaching methods and philosophy. This diploma (or a degree) will be awarded by NUEPA or an equivalent body. The details of such training will be described separately. At the end of the three year period, the student will join the faculty position at the level of PB-3 and GP of Rs. 6000.

In case of M A /M Sc students, it is suggested that they can join the doctoral program for duration of four years. During this period, for the first year, they will be provided the financial support at the level of PB-3 plus GP of

Rs. 5400. From second year, they will be provided the financial support at the level of PB-3 plus GP of Rs. 6000. At the end of the four year period, they will receive the post-graduate diploma in higher education as well as the doctoral degree in their main subject. After the completion of their degree, they will join the academic institution which had selected them at the beginning of the academic program.

It is hoped that over a long period of 10 to 15 years, this scheme will start showing the impact both in terms of quantity as well as quality.

The financial liability of such a scheme is expected to be about Rs. 50 crores per year for admitting about 5000 candidates per year. In short, one can estimate the creation of about 50,000 candidates for academic careers using this scheme.

It is hoped that the requirement of NET qualification will be acquired by these candidates during the course of their post-graduate education.

Students doing professional courses in engineering etc., can join the doctoral program for a period of three years after the successful completion of their Master's degree.

(ii) Summer Research Fellowship Scheme

Young men and women who join the academic profession require mentoring. Such mentoring can be provided by the national institutions as well as some international institutions. If a young person is engaged in teaching during the academic year and is provided with an opportunity to spend summer months at a well-endowed laboratory or department, the person will be able to pursue the academic career with clear goals and well developed network of collaborators.

In order to facilitate such mentioning, it is proposed to provide about 1000 summer research fellowships every year. Under the fellowship programme, a young faculty member will be provided travel support, board and lodging to spend 8 to 10 weeks at a well known academic institution every year for three years. At the end of this three year programme, it is hoped that the academic person will have built up a vision of his or her academic work that can be pursued at the institution where the person is employed on a full time basis.

The selection of such persons will be done at the national level. The number of such persons in an academic institution will be an index of how the academic institution will be able to provide encouragement for the growth of academic career of young faculty members. The period of stay away from the parent institution shall be treated as on duty. The person shall be provided the salary during this period. The fellows will have to submit a yearly report as well as a final report at the end of their three year period. Such summer research fellowships can be named after famous educationists. The allocation of about Rs. 50 crores per year is envisaged for this scheme.

(iii) Best Higher Educationist Award

In order to enhance the image of the academic profession in higher education, it is proposed to institute - both at the national level as well as the state level - awards such as Best Higher Educationist award. These awards will be open to junior as well as senior faculty members. The awards will be based on student reaction surveys, academic performance in terms of teaching and research, professional performance in terms of writing of books and journal articles as well as commitment to student and campus community. The commitment to the academic profession shall be also considered. These awards can be given once a year. The day on which such awards are to be given shall be declared as a higher education day.

In short, a day in the academic calendar shall be declared as a higher education day.

FINANCIAL REFORMS

(i) Honorarium for Time devoted on sponsored research

Besides teaching, higher education depends on the research activities of faculty members. In India, there is a concern in terms of research performance of higher educational institutions. Even at those institutions where such activities are being pursued, the time spent by faculty members in research is not accounted for properly. Internationally, it is well understood that a faculty member can devote upto 3 months for sponsored research activities. The salary for this period is charged to the budget of sponsored research. This is an incentive for academicians all over the world. In India, such a practice is not in place as yet.

In order to improve the quality as well as quantity of research, it is proposed that the time of a faculty member can be charged to the project budget. Such amounts can then be provided as honorarium on the top of the salary. The maximum that one can charge on such account shall be limited to higher salary equivalent of 3 months. This honorarium will be an incentive in many ways.

(ii) Chair Professorships

In order to increase the public-private partnership in the academic world, it is proposed to encourage companies, alumni, public bodies and individuals to make donations and establish chairs at a university or an academic institution. It is to be noted that appointment to a chair shall be an academic honour for a period of three to five years. Besides the

regular salary, the faculty member will get an amount of about Rs. 15,000 to Rs. 20,000 per month. This will come from the interest of the endowment. Selected persons will have to submit a yearly report of their donor will be given tax exemptions through a policy of the government for such donations. It is to be noted that the full salary will not come from the interest of the endowment. This will provide both honour and financial incentives to faculty members. Every academic institution should strive to have about 20 percent of the professional strength as chair professors; once again, the performance of any institution on such matters should be duly recognized in the process of accreditation.

Special financial packages for faculty positions in backward regions will go a long way in addressing the problem of shortages in institutions located in such areas.

MISCELLANEOUS REFORMS

(i) Collection of Statistical Data

The Task Force recommends the following reforms.

1. State Governments may be requested to collect educational statistical data for their respective states and the Central Government may collect the same for the central sector;
2. The University Grants Commission may work as nodal agency of the Central Government for collection of this data and may expedite implementation of on-line submission of statistical data from the year 2012-13;
3. The data, so collected, may be used by various committees, task forces, agencies, etc. for proper future planning.

(ii) Web Portal for Academic Induction

It is clear that thousands of young men and women around the world with high qualifications are keen to take up academic careers at IITs, NITs, IISERs, IIITs, central universities, state universities, private universities and deemed universities. Unfortunately, they do not get connected properly. After the explosion of internet, we have portals like shaadi.com. Young men and women are able to get their life partners not through local Pandit but through a web portal. Why can't the same be achieved for getting these young bright men and women in the rapidly expanding academic world in India?

A web portal for seekers of academic careers as well as for academic institutions looking for prospective faculty members is absolutely desirable. A news report indicated that the vacancies in central universities range between 30 to 80 per cent. All IITs have on an average 25 to 30 per cent vacancies. If the process of recruitment has to have some momentum, some modern approach is desirable.

The present method of recruitment is clearly out of date. A newspaper advertisement is not sufficient to communicate to those who do research or doctoral studies around the world. Even doctoral and post-doctoral candidates in India miss these obscure advertisements. On the other hand, this community of research-minded young folks is glued to cyberspace. They read e-journals regularly. They visit the websites of many universities to get more information about what is going on at these universities. They also have discussion groups among themselves where information moves very fast.

Now, imagine if there were a portal and this portal was well advertised on sites of Yahoo or Google, it will get flashed in the minds of prospective candidates very quickly. On this portal, all universities, IITs and other

institutions are invited to host a corner each. In this corner, the institution should clearly indicate the opportunities for academic careers. Further, the posting should indicate very clearly as to how the interested person can contact the Head of Dean or some other official. In the present age, it is extremely important to respond to the query of these prospective candidates. Unfortunately, the academic world in India at present is very bureaucratic. The responses are so trite and downright discouraging even when the institution is in dire need of academic manpower. The other method employed is called 'toss the ball' approach. The mail para-prospective candidate be passed on from one person to the other. The other person passes it on to the third person and so on. During this chain, a break may happen at some point and the communication is snapped. The candidate loses his or her interest and the country loses a good chance.

The universities should also provide on the portal sufficient information about the salary scales, medical benefits, transportation allowance, pension or retirement plans, schooling facilities, housing available on the campus etc. The universities should also prepare a list of answers for FAQs - Frequently Asked Questions. The departments should provide adequate information about faculty, laboratory facilities, library facilities, and computing facilities and start up grants. The universities should tell about provisions of international travel for attending conferences, book grants, grants for subscription of journals or membership of a society, or any other feature. Young faculty members are keen to know as to how much office space, lab space will be available, upon joining. Some people are interested in knowing about research funding available in their area of specialization either at the University or at the national funding agencies. Universities should inform these persons about the efforts that are being made by the institution to get the research activity of the faculty going upon joining the organization. Some people are interested in knowing about the employment prospects for their spouses. This also needs to be

answered in FAQs. In short, it is just not the salary scale but the entire life style package that one is interested in exploring with the university. All this information should be available on the portal corner of the university.

So, the web portal should be a commercial venture. Besides the universities hosting their corners, the portal will allow individuals to post their resumes on this portal. In other words, the University officials should also visit the portal and scan the candidates who are interested.

The candidates will not only post their resume but will also put an outline of their teaching plans, their research plans, copies of their publications and photographs of their laboratory set ups. These postings may include even copies of transcripts as well as recommendations. However, such confidential information can be accessed only through some password access provided by the other party. The candidates can also put a copy of their seminar or presentation on You Tube site and link it with their resume. In short, all the information that is required by the university will be so readily available to the universities in India that the bureaucratic requirements will be met promptly.

If there is a prima facie match of needs and availability, the portal will offer a platform of video dialog in the form of Skype or an equivalent technology - once again at some cost. A face to face dialogue will certainly increase the bandwidth of communication. Universities in India are obligated to hold the statutory selection committees and then only the appointment can be issued. Once again, it is possible to hold the interviews by telephone conferencing. If 3G standards are rolled out, we are sure the interviews can be held even though video conferencing. The experts will be sitting in their offices at different cities in India, the candidates will be at a location in India or overseas and the video conferencing can be facilitated by the portal - once again for a normal charge.

(iii) Faculty Induction Fairs

Similar to India, the higher education system in China has also undergone a major expansion. In order to meet the faculty shortage in that country, the scheme of holding faculty induction fairs has been carried out by the Chinese Government. Such fairs are held at prominent cities in the world. Young men and women who are working as doctoral as well as post-doctoral candidates abroad can attend these fairs. The meetings and discussions enable the process of recruitment to move at a much faster pace than the usual one. It is proposed that a similar scheme be initiated by Government of India in cooperation with state and central educational institutions. Besides stalls and meeting booths, these fairs will provide an opportunity for India to showcase its ambitious programmes of higher education at the International level. It is hoped that some help from Indian missions abroad can be taken for holding such events.

CHAPTER VI

DESIGN OF PERFORMANCE APPRAISAL SYSTEM

Introduction

Performance Appraisal of teachers in universities and colleges has always been a moot point, swinging between two extremes of complete subjectivity and proposals for a rigid system leaving no scope whatsoever for any flexibility. As a result, no system could be put into place that was objective and universally acceptable to all stake holders, namely, teachers, students, administrators and the society at large.

Latest Pay Review Committee

All Commissions on Education, including the various Pay Revision Committees deliberated over the issue of and made general suggestions about the accountability of teachers but no concrete system could be enforced. Sixth UGC Pay Review Committee, for instance, also deliberated on this issue in detail and made the following recommendations:

“Academic Accountability

The question of evaluating teachers’ work and their academic accountability came up for discussion during almost all interactions between the Pay Review Committee and various stakeholders. Teachers observed that only a small percent of black sheep among them were getting them an adverse image in the eyes of the society at large about their academic accountability. They observed further

that they had no objection to their performance being evaluated publicly including by students but they wanted the modes of evaluation and accountability to be transparent, unbiased, uniform and to be applied across the board to all categories of teachers. Assistant Professors, Associate Professors, Senior Associate Professors and Professors and even Vice Chancellors.

After deliberating over the issue at length, the Pay Review Committee recommends that the evaluation of a teacher's work should have inputs from multiple sources- self assessment, assessment by students who have been taught a course/s by the teacher and assessment by the academic head/s and should be based on multiple parameters like class room teaching, holding of tutorials, availability to students, participating in faculty meetings, guiding and carrying out research and participation in other academic and co-curricular activities of the department. The needed formal structure, based upon parameters relevant to universities and colleges respectively may be defined by the University Grants Commission for carrying out such evaluation uniformly throughout the country.

Such evaluation should be made once a year and it should be communicated to the teacher concerned. It should also be made available to the selection committee at the time of promotion of the teacher.”

The Central Government while considering the recommendations of the Sixth UGC Pay Review Committee, vide its letter dated 31st December, 2008 requested the University Grants Commission to consider all such recommendations with the approval of the Central Government, wherever required, or under the Commission's Regulations in accordance with provisions of UGC Act. Accordingly, the University Grants Commission appointed an Expert Committee under the Chairmanship of Prof. S.P. Thyagarajan, former Vice Chancellor, University of Madras to recommend minimum qualifications for appointment of teachers and other academic staff in Universities and Colleges and other measures for the maintenance of standards in higher education. The Committee devised a new appraisal system based on scores for Academic Performance Indicators(API) as expected (Annexure-4)

Meanwhile, MHRD appointed a Task Force to design and develop, among others, “a robust, objective, transparent and multi-source Performance Appraisal System to provide a framework to enable performance evaluation of faculty throughout the country in regard to technical education, professional education and University education.”

The following Sub committee of the Task Force was responsible for designing and providing a framework to enable performance evaluation of faculty throughout the country in regard to technical education, professional education and University education.

1. Prof. K.K. Aggarwal
2. Dr. R.K. Chauhan

The following UGC officers assisted the Sub-committee:

1. Dr. Niloufer A. Kazmi, Secretary, UGC
2. Dr. (Mrs.) Manju Singh, Joint Secretary, UGC

The subcommittee visited the following institutions to have first hand discussions with the Heads of the Institution and some senior faculty members who gave their observations to the Task Force :

Central Universities

- (i) Jawaharlal Nehru University, New Delhi

State Universities

- (i) Calcutta University, Kolkata
- (ii) Jadavpur University, Kolkata
- (iii) Bangalore University, Bangalore
- (iv) National Law School of India University, Bangalore

- (v) University of Mumbai, Mumbai
- (vi) University of Pune, Pune

Deemed Universities

- (i) Christ University, Bangalore
- (ii) Jain University, Bangalore
- (iii) Padmashree Dr. D.Y. Patil Vidyapeeth, Mumbai
- (iv) Bharatiya Vidyapeeth, Pune

Institutions of National Importance

- (i) Indian Institute of Technology, New Delhi
- (ii) Indian Institute of Management, Kolkata

Colleges

- (i) Maulana Azad Medical College, New Delhi
- (ii) Maulana Azad Institute of Dental Sciences, New Delhi
- (iii) Presidency College, Kolkata

In addition, the Task Force had an access to several proformas available in the office of the UGC for its perusal.

The Task Force is of the view that one rigid system cannot be applied to all institutions as there are significant inter-institutional variations. "One size fits all" is neither applicable nor desirable. Some of the parameters that have to be kept in view regarding the variations in Higher Education Institutions are:

- (i) Affiliated colleges (where there is primarily UG teaching only)
- (ii) Affiliated Colleges (with both UG & PG teaching)
- (iii) UTDs (with UG + PG + Research)

- (iv) UTDs(with PG + Research)
- (v) Expenditure on Research per Teacher
- (vi) Teacher : Taught ratio
- (vii) Dominantly professional education institutions(engineering/medicine/Dental/nursing/law etc.)
- (viii) Extent of sponsored research projects and consultancy projects in the Institute

As for the guidelines, the Task Force feels that the elaborate exercise undertaken by Thyagarajan Committee on behalf of the UGC and consequent notification by Govt. of India is reasonably in order. Therefore, the following recommendations are made, primarily in consonance with Thyaragajan Committee's recommendations.

- (i) These Academic Performance Indicators (APIs) are for yearly Performance Appraisal
- (ii) Some mechanism of student feedback must be built into the system.
- (iii) Scores for APIs may remain in three categories as indicated by the Thyagarajan Committee are given at Annexure 4.
- (iv) The Task Force, therefore, also recommends the following API scores per year:

	Minimum
Assistant Professors (for first four years)	110
(for the next five years)	120
(subsequently)	130
Associate Professors	140
The Task Force recommends in addition, the following API's for Professors	150

Note: Since the scales of pay for Colleges & Universities teachers are the same, the Task Force is of the view that the overall API's score requirements should be the same.

CATEGORY I: TEACHING, LEARNING AND EVALUATION RELATED ACTIVITIES

Brief Explanation: Based on the teacher's self-assessment (and also student feedback, wherever applicable), API scores are proposed for (a) teaching related activities; (b) domain knowledge; (c) participation in examination and evaluation; (d) contribution to innovative teaching, new courses etc. The minimum API score required by teachers from this category is 75. The assessment should be based on objectively verifiable criteria/data wherever possible and should be finalized by a core committee for every institution comprising of at least five senior teachers.

Universities will be required to detail the activities and in case institutional specificities require, adjustments in weightages may be made without changing the minimum total API scores required under this category.

S.No.	Nature of Activity	Maximum Score
1	Lectures, seminars, tutorials, practicals, contact hours undertaken taken as percentage of lectures allocated	50
2	Lectures or other teaching duties in excess of the UGC norms	10
3	Preparation and Imparting of knowledge / instruction as per curriculum; syllabus enrichment by providing additional resources to students	
	(i) Self Assessment	10
	(ii) Student Feedback	10

4	Use of participatory and innovative teaching-learning methodologies; updating of subject content, course improvement etc. (i) Self Assessment (ii) Student feedback	15 05
5	Examination duties (Invigilation; question paper setting, evaluation/assessment of answer scripts) as per allotment.	25
	Total Score	125
	Minimum API Score Required per year	75

Note: Lectures and tutorials allocation to add up to the UGC norm for particular category of teacher. University may prescribe minimum cut-off (net of due leave), say 80 %, for 1 and 5 above, below which no scores may be assigned in these sub-categories.

CATEGORY II: CO-CURRICULAR, EXTENSION AND PROFESSIONAL DEVELOPMENT RELATED ACTIVITIES

Brief Explanation: Based on the teacher's self-assessment (and also student feedback, wherever applicable) category II API scores are proposed for co-curricular and extension activities and Professional development related contributions. The minimum API required by teachers per year is 15. A list of items and proposed scores is given below. It will be noticed that all teachers can earn scores from a number of items, whereas some activities will be carried out only by one or a few teachers. The list of activities is broad enough for the minimum API score required (15) in this category to accrue to all teachers. As before, the assessment score should be based on objectively verifiable criteria/data and will be finalized by the core committee for every institution comprising of at least five senior teachers.

The model table below gives groups of activities and API scores. Universities may detail the activities or, in case institutional specificities require, make adjustment in the weightages, without changing the minimum total API scores required under this category.

S.No.	Nature of Activity	Maximum Score
1	Student related co-curricular, extension and field based activities (such as extension work through NSS/NCC and other channels, cultural activities, subject related events, advisement and counselling)	
	(i) Self Assessment	10
	(ii) Student feedback	10
2	Contribution to Corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities.	15
3	Professional Development activities (such as participation in seminars, conferences, short term, training courses, talks, lectures, membership of associations, dissemination and general articles, not covered in Category III below)	15
	Minimum API Score Required per year	15

CATEGORY-III: RESEARCH AND ACADEMIC CONTRIBUTIONS

Brief Explanation: Based on the teacher's self-assessment, API scores are proposed for research and academic contributions. The self-assessment score will be based on verifiable criteria/data and will be finalized by the core committee comprising of five senior teachers of the institution.

S No.		Max. points for University and college teacher position	
III (A)	Research Papers published in	Refereed Journals *	15 / publication
		Non-refereed but recognized and reputable journals and periodicals, having ISBN/ISSN numbers.	10 / publication
		Conference proceedings as full papers, etc. (Abstracts not to be included)	10 / publication
III (B)	Research Publications (books, chapters in books, other than referred journal articles)	Text or Reference Books Published by International Publishers with an established peer review system	50 /book; and 10/ chapter in an edited book
		Subjects Books by National level publishers/ State and Central Govt. Publications with ISBN/ISSN numbers.	25 /book and 5/ chapter in edited books
		Subject Books by Other local publishers with ISBN/ISSN numbers.	15 / book and 3 / chapter in edited books

III (C) RESEARCH PROJECTS

(i)	Sponsored Projects carried out/ongoing	Major Projects amount mobilized with grants above ₹ 30.0 (5.0) lakhs +	20 for each Project in the year of award and 10 per year for the approved duration.
		Major Projects amount mobilized with grants above ₹ 5.0 (3.0) lakhs up to ₹ 30.00 (5.0) lakhs +	15 for each Project in the year of award and 7.5 per year for the approved duration.

		Minor Projects (Amount mobilized with grants above ₹ 50,000 (25,000) up to ₹ 5 (3) lakh) +	10 for each Project in the year of award and 5 per year for the approved duration.
(ii)	Consultancy Projects carried out/ongoing	Amount mobilized with minimum of ₹10.00 lakh(2 lakhs) +	10 per every ₹ 10 (2) lakhs + received during the year
(iii)	Projects Outcome/ Outputs	Patent/Technology transfer/ Product/ Process/ Major Policy document of Govt. bodies at Central and State level	30 / each national level output or patent /50 / each for International level

III (D) RESEARCH GUIDANCE

(i)	M.Phil	i) Registered for Degree ii) Degree awarded	3 per candidate (for almost 1 year) 5 per candidate
(ii)	Ph.D	i) Registered for Degree ii) Degree awarded	5 per candidate per year (for almost 3 years) 10 per candidate

III (E) TRAINING COURSES AND CONFERENCE/SEMINAR/
WORKSHOP PAPERS

(i)	Refresher courses, Methodology workshops, training, teaching-learning	(a) Not less than two weeks duration	20 per course organized & 10 /attended
		(b) One week duration	10/each course organized & 5 per attended
(ii)	Papers in Conferences/ Seminars/Workshops etc.**	Participation and Presentation of research papers (oral/poster) in	
		International conference	10 each
		National	7.5 each
		Regional/State level Local -University/	5 each
		College level	3 each
(iii)	Invited lectures or presentations for Conferences/Symposia	International	10 each
		National level	5 each

*Wherever relevant to any specific discipline, the API score for paper in refereed journal would be augmented as follows: (i) indexed journals - by 5 points; (ii) papers with impact factor between 1 and 2 by 10 points; (iii) papers with impact factor between 2 and 5 by 15 points; (iv) papers with impact factor between 5 and 10 by 25 points.

** If a paper presented in a Conference/Seminar is published in the form of Proceedings, the points would accrue for the publication (III (a)) and not under

presentation (III (e) (ii)). Also if the teacher has organized a conference at the levels indicated, his/her weightage points will be doubled.

Notes.

- I. It is incumbent on the Coordination Committee proposed in these Regulations and the University to prepare and publicize within six months subject-wise lists of journals, periodicals and publishers under categories IIIA and B. Till such time, core committee will assess and verify the categorization and scores of publications.*

- II. The API for joint publications will have to be calculated in the following manner: Of the total score for the relevant category of publication by the concerned teacher, the first author & the corresponding author (if different then the first author) will have double the weightage as compared to all other authors.*

PROMOTIONS:

Although the Task Force is primarily concerned with Annual Performance Appraisal, yet some observations regarding promotional avenues will be in order, as our observations are primarily based on Thyagarajan Committee - whose salient focus is also on "Promotions".

1. Thyagarajan Committee stipulates the following time duration:

	Years
(a) Assistant Professor (Stage 1) to Assistant Professor (Stage 2).	4
(b) Assistant Professor (Stage 2) to Assistant Professor (Stage 3).	5

- | | | |
|-------|---|---|
| (c) | Assistant Professor (Stage 3) to Associate Professor (Stage 4). | 3 |
| (d) | Associate Professor (Stage 4) to Professor (Stage 5). | 3 |

Task Force agrees with this stipulation subject to the qualifications prescribed by the Ministry of Human Resource Development.

2. For 1 (a) and (b) above, only Screening Committee with no additional points for interview is stipulated.

Task Force agrees.

3. For 1 (c) and (d) above, Selection Committee is stipulated with some weightage for Interview Performance. (20% weightage is mentioned.)

Task Force feels that this will complicate the process, although in spirit, it agrees with the recommendation. Task Force therefore recommends that Interview marks (out of a total of 100) be added to the total score calculated. Task Force, further, recommends 60 to be the qualifying marks out of the Interview for promotion.

4. Task Force thus recommends the following threshold marks for promotions:

- | | | | |
|-------|----------------|------------|---------------------------|
| (i) | for Step 1 (a) | - | 440 |
| (ii) | (b) | - | 600 |
| (iii) | (c) | $390+60 =$ | 450 (including Interview) |
| (iv) | (d) | $420+60 =$ | 480 (-do-) |

5. Task Force, however, very significantly recommends Fast Track Promotions for consistently Good Performers.

The following is recommended:

- (i) From Stage 1 to 2 - 4 years.
- (ii) From Stage 2 to 3 - 5 years in the normal case. However, a candidate holding Ph.D. degree may be considered for promotion after 4 years if the total API Score achieved in 8 yrs is at least 10% higher than the minimum cumulative API score for 9 years, i.e. 1144.
- (iii) From Stage 3 to 4 - 3 years.
- (iv) From Stage 4 to 5 - 3 years in the normal case. However, a candidate holding Ph.D. degree may be considered for promotion after 2 years if the total API Score achieved in 5 years is at least 10% higher than the minimum cumulative API Score for 6 years, i.e. 1023.

Performance Appraisal System: Implementation

The Task Force would like to observe that past experience shows a lack of will on the part of implementing institutions-Universities and Colleges about the various performance appraisal schemes recommended by the University Grants Commission from time to time. It, therefore urges upon the MHRD and the UGC to ensure that Performance Appraisal System suggested above, which has been

developed after wider consultations with institutions across the country, is implemented universally without exception and without effecting any major changes.

The evaluation criterion suggested in this chapter is equally applicable to adhoc, adjunct or guest faculty, in case they are serving full-time.

However, in the case of part-time faculty, the scores required may be proportionately moderated by multiplying the same with a fraction of time (compared to a full-time faculty), which the part-time is engaged for.

Further, in case of faculty from industry, the score for research outputs (Category-III) may be allowed to be made from other components, such as organizing a workshop, preparation of a industry project/ case study, contribution to industrial training and placement etc. In the case of medical (or allied) disciplines, this may be substituted by clinical practice, patient attendance etc. This will have to be fine-tuned by each institution, as already mentioned in the suggested evaluation criteria.

The Task Force, is of the considered view and RECOMMENDS that the above mentioned variations notwithstanding, Performance Appraisal is a must and every institution must devise its own method and proforma in consultation with faculty keeping in view the guidelines of UGC/MHRD.

Chapter VII

SUMMARY OF THE REPORT

Introduction

Indian higher education sector is very complex. Different types of higher education delivery institutions exist and these operate under very different contexts. All these various types of institutions face serious problems of faculty shortage. However, they follow different strategies in responding to these problems. Moreover, reactions of one type of institutions have important impact on others. These impacts can be positive or negative. Hence, it is important to take an overall systemic view in developing strategies for addressing the problems of faculty shortage.

Keeping the above objective in mind, the Union Ministry of Human Resource Development, vide its Notification No. F.No.4-482009-UI dated 14th September 2009, appointed a Task Force to look into the question of faculty shortage and other related issues. Headed by Professor Sanjay Dhande, Director, Indian Institute of Technology, Kanpur, the Task Force had the following as its other members:

Professor Devi Singh, Director, Indian Institute of Management, Lucknow.

Professor Chiranjib Sen, Indian Institute of Management, Bangalore

Professor V. Kannan, Pro-Vice Chancellor, University of Hyderabad, Hyderabad

Professor K.K.Aggarwal, Former Vice Chancellor, Guru Gobind Singh Indraprastha University, Delhi.

*Dr. R.K.Chauhan, Secretary, University Grants Commission, New Delhi (Member Secretary)

*Dr. Niloufer A. Kazmi, Secretary, University Grants Commission became the Member Secretary w.e.f. 1.3.2010 after the superannuation of Dr. Chauhan.

The Terms of Reference of the Task Force were as under:

1. To assess the existing faculty shortage in the country in regard to technical and professional education and university education
2. to assess the requirement of quality faculty in regard to technical and professional education in the remaining period of the Eleventh Plan and the Twelfth Plan considering the need to achieve the Gross Enrolment Ratio by the terminal year of the Twelfth Plan
3. to suggest remedial policies and other measures to meet the estimated shortfall in quality faculty
4. to design and develop a robust, objective transparent and multisource Performance Appraisal System to provide a framework to enable performance appraisal of faculty throughout the country in regard to technical education, professional education and university education.

Interactions with Regulatory Bodies and Universities

As a part of the methodology to approach the problem, the Task Force decided to hold close interaction with heads of various Regulatory Bodies and universities. Based on the presentations made before the Task Force, as also the observations made by earlier Commissions and Committees on higher education, the following common points emerged:

1. The basic problem of faculty shortage arises due to inadequate supply vis-à-vis the increasing demand for teachers. Adequate number of qualified, quality persons are not attracted to the profession.
2. Academic careers are unattractive due to, primarily, uncompetitive academic salaries, non-congenial work environment, rigid service conditions and lack of uniform incentive policies, particularly for outstanding

performers. The problem is more acute in those sectors where students with plain graduate degrees can earn handsome salaries by working in non-academic sectors.

3. There is a severe resource crunch in institutions of higher learning, particularly those funded by the states. Budgetary allocation for higher education by the states have been practically frozen for decades and institution find it difficult to meet even the expenditure on salaries of teachers. This has adversely affected new recruitment of faculty.
4. More and more institutions are resorting to easy and economically suitable solutions of turning to adhoc, temporary and guest faculty in place of permanent, regularly appointed faculty even where sanctioned posts exist and competent teachers are available, thereby compromising the imparting of quality education.
5. The shortage of faculty is determined by the number of posts lying vacant against sanctioned posts. But sanctioned posts in themselves are very inadequate since these remain fixed for long periods of time.
6. The setting up private universities and other institutions of higher learning has aggravated the situation of faculty shortage as these institutions are poaching on quality in state run institutions by offering them better incentives if not higher scales of pay and promotions.
7. The inability of Regulatory Bodies to control the functioning of institutions, particularly in professional education, because of vague laws and norms without any punitive measures for violations, had led to the dilution of quality education.
8. Introduction of self-financing courses has led to a skewed situation wherein some departments within the same institution are flush with funds and faculty while others are sorely starved on both counts.
9. Absence of a uniform, transparent and scientific system of regular performance appraisal of teachers' work has also led to dilution of quality teaching.

Faculty Resource: Analysis of available data

The work of the Task Force was handicapped severely because no reliable data in respect of both the existing faculty and the faculty shortage was available. In the case of professional institutions, no data whatsoever was made available to the Task Force despite several written and oral reminders to the Regulatory Bodies governing these institutions.

As for general education, the data available with the University Grants Commission was grossly inadequate and incomplete with wide gaps so that it is very difficult to draw authentic inferences from it.

However, on the basis of the analysis of the available data, the existing strength of the faculty in universities and colleges in 2008 was 6, 99,644. Calculated on its basis, the teacher Student ratio works out to be 1: 20.9 whereas it should be 1:13.5(1:12 for post graduate and research students and 1:15 for undergraduate students). Thus as on 2008, another 3,83,868 faculty members were needed , making the shortage to be 54% of the existing strength. This is much higher than the generally perceived shortage of upto 40%.

Considering the student enrolment data for the last several years, the average annual growth has been around 6%. Thus by 2017, that is by the end of the 12th Five Year Plan, the total projected faculty strength would go upto 13, 17, 332.

Since all these figures are based on the data that is incomplete and has wide gaps, The Task Force is of the considered opinion that the Union Ministry of Human Resource needs to undertake, urgently, a nation-wide exercise to collect upto date data relating to the existing faculty strength in universities, colleges and professional institutions. No policy projections relating to higher education can be made realistically in the absence of such data.

The Task Force has developed a questionnaire in this regard that can be used for eliciting such data from universities, colleges and professional institutions.

The Task Force has also developed a basic framework for calculating the faculty needs— and hence shortages—on a more scientific basis than at present. At present, faculty shortage is calculated vis-à-vis the sanctioned strength of the faculty. The concept of sanctioned strength is both inadequate and outmoded. It is inadequate because sanctioned strength of the faculty remains fixed and static over long periods of time, controlled by various administrative bodies that refuse to take into consideration increased student strength, new academic programmes and courses needing a critical minimal faculty, etc.

It is outmoded because in the case of private universities and colleges and unaided institutions, there is no sanctioned strength of the faculty.

Thus, a more acceptable framework can be based on the demand and supply needs of higher education—both general and professional. The demand for higher education can be calculated on the basis of the number of student age population and the desired GER. The GER, in turn, is based on trends in per capita income, the cost of higher education and social status linked with higher education attainment. The details of this framework are given in Chapter IV of the Report.

Major Reasons for Faculty Shortage

- Massive expansion in higher education, with the starting of numerous new institutions
- Poor supply of Ph.Ds and qualified teachers
- Ban on recruitment by most institutions
- Lack of flexibility in the process of recruitment
- Procedural delays: infrequency in recruitment exercise
- Communication gap—poor publicity
- Absence of special training before induction: missing quality
- Absence of quality consciousness among a large number of applicants: they get rejected, dejected and create obstacles

- Court cases and legal injunctions, causing posts to be kept vacant over long periods of time
- Absence of a common forum to recruit faculty for various institutions together and frequently
- Overconsciousness in recruitment because of no provision later to root out the incompetent

Faculty Resource : Recommendations for Quantity and Quality

Based on the analysis of the data made available to the Task Force and discussions held with the Heads of Regulatory Bodies, the Task Force makes the following major recommendations under four categories:

1. Administrative Reforms
2. Academic Reforms
3. Financial Reforms
4. Miscellaneous Reforms

Administrative Reforms

Establish Faculty Induction and Development Cell (FIDC)

Establish in every academic institution for dealing with matters relating to recruitment, training appraisal, promotion and human resource management of the faculty.

Improve the process of recruitment and promotion by posting on website of the institution, information regarding the recruitment, training, appraisal, promotion and human resource management of the faculty.

Ensure that a calendar of recruitment and promotion is declared and made public at the beginning of every academic year along with the vacancy situation.

Make process of advertisement simple. A rolling advertisement should be posted on the website of the academic institution. This requirement should be mandatory. Appoint a Standing Committee for non-regular appointments. The standing committee should be able to appoint the non-regular faculty on need basis on a fast track mode.

No delay in the process of consideration of Faculty members for promotion. Management of non-regular faculty members

Non-regular faculty strength in an academic program or institution should not exceed 25 per cent of the sanctioned strength.

However, during initial period of an academic program of about 5 years, this resource can be as high as 50 per cent of sanctioned strength.

Non-regular faculty members who are primarily engaged for teaching purposes can be categorized as follows.

- Faculty members on contract
- Guest faculty members
- Adjunct faculty members

Non-regular faculty members who are primarily engaged for research purposes can be categorized as follows.

- Visiting faculty members
- Distinguished mentor faculty members
- International Adjunct faculty members

A bouquet of regular and non-regular faculty members should be taken into account while addressing the issue of shortage of faculty members.

Faculty members on contract

Financial packages for faculty members on contract should be comparable to those provided for regular faculty members.

Benefits such as contribution for pension, medical allowance, travel allowance, leaves facilities etc. should be provided to such persons. Such contractual arrangements should be renewed on yearly basis, should be transparent and should follow all the legal requirements.

A faculty member on contract can be on full-time basis or part-time basis. In case of part-time basis, the salary amounts will be based on the work load. It is suggested that part-time contractual faculty appointments be considered at par with adjunct positions so far as financial aspects are concerned. It is also suggested that part-time contractual faculty positions should not be offered to persons who do not have any other professional engagement.

Guest faculty members

Engagement of guest faculty members should be based on the requirements of a course in an academic session.

Guest faculty members should be provided honorarium based on qualifications along with reimbursement of actual costs of travel, lodge and board.

Adjunct faculty members

Adjunct faculty members may be appointed to give one full course or part of a course or contribute towards some R&D activities. Proper permission and clearance of the parent organization should be placed on record by the organization inviting such individuals.

Such adjunct appointments should be made for a period of one semester or one academic year.

The adjunct faculty member should be provided honorarium proportional to the work assigned to them.

Scientists of research laboratories as well as managers of companies who have some passion and flavor for academic work may also be appointed as adjunct faculty members.

Visiting faculty members

If a professional wishes to take a leave from his or her parent organization and spend time in an academic organization, then such an appointment should be considered as visiting faculty appointments. The person should be able to retain his or her lien in the original employment. However, the salary should be paid by the organization inviting the person as a visiting faculty member. Such appointment should be made on a yearly basis and should not be at a stretch for more than three years. All such appointments should be made by the standing committee. It should be seen that the person is able to get proper clearance from the parent organization. A visiting faculty member should be paid salary similar to a regular employee depending on qualifications and experience. All visiting faculty members should be provided full benefits in terms of leave etc. All visiting faculty members should be accorded full freedom and status as regular faculty members so that can contribute effectively to the academic programs and activities of the institution.

Distinguished mentor faculty members

If an academic organization wishes to avail the help of an eminent person as friend, philosopher or mentor of an academic activity in an organization, such engagements should be considered under the category of distinguished mentor faculty members. Such persons should be able to advise the academic groups

or programs. It should be possible for such eminent persons to guide the academic organization in terms of measures to be undertaken for improving the quality. Such engagements should be considered as honorific in nature. An honorarium should be based on a period spent on the campus. Of course, all expenses of travel, lodge and board should be reimbursed.

International adjunct faculty members

It is felt that Indians engaged in academic activities abroad can be engaged effectively as international adjunct faculty members. Such persons are keen to help their alma mater. A healthy tradition of such international adjunct faculty members will ultimately help address the issue of faculty shortage. All such arrangements will not provide any travel support for international travel. It may be beyond the means of the organization in India. A modest honorarium based on the contribution can be provided for such arrangements.

Academic Reforms

Academic Career Assistantship Program

It is, proposed to launch a scheme called Academic Career Assistantship Program. It is a quality improvement scheme. It will provide a financial package much better than the present assistantship amounts. It will ensure employment in an academic institution after graduation. The scheme is described in details in Chapter V of the Report.

Best Higher Educationist Award

In order to enhance the image of the academic profession in higher education, it is proposed to institute - both at the national level as well as the state level - awards such as Best Higher Educationist award. These awards will be open for

junior as well as senior faculty members. These awards can be given once a year. The day on which such awards are to be given shall be declared as a higher education day. In short, a day in the academic calendar shall be declared as a higher education day.

Financial Reforms

Honorarium for time devoted on sponsored research

Besides teaching, higher education depends on the research activities of faculty members. In India, there is a concern in terms of research performance of higher educational institutions. Even at those institutions where such activities are being pursued, the faculty members devote time which otherwise is not accounted properly. This is an incentive for academicians all over the world. In India, such a practice is not present.

In order to improve the quality as well as quantity of research, it is proposed that the time of a faculty member can be charged to the project budget. Such amounts can then be provided as honorarium on the top of the salary. The maximum that one can charge on such account shall be limited to salary equivalent of 3 months. This honorarium will be an incentive in many ways.

Chair Professorships

In order to increase the public-private partnership in the academic world, it is proposed to encourage companies, alumni, public bodies and individuals to donate an amount and establish a chair at a university or an academic institution. It is to be noted that a chair shall be an academic honor for a period of three to five years. Besides the regular salary, the faculty member will get an amount of say ₹ 15,000 to ₹ 20,000 per month. This will provide both honor and financial

incentives to faculty members. Every academic institution should strive to have about 20 percent of the professional strength as chair professors.

Miscellaneous Reforms:

Collection of Statistical Data

The Task Force recommends the following reforms.

1. State Governments may be requested to collect educational statistical data for their respective states and the Central Government may collect the same for the central sector;
2. The University Grants Commission may work as nodal agency of the Central Government for collection of this data and may expedite implementation of on-line submission of statistical data from the year 2012-13;
3. The data, so collected, may be used by various committees, task forces, agencies, etc. for proper future planning.

Web Portal for Academic Induction

It is clear that thousands of young men and women around the world with high qualifications are keen to take up academic careers at IITs, NITs, IISERs, IIITs, central universities, state universities, private universities and deemed universities. Unfortunately, they do not get connected properly. It is clear that a web portal for seekers of academic careers as well as for academic institutions looking for prospective faculty members is absolutely desirable.

The universities should also provide sufficient information about the salary scales, medical benefits, transportation allowance, pension or retirement plans, schooling facilities, housing available on the campus. The universities should also prepare a list of answers for FAQs - Frequently Asked Questions. The departments should

provide adequate information about faculty, laboratory facilities, library facilities, and computing facilities and start up grants. The universities should post information about provisions of international travel for attending conferences, book grants, grant and state government bodies, dissemination and general articles, not covered in Category III below)

The question of imparting quality education is linked inalienably with the performance of teachers. At present no uniform, robust, transparent, objective criteria exist for appraising the performance of teachers regularly. The University Grants Commission recently adopted and circulated to universities and colleges for adoption the recommendations of the Thyagarajan Committee. The Task Force agrees in principle with these recommendations and after fairly wide consultations with various kinds of institutions of higher learning has recommended the following Performance Appraisal System : Universities will be required to detail the activities and in case institutional specificities require, adjustments in weightages may be made without changing the minimum total API scores required under this category.

Design of Performance Appraisal System

CATEGORY I: TEACHING, LEARNING & EVALUATION RELATED ACTIVITIES

S.No.	Nature of Activity	Maximum No. Score
1	Lectures, seminars, tutorials, practicals, contact hours undertaken taken as percentage of lectures allocated	50
2	Lectures or other teaching duties in excess of the UGC norms	10
3	Preparation and Imparting of knowledge / instruction as per curriculum; syllabus enrichment by providing additional resources to students (i) Self Assessment (ii) Student Feedback	10 10
4	Use of participatory and innovative teaching-learning methodologies; updating of subject content, course improvement etc. (i) Self Assessment (ii) Student feedback	15 05
5	Examination duties (Invigilation; question paper setting, evaluation/assessment of answer scripts) as per allotment.	25
	Total Score	125
	Minimum API Score Required per year	75

Note: Lectures and tutorials allocation to add up to the UGC norm for particular category of teacher. University may prescribe minimum cut-off (net of due leave), say 80 %, for 1 and 5 above, below which no scores may be assigned in these sub-categories

CATEGORY II: CO-CURRICULAR, EXTENSION AND PROFESSIONAL DEVELOPMENT RELATED ACTIVITIES.

Brief Explanation: Based on the teacher's self-assessment (and also student feedback, wherever applicable) category II API scores are proposed for co-curricular and extension activities and Professional development related contributions. The minimum API required by teachers per year is 15. A list of items and proposed scores is given below. It will be noticed that all teachers can earn scores from a number of items, whereas some activities will be carried out only by one or a few teachers. The list of activities is broad enough for the minimum API score required (15) in this category to accrue to all teachers. As before, the assessment score should be based on objectively verifiable criteria/data and will be finalized by the core committee for every institution comprising of at least five senior teachers.

The model table below gives groups of activities and API scores. Universities may detail the activities or, in case institutional specificities require, make adjustment in the weightages, without changing the minimum total API scores required under this category.

S.No.	Nature of Activity	Maximum No. Score
1	Student related co-curricular, extension and field based activities (such as extension work through NSS/NCC and other channels, culture activities, subject related events, advisement and counselling) (i) Self Assessment (ii) Student feedback	10 10
2	Contribution to Corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities.	15
3	Professional Development activities (such as participation in seminars, conferences, short term, training courses, talks, lectures, membership of Boards of Study, Academic Council, membership of Professional Associations, nomination to other university, central and state government government bodies, dissemination and general articles, not covered in Category III below)	15
	Minimum API Score Required per year	15

CATEGORY-III: RESEARCH AND ACADEMIC CONTRIBUTIONS

S No.		Max. points for University and college teacher position	
III(A)	Research Papers	Refereed Journals *	15 / publication
		published in Non-refereed but recognized and reputable journals and periodicals, having ISBN/ISSN numbers. Conference proceedings as full papers, etc. (Abstracts not to be included)	10 /Publication 10/ publication
III (B)	R e s e a r c h Publications books, chapters in books, other than referred journal articles	Text or Reference Books Published by International Published peer review system	50/book; and 10/chapter in an edited book
		Subjects Books by National level publishers/State and Central Govt. Publications with ISBN/ISSN Numbers.	25/ books; and 5/ chapter in edited books
		Subjects Books by Other local publisher with ISBN/ISSN numbers.	15/ books; and 3/ chapter in edited books

III (C) RESEARCH PROJECTS

(i)	Sponsored Project out/ongoing	Major Projects amount mobilized with grants above ₹ 30.0 (5.0) lakhs+	20 for each project in the year of award and 10 per year for the approved duration.
		Major Projects amount mobilized with grants above ₹ 5.0 (3.0) lakhs up to ₹ 30.00 (5.0) lakhs +	15 for each Project in the year of award and 7.5 per year for the approved duration.
		Major Projects amount mobilized with grants above ₹ 5.0 (3.0) lakhs up to ₹ 30.00 (5.0) lakhs +	10 for each Project in the year of award and 5 per year for the approved duration.

(ii)	Consultancy Projects carried out/ongoing	Amount mobilized with minimum of ₹10.00 lakh(2 lakhs) +	10 per every ₹10 (2) lakhs + received during the year.
(iii)	Projects Outcome/ Outputs	Patent/Technology transfer/ Product/ Process/ Major Policy document of Govt. bodies at Central and State level.	30 / each national level output or patent /50 / each for International level.

III (D) RESEARCH GUIDANCE

(i)	M.Phil	i) Registered for Degree ii) Degree awarded	3 per candidate (for almost 1 year) 5 per candidate
(ii)	Ph.D	i) Registered for Degree ii) Degree awarded	5 per candidate per year (for almost 3 years) 10 per candidate

III (E) TRAINING COURSES AND CONFERENCE/SEMINAR/ WORKSHOP PAPERS

(i)	Refresher courses, Methodology workshops, training, teaching-learning	(a) Not less than two weeks duration (b) One week duration	20 per course organized & 10 per attended 10/each course organized & 5 per attended
(ii)	Papers in Conferences/ Seminars/Workshops etc.**	Participation and Presentation of research papers (oral/poster) in	
		International conference	10 each
		National	7.5 each
		Regional/State level	5 each
		Local /University / College level	3 each
(iii)	Invited lectures or presentations for conferences/symposia	International	10 each
		(d) National level	5 each

*Wherever relevant to any specific discipline, the API score for paper in refereed journal would be augmented as follows: (i) indexed journals – by 5 points; (ii) papers with impact factor between 1 and 2 by 10 points; (iii) papers with impact factor between 2 and 5 by 15 points; (iv) papers with impact factor between 5 and 10 by 25 points. Where, however, such impact factor calculation is not feasible at present, efforts may be made to devise the same.

** If a paper presented in a Conference/Seminar is published in the form of Proceedings, the points would accrue for the publication (III (a)) and not under presentation (III (e) (ii)). Also if the teacher has organized a conference at the levels indicated, his/her Weightage points will be doubled.

Task Force therefore recommends that Interview marks (out of a total of 100) be added to the total score calculated. Task Force, further, recommends 60 to be the qualifying marks out of the Interview for promotion.

4. Task Force thus recommends the following threshold marks for promotions:

- (i) for Step 1 (a) - 440
- (ii) (b) - 600
- (iii) (c) $390+60 = 450$ (including Interview)
- (iv) (d) $420+60 = 480$ (-do-)

5. Task Force, however, very significantly recommends Fast Track Promotions for consistently Good Performers.

The following is recommended:

- (i) From Stage 1 to 2 - 4 years.
- (ii) From Stage 2 to 3 - 5 years in the normal case. However, a candidate holding Ph.D. degree may be considered for promotion after 4 years if the total API Score achieved in 8 yrs is at least 10% higher than the minimum cumulative API score for 9 years, i.e. 1144.
- (iii) From Stage 3 to 4 - 3 years.
- (iv) From Stage 4 to 5 - 3 years in the normal case. However, a candidate holding Ph.D. degree may be considered for promotion after 2 years if the total API Score achieved in 5 years is at least 10% higher than the minimum cumulative API Score for 6 years, i.e. 1023.

The Task Force hopes fervently that the recommendations in respect of Faculty Shortage and Performance Appraisal, when implemented, shall go a long way in mitigating both the problems.

F.No. 4-48/2009-UI(A)
Government of India
Ministry of Human Resource Development
Department of Higher Education

New Delhi, dated 14th September, 2009

Subject: Constitution of Task force on Faculty shortage and design of Performance Appraisal systems

The Central Government is alive to the need for quality faculty for the growth of the higher education sector in the country. It has been felt that there is a necessity to assess the existing faculty shortage and the projected need for additional faculty in the background of expansion of institutions of higher learning to achieve the targeted Gross Enrolment Ratio in the Eleventh and the Twelfth Plan periods. Remedial measures have to be taken to alleviate the shortage of quality faculty.

2) The Pay Review Committee under Prof. G.K. Chaddha, in their report recommending revision of pay-scales for faculty, suggested that “multi-source evaluation – self assessment, assessment by students who have been taught a course by the teacher and assessment by academic heads” may be introduced. The Committee further stated that “multiple parameters such as regularity in class room teaching, holding tutorials, availability to students for consultation, participating in faculty meetings, guiding and carrying out research, and participating in other academic activities like seminars etc. should be taken into consideration while assessing teacher’s academic accountability.” The committee recommended that “UGC should evolve parameters relevant to universities and colleges respectively for carrying out evaluation uniformly throughout the country.”

3) In order to advise and make appropriate recommendations for the alleviation of shortage of quality faculty and design of a robust, objective and transparent Performance Appraisal system, the Central Government, hereby, constitutes a Task Force, consisting of the following members:-

- (i) Prof. Sanjay Dhande, Director, IIT Kanpur Chairperson
- (ii) Prof. Devi Singh, Director, IIM, Lucknow
- (iii) Prof. Chiranjib Sen, Professor, IIM, Bangalore
- (iv) Prof. V. Kannan, Pro-Vice Chancellor, University of Hyderabad
- (v) Prof. K.K. Aggarwal, former Vice Chancellor, Indraprastha University, Delhi

Secretary, University Grants Commission (UGC) shall act as the member-Secretary of the Task Force.

2) The Task force shall have the following terms of reference:-

- (i) To assess the existing faculty shortage in the country in regard to technical and professional education and University education.
- (ii) To assess the requirement of quality faculty in regard to technical and professional education and University education in the remaining period of the Eleventh Plan and the Twelfth Plan considering the need to achieve the targeted Gross Enrolment Ratio by the terminal year of the Twelfth Plan.
- (iii) To suggest remedial policies and other measures to meet the estimated shortfall in quality faculty.
- (iv) To design and develop a robust, objective, transparent and multi-source Performance Appraisal System to provide a framework to enable performance evaluation of faculty throughout the country in regard to technical education, professional education and University education.

3) The members shall be entitled to TA/DA at the highest rate as applicable to the rules of the University Grants Commission (UGC) and the expenditure in this regard shall be met out of the funds of the UGC. The University Grants Commission shall provide all secretariat and other administrative support to the members for the Task Force

4) The Task Force shall meet as often as may be convenient to Members and shall advise and make such recommendations as it may deem fit. The Task force may submit its report with recommendations on the terms of reference within four months.

Sd/-

(Sunil Kumar)

Joint Secretary to the Government of India

Meetings of the Task Force

Sl. No.	Date of Meeting	Place of Meeting
1.	26 th November, 2009	UGC Office, New Delhi
2.	8 th February, 2010	UGC Office, New Delhi
3.	27 th February, 2010	UGC Office, New Delhi
4.	5 th April, 2010	UGC Office, New Delhi
5.	14 th May, 2010	UGC Office, New Delhi
6.	25 th June, 2010	UGC Office, New Delhi
7.	24 th & 25 th July, 2010	University of Hyderabad, Hyderabad
8.	7 th December, 2010	UGC Office, New Delhi
9.	1 st February, 2011	UGC Office, New Delhi
10.	1 st March, 2011	UGC Office, New Delhi
11.	28 th April, 2011	UGC Office, New Delhi
12.	16 th May, 2011	UGC Office, New Delhi
13.	9 th June, 2011	UGC Office, New Delhi

ANNEXURE 3 (I)

STATEMENT OF TEACHING STAFF STRENGTH AS ON 31.3.2010 (EXISTING & VACANT POSITIONS)
CENTRAL UNIVERSITIES

Sl. No.	Name of University	Sanctioned Posts					Existing Strength										GRAND TOTAL	No. of Vacant Positions				
		P	R	L	O	TOTAL	Professor		Reader		SL / SG	Lecturer	O	TOTAL		P		R	L	O	TOTAL	
							DR	CAS	DR	CAS	CAS	DR		DR	CAS							
1	2	3					4										5	6				
	ANDHRA PRADESH																					
1	M.A. N. URDU UNIVERSITY	35	58	15	91	339	18	0	33	0	0	79	29	159	0	159	17	25	76	62	180	
2	HYDERABAD UNIVERSITY	106	22	21	0	541	87	74	126	19	19	32	0	245	112	357	19	95	70	0	184	
3	THE ENGLISH & FOREIGN LANGUAGES UNIVERSITY	32	60	14	0	237	28	24	48	4	0	78	0	154	28	182	4	12	39	0	55	
	ARUNACHAL PRADESH																					
4	RAJIV GANDHI UNIVERSITY ASSAM	16	31	95	0	142	5	10	16	8	0	56	0	77	18	95	11	15	21	0	47	
5	ASSAM UNIVERSITY	32	94	19	0	325	27	18	81	0	18	152	0	260	36	296	5	13	11	0	29	
6	TEZPUR UNIVERSITY	48	64	12	0	232	29	5	34	11	20	52	0	115	36	151	19	30	32	0	81	
	CHHATTISGARH																					

7	GURU GHASIDAS VISHWAVIDY ALAYA DELHI	38	63	13 7	0	238	10	4	16	11	0	44	0	70	15	85	28	47	78	0	153
8	DELHI UNIVERSITY	307	65 4	69 1	50	1702	124	0	296	0	0	349	23	792	0	792	183	358	342	27	910
9	JAMIA MILLIA ISLAMIA	113	17 6	43 4	47	770	92	78	157	29	72	195	35	479	179	658	21	19	60	12	112
10	JAWAHARLAL NEHRU UNIV. MADHYA PRADESH	165	28 7	27 1	5	728	101	122	195	0	0	67	5	368	122	490	64	92	82	0	238
11	DR. HARISINGH GOUR VISHWAVIDY ALAYA MAHARASH TRA	50	92	17 8	7	327	9	62	42	14	0	26	3	80	76	156	41	50	76	4	171
12	M.G.A. HINDI VISHWAVIDY ALAYA MANIPUR	16	10	43	0	69	9	0	6	0	0	28	0	43	0	43	7	4	15		26
13	MANIPUR UNIVERSITY MEGHALAYA	35	81	14 1	0	257	8	42	52	11	0	54	0	114	53	167	27	29	34	0	90
14	NORTH EASTERN HILL UNIV.	87	13 3	18 6	0	406	60	36	96	28	28	50	0	206	92	298	27	37	44	0	108

15	MIZORAM UNIVERSITY NAGALAND	43	67	22 8	0	338	20	2	40	4	10	137	0	197	16	213	23	27	75	0	125
16	NAGALAND UNIVERSITY PUDUCHERRY	32	59	12 0	5	216	14	11	29	5	16	62	0	105	32	137	18	30	26	5	79
17	PONDICHERY UNIVERSITY TRIPURA	69	13 8	25 3	0	460	33	46	69	27	0	83	0	185	73	258	36	69	97	0	202
18	TRIPURA UNIVERSITY UTTAR PRADESH	16	27	54	0	97	8	9	20	6	13	19	0	47	28	75	8	7	7	0	22
19	ALIGARH MUSLIM UNIVERSITY	173	35 6	85 3	37 3	1755	128	230	280	148	178	182	34 0	930	556	1486	45	76	115	33	269
20	BANARAS HINDU UNIVERSITY	347	68 0	13 68	0	2395	175	460	418	137	0	300	0	893	597	1490	172	262	471	0	905
21	B.B.A.U.	22	43	65	0	130	11	1	19	1	0	43	0	73	2	75	11	24	20	0	55
22	UNIVERSITY OF ALLAHABAD UTTARAKHA ND	70	16 7	53 4	0	771	12	86	73	70	0	79	0	164	156	320	58	94	299	0	451
23	H.N.B. GARHWAL UNIVERSITY WEST BENGAL	29	55	23 5	8	327	18	86	37	64	16	41	7	103	166	269	11	18	28	1	58
24	VISVA BHARATI TOTAL	62 3	12 8 44	35 9 78	16 3 9	712	53	78	106	45	61	119	13 8 0	416	184	600	9	22	56	25	112 4662

ANNEXURE 3(II)

STATEMENT SHOWING THE POSITION OF THE REGULAR/TEMPORARY/VACANT POST OF TEACHERS
WORKING IN THE STATE UNIVERSTIES (AS ON 01.05.2007)

S. No	Name of the University	Sanctioned strength			Post filled			Post Vacant			Sanctioned strength	Post filled up	% post filled up
		P	R	L	P	R	L	P	R	L			
	Andhra Pradesh												
1.	Osmania University	144	498	578	45	222	560	99	27	18	1220	827	67.8
2.	S.P.M. University, Tirupati	17	34	76	11	21	69	6	13	7	127	101	
3.	JNTU, Hyderabad	92	97	256	75	71	182	17	26	74	445	328	73.7
4.	NALSAR University, Hyderabad	7	7	15	6	5	4	1	3	10	29	15	51.7
5.	Dravidian University, Kuppam	10	20	40	6	6	37	4	14	4	70	149	70
	Arunachal Pradesh												
6.	Rajiv Gandhi University, Itanagar	13	27	84	2	17	53	11	10	31	124	72	58
	Assam												
7.	Gauhati University, Gawahati	115	120	141	103	106	116	12	14	25	376	325	86
8.	Dibrugarh University, Dibrugarh	24	64	111	11	43	102	13	14	16	199	147	73.8
	Bihar												
9.	T.M. Bhagalpur Univ., Bhagalpur	40	155	1294	153	346	460	40	154	336	1489	959	64.4
	Chhattisgarh												
10.	Indira Kala Sangeet Vish., Khairagarh	5	16	35	1	5	19	4	11	16	56	25	44.6
11.	Pt. Ravi Shankar Shukla Vishwavidyalaya, Raipur	23	49	82	14	32	59	9	18	25	154	105	58.1

	Delhi												
12.	Guru Gobind Singh Indraprastha University, Delhi	38	51	87	15	18	73	23	33	9	176	106	60.2
	Goa												
13.	Goa University, Goa	31	66	91	21	53	94	19	34	30	188	150	79.7
	Gujarat												
14.	Bhavnagar University, Bhavangar	13	24	36	6	14	30	7	10	6	73	50	58.4
15.	Gujarat University, Ahmedabad	35	76	94	12	43	71	23	33	23	205	51	24.9
16.	M.S. Univ. of Baroda, Vadodara	86	140	526	44	110	334	41	12	197	752	488	64.8
17.	Sardar Patel Univ., Vallabha Vidyanagar	37	73	129	27	52	99	10	21	30	239	180	75.3
18.	Saurashtra Univ., Rajkot	23	41	73	12	31	58	11	10	15	137	101	73.7
19.	South Gujarat University, Surat	23	44	64	13	25	48	10	19	16	131	86	55.6
	Haryana												
20.	M.D. Univ., Rohtak	35	61	208	20	33	139	15	36	71	304	194	53.8
21.	Kurukshetra Univ., Kurukshetra	106	98	57	87	70	113	19	28	44	361	270	74.7
22.	Guru Jambheswar Univ., Hisar	35	74	60	14	39	118	21	47	34	269	171	63.5
	Himachal Pradesh												
23.	Himachal Pradesh Univ., Shimla	34	63	26	16	35	101	18	28	26	223	152	68.1
	Jammu & Kashmir												
24.	Jammu University, Jammu Tawi	59	83	167	47	71	154	11	10	13	309	272	88
	Jharkhand												
25.	Ranchi University, Ranchi	43	90	1302	--	11	910	43	79	400	1435	921	64.2
	Karnataka												
26.	Bangalore University,	80	156	321	21	75	220	61	76	103	557	316	56.7

27.	Kuvempu University, Shankarghatta	26	40	89	13	30	79	14	10	11	155	121	55.6
28.	Kannada University, Hampi	8	22	40	5	19	40	4	3	--	70	64	91
29.	Mangalore University, Manglorgangothri	29	42	94	12	30	81	17	12	15	165	123	74.5
30.	National Law School of India University, Bangalore	7	2	11	7	2	11	-	-	-	20	20	100
	Kerala												
31.	Calicut University, Calicut	32	66	136	22	45	116	10	21	23	234	183	78.2
32.	Cochin University of Sc. & Technology, Kochi	69	88	107	61	65	48	8	23	59	264	174	65.9
33.	Mahatma Gandhi Univ., Kottayam	15	23	80	11	18	18	69	4	5	118	47	38.2
34.	Kannur University Mangattuparamba	5	18	27	5	18	26	--	--	1	50	49	99
35.	Sree Sankaracharya Univ., of Sanskrit., Kalady	8	35	159	8	26	159	1	22	12	198	193	99
	Madhya Pradesh												
36.	A.P.S. University, Rewa	17	21	35	2	7	20	15	14	15	73	29	39.7
37.	Barkatullah University,	15	26	53	4	17	34	12	7	18	94	55	58.5
38.	Devi Ahilya Vishwavidyalaya, Indore	33	53	79	16	29	53	12	24	26	165	98	59.39
39.	Dr. H.S. Gaur Vishw., Sagar	50	92	174	12	45	22	38	48	72	316	99	25
40.	Jiwaji University, Gwalior	21	33	88	5	23	38	3	16	58	142	66	46.4
41.	National law Instt. University, Bhopal	4	8	13	--	2	7	4	6	6	25	9	36
	Maharashtra												
42.	S.G.B. Amravati University, Amravati	14	24	47	6	13	46	8	11	1	85	65	76.4
43.	Dr. B.A. Marathwada	35	80	131	24	42	88	11	38	43	246	155	53

44.	Mumbai University, Nagpur	105	140	177	56	72	120	44	65	52	422	260	61.6
45.	R.T.M. Nagpur University, Nagpur	54	91	207	54	10	36	44	55	84	352	100	28.4
46.	North Maharashtra Univ.,	13	26	76	8	11	32	12	15	36	115	51	44.3
47.	Pune University, Poona	68	113	190	42	55	127	26	58	63	371	224	50.3
48.	Shivaji University, Kolhapur	40	46	124	17	27	95	23	19	29	210	139	66.2
49.	S.R.T. Marathwada Univ., Nanded	7	15	32	5	13	28	2	2	4	54	46	35.1
	Orissa												
50.	Utkal University, Bhubaneshwar	63	95	182	63	95	182	34	36	72	340	184	54.1
51.	Berhampur University Bhanja Bihar	98	54	100	11	38	69	21	16	31	166	118	71
52.	Shri Jagannath Sanskrit University, Puri	7	13	21	5	3	14	2	10	7	41	22	53.6
53.	Fakir Mohan University, balasore	5	10	15	4	10	12	1	--	1	30	26	86.6
54.	North Orissa University, Baripada	5	10	15	4	10	13	1	0	2	30	27	90
	Punjab												
55.	Panjab University, Chandigarh	78	95	98	44	62	66	34	33	32	271	172	53.4
56.	Punjabi University, Patiala	190	239	424	112	136	229	69	90	116	853	578	57.7
57.	Guru Nanak Dev Univ., Amritsar	146	156	255	113	91	207	32	56	198	557	411	73.7
	Rajasthan												
58.	Rajasthan University, Jaipur	61	135	703	1	27	244	60	108	459	899	272	30.2
59.	J.N. Vyas University, jodhpur	52	125	503	1	27	298	51	98	205	680	326	47.9
60.	M.L. Sukhadia Univ., Udaipur	268	--	--	100	--	--	162	--	--	262	100	38.1

61.	M.D.S. University, Ajmer	13	26	19	5	9	14	8	17	5	58	28	48.3
	Tamil Nadu												
62.	Alagappa University, Karaikudi	15	34	85	10	26	81	5	8	4	134	117	87.3
63.	Annamalai University, Annamalainagar	250	237	1571	250	237	1571	-	-	-	2058	2058	100
64.	Bharatidasan Univ., Tiruchirappalli	21	32	139	14	27	98	7	5		192	139	72.4
65.	Bharatidasan Univ., Coimbatore	6	6	65	3	3	30	3	30	35	77	36	46.7
66.	Madurai Kamaraj Univ., Madurai	70	147	177	121	36	35	203	394	192	48.7		
67.	Mother Teresa Women's University , Kodaikanal	22	25	56	1	5	31	21	19	25	103	37	35.9
	Tripura												
68.	Tripura University	15	28	55	9	15	45	6	13	10	98	69	70.4
	Uttar Pradesh												
69.	Bundelkhand University, Jhansi	8	17	31	3	10	29	2	8	3	56	42	75
70.	M.G. Kashi Vidyapeeth, Varanasi	21	36	126	14	27	114	7	9	13	183	154	34.1
	Uttranchal												
71.	Kumaun University, Nainital	30	48	240	5	30	193	24	18	46	318	228	71.6
	West Bengal												
72.	Calcutta university, Calcutta	147	253	447	89	194	285	44	62	111	847	619	73
73.	Jadavpur University, Kolkata	153	257	414	150	225	269	3	32	145	824	664	78.1
74.	Burdwan University, Burdwan	38	91	140	30	81	118	8	10	22	269	229	85
75.	North Bengal University, Darjeeling	28	56	123	1	2	8	27	54	115	207	11	5.3
76.	Rabindra Bharati Univ., Kolkata	16	33	111	14	29	107	2	4	4	160	150	93.7

ANNEXURE 3(III)

STATEMENT OF FILLED/UNFILLED TEACHING AND NON-TEACHING STAFF IN DEEMED UNIVERSITY STATEMENT OF TEACHING STAFF STRENGTH AS ON 31.3.2010 (EXISTING & VACANT POSITION) DEEMED UNIVERSITIES

S. N.	Name of University	Sanctioned Posts					Existing Strength										No. of Vacant Positions				
		P	R	L	O	Total	Prof.		Reader		SL/SG	Lect.	O	Total		Grand Total	P	R	L	O	Total
							DR	CAS	DR	CAS	CAS	DR		DR	CAS						
	Andhra Pradesh																				
1.	Rashtriya Sanskrit Vidyapeeth Tirupati	9	14	35	-	58	9	9	6	10	10	10	-	27	29	56	-	-	2	-	2
	Delhi																				
2.	Shri LBS Rashtriya Sanskrit Vidyapeeth New Delhi	8	19	74	-	101	8	13	16	7	26	18	-	42	46	88	-	3	10	-	13
	Gujarat																				
3.	Gujarat Vidyapeeth, Ahmedabad	20	30	94	14	158	6	2	15	29	15	28	8	57	46	103	12	15	22	6	55
	Maharashtra																				
4.	Tata Institute of social Sciences Deonar, Mumbai	18	43	57	-	118	17	12	23	4	16	31	-	71	32	103	1	8	6	-	15
	Tamil Nadu																				
5.	Avinashilingam Institute of Home Science and Higher Education Coimbatore		15	170	-	207	22	21	15	53	27/18	42	-	79	119	198	-	-	9	-	9
6.	Gandhigram Rural Institute, Dindigul	17	25	97	6	145	16	29	19	31	10	15	3	50	70	123	1	6	12	3	22
	Uttar Pradesh																				
7.	Dayalbagh Educational Institute, Agra	6	28	149	3	186	6	45	14	53	30	27	-	47	128	175	-	2	6	3	11
	Uttarachanchal																				
8.	Gurukul Langri Vishwavidyalaya, Haridwar	14	22	76	-	112	8	27	20	8	6	21	-	49	41	90	6	2	14	-	22
	Total	114	196	752	23	1085	92	158	128	195	113	192	11	422	511	936	20	36	81	12	149

Note: - Only 8 Deemed Universities are receiving maintenance grant from UGC, out of 25 Deemed Universities being provided Development grant.

ANNEXURE 3(IV)

STATEMENT OF NON-TEACHING STAFF STRENGTH AS ON 31.3.2010
(EXISTING & VACANT POSITIONS)

Sl. No.	Name of University	Sanctioned Posts					Existing Strength					No. of Vacant Positions				
		Gr.A	Gr.B	Gr.C	Gr.D	Total	Gr.A	Gr.B	Gr.C	Gr.D	Total	Gr.A	Gr.B	Gr.C	Gr.D	Total
1	Avinashilingam Institute of Home Science and Higher Education, Coimbatore	19	7	71	31	128	17	7	67	31	122	2	--	4	--	6
2	Dayalbagh Educational Institute, Agra	9	5	94	16	124	8	2	83	15	108	1	3	11	1	16
3	Gandhigram Rural Institute, Dindigul	22	31	123	89	265	18	25	108	53	204	4	6	15	36	61
4	Gujarat Vidyapeeth, Ahmedabad	33	11	151	53	248	15	8	78	20	121	18	3	73	33	127
5	Gurukul Kangri Vishwavidyalaya, Haridwar	15	9	77	90	191	11	7	74	83	175	4	2	3	7	16
6	Rashtriya Sankrit Vidyapeeth, Tirupati	9	8	28	28	73	9	7	27	26	69	--	1	1	2	4
7	Shri LBS Rashtriya Sanskrit Vidyapeeth, New Delhi	12	10	56	30	108	10	8	37	26	81	2	2	19	4	27
8	Tata Institute of Social Sciences, Deonar, Mumbai	22	46	110	93	271	21	39	79	69	208	1	7	31	24	63
	TOTAL	141	127	710	430	1408	109	103	553	323	1088	32	24	157	107	320

ANNEXURE 3(V)

TEACHING STAFF : UNIVERSITY TEACHING DEPARTMENTS : 2009-10

Sr. No.	State/University	Sanctioned staff					Existing staff				
		Prof.	Read.	Slec.grade Lect.	Sr.lect	Total	Prof.	Read.	Slec.grade Lect.	Sr.lect.	Total
	Andhra Pradesh										
1.	Acharya N.G. Ranga Agricultural Univ., Hyderabad	33	101	0	320	454	110	85	22	97	314
2.	Adikavi Nannaya Univ., Rajahmundry	8	15	0	25	48	3	6	0	17	26
3.	Gandhi Institute of Technology & Management, Vishakhapatnam	30	74	217	12	333	30	74	217	12	333
4.	International Institute of Information Technology, Hyderabad	25	10	22	14	71	25	10	22	14	71
5.	Koneru Lakshmaiah Education Foundation, Guntur-	58	64	0	264	386	58	64	79	185	386
6.	National Academy of Legal Studies & Research University, Hyderabad	8	9	9	8	34	8	3	6	6	23
7.	Rashtriya Sanskrit Vidyapeeth, Tirupathi	9	15	0	47	71	18	24	9	13	64
8.	Sri Venkateswara Institute of Medical Sciences	44	24	70	25	163	34	15	34	23	106
9.	Telangana University, Nizamabad	12	35	0	50	97	6	7	0	30	43
10.	Yogi Vermana University, Kadapa	33	61	0	124	218	10	17	98	0	125
	Total	260	408	318	889	1875	302	305	487	397	1491
	Assam										
11.	Dibrugarh University, Dibrugarh	25	54	127	0	206	11	39	104	0	154
12.	National Institute of Technology, Silchar	17	33	66	0	116	14	17	55	0	86
	Total	42	87	193	0	322	25	56	159	0	240

	Bihar										
13.	National Institute of Technology, Patna	20	40	0	82	142	11	19	0	37	67
	Total	20	40	0	82	142	11	19	0	37	67
	Chhattishgarh										
14.	Hidayatullah National Law University, Raipur	8	14	12	13	47	0	1	4	12	17
15.	Indira Kala Sangeet, Khairagarh	5	16	35	0	56	1	6	16	8	31
16.	Kushabhau Thakre Patrakarita Avam Jansanchar Vishwavidyalaya, Raipur	2	4	0	6	12	0	2	0	5	7
17.	MATS University, Arang Kharora -	7	14	7	50	78	4	6	2	43	55
	Total	22	48	54	69	193	5	15	22	68	110
	Delhi										
18.	Delhi Technological University, Delhi	51	101	0	182	334	15	42	0	75	132
19.	National Law School, New Delhi	4	6	0	10	20	5	3	0	9	17
20.	Shri L.B.S.Rasthriya Sanskrit Vidyapith, New Delhi	10	21	0	87	118	8	14	0	65	87
	Total	65	128	0	279	472	28	59	0	149	236
	Goa										
21.	Goa University	31	66	0	95	192	25	60	27	0	112
	Total	31	66	0	95	192	25	60	27	0	112
	Gujarat										
22.	Bhavnagar University, Bhavnagar	13	24	0	36	73	14	21	0	16	51
23.	Central University of Gujarat, Gandhinagar	4	8	0	12	24	1	0	0	0	1
24.	Centre for Environment Planning and Technical University, Ahmedabad	0	26	34	33	93	0	24	31	30	85
25.	Dharmsinh Desai University, Nadiad	36	52	210	0	298	36	52	210	0	298

26.	Ganpat University, Ganpat	5	11	0	21	37	5	11	0	21	37
27.	Gujarat National Law University, Gandhinagar	0	0	0	1	1	0	0	0	39	39
28.	Gujarat Vidyapeeth, Ahmedabad	20	30	0	108	158	8	10	40	43	101
29.	Hemchandracharya North Gujarat University, Patan	10	18	22	0	50	4	12	9	0	25
30.	Kantiguru Shyamji Verma Kachchh University, kachchh	6	10	338	0	354	4	9	272	0	285
31.	M.S. University of Baroda, Baroda	4	19	1	20	44	4	19	1	20	44
32.	Nirma University of Science & Technology Ahmedabad	47	111	0	262	420	32	97	36	180	345
33.	Saurashtra University, Rajkot	23	41	0	73	137	24	40	7	5	76
	Total	168	350	605	566	1689	132	295	606	354	1387
	Haryana										
34.	Bhagat Phool Singh Mahila Vishwavidyalaya, Sonipat	11	29	0	170	210	8	14	2	136	160
35.	Deenbandhu Chhotu Ram University of Science & Technology, Murthal	46	90	0	242	378	28	35	0	88	151
36.	Guru Jambheshwar University of Science & Technology, Hisar	34	73	162	0	269	23	41	23	66	153
37.	Lingaya's University, Faridabad	0	0	0	0	0	32	93	27	72	224
38.	Maharshi Dayanand University, Rohtak.	35	54	322	0	411	25	36	246	0	307
	Total	126	246	484	412	1268	116	219	298	362	995

	Himachal Pradesh										
39.	Himachal Pradesh University, Shimla	42	86	0	231	359	86	76	31	4	197
40.	Jaypee University of Information, Solan	10	24	0	69	103	10	24	0	69	103
41.	Shoolini University, Solan	14	18	60	0	92	13	9	42	0	64
	Total	66	128	60	300	554	109	109	73	73	364
	Jammu & Kashmir										
42.	Islamic University of Science & Technology , Pulwama	8	10	0	79	97	5	2	0	76	83
43.	Jammu University, Jammu Tawi	63	89	0	192	344	85	56	38	41	220
	Total	71	99	0	271	441	90	58	38	117	303
	Karnataka										
44.	Christ College, Bangalore	11	62	68	87	228	9	59	66	86	220
45.	Jain University, Bangalore	0	0	0	0	0	32	71	21	124	248
46.	Karnataka State Open University, Mysore.	0	7	0	72	79	13	13	1	0	27
47.	Karnataka State Women University, Bijapur	16	33	0	46	95	4	16	0	25	45
48.	Martin Luther Christian University, Bangalore	22	48	94	14	178	66	27	73	6	172
49.	National Law School of India University, Bangalore	9	3	6	5	23	9	2	6	4	21
50.	Sri Devraj Urs Academy of Higher Education & Research, Kolar	22	48	94	14	178	66	27	73	6	172
51.	University of Agricultural Sciences, Bangalore	59	89	0	344	492	142	174	0	99	415
52.	Yenepoya University, Mangalore	78	44	98	0	220	78	44	98	0	220
	Total	217	334	360	582	1493	419	433	338	350	1540

	Madhya Pradesh										
53.	Indian Instion of Information Technology & Management, Gwalior	13	15	0	19	47	3	10	16	0	29
54.	Jawaharlal Nehru Krishi University, Jabalpur	1	2	0	4	7	1	1	0	2	4
55.	L.B. National Institute of Physical Education, Gwalior	5	6	0	31	42	0	1	0	27	28
56.	Maharishi Panini Sanskrit Evam Vedic Vishwavidyalay, Ujjain	5	10	0	15	30	0	0	0	0	0
57.	National Law Institute University, Bhopal	4	9	0	13	26	2	8	2	7	19
	Total	28	42	0	82	152	6	20	18	36	80
	Maharashtra										
58.	Dr.Babasaheb Ambedkar	11	23	0	61	95	4	35	4	18	61
59.	Gokhale Institute of Politics & Economics , Pune	12	12	0	16	40	4	5	1	7	17
60.	Institute of Chemical Technology, Mumbai	24	35	40	0	99	10	21	27	0	58
61.	International Institute for Population Science. Mumbai	8	11	0	13	32	5	8	0	9	22
62.	Maharashtra Univ. of Health Sciences,Nasik	21	12	0	18	51	3	6	0	16	25
63.	Narsee Monjee Inst. of Management, Mumbai	21	10	0	0	31	21	10	0	0	31
64.	S.N.D.T. Women's University, Mumbai.	52	160	278	0	490	19	117	150	0	286
65.	Tata Institute of Social Sciences, Mumbai	23	50	0	69	142	36	39	0	52	127

66.	The Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	53	89	0	192	334	19	37	0	117	173
67.	Y.C. Maharashtra Open University, Nasik	11	15	29	0	55	6	6	22	0	34
	Total	236	417	347	369	1369	127	284	204	219	834
	Orissa										
68.	Ravenshaw University, Cuttack	16	43	0	88	147	6	36	0	63	105
69.	Sambalpur University, Sambalpur	26	45	0	75	146	45	26	6	19	96
	Total	42	85	0	163	293	51	62	6	82	201
	Panjab										
70.	Guru Nanak Dev University, Amritsar	152	165	0	250	567	91	81	0	128	300
71.	Sant Longowal Institute of Engg. & technology, Sangrur	22	43	0	115	180	21	70	8	30	129
72.	Thapar Instt. of Engg. & Technology, Patiala	40	79	0	156	275	37	30	0	141	208
	Total	214	287	0	521	1022	149	181	8	299	637
	Rajasthan										
73.	Amity University, Rajasthan NH-11c	0	23	13	51	93	11	24	13	53	101
74.	Birla Institute of Technology & Sc., Pilani	112	153	304	133	702	32	33	265	183	513
75.	Jagadguru Ramannandecharya Sanskrit University, Jaipur	5	12	20	0	37	3	6	12	0	21
76.	Jagannath University, Jaipur	9	14	0	37	60	7	14	0	29	50
77.	Jain Vishva Bharati Institute, Ladnun	12	16	0	69	97	8	7	0	60	75
78.	Janardhan Rai Nagar Rajasthan Vidyapeeth, Udaipur	19	21	0	122	162	19	31	0	134	184

79.	Jain Vishva Bharati Institute, Ladnun	12	16	0	69	97	8	7	0	60	75
80.	Janardhan Rai Nagar Rajasthan Vidyapeeth, Udaipur	19	21	0	122	162	19	31	0	134	184
81.	Maharana Pratap University of Agriculture & Technology University, Udaipur	1	5	0	13	19	0	3	0	4	7
82.	Sir Padampat Singhanian University, Udaipur	8	14	28	32	82	4	16	18	11	49
83.	Suresh Gyan Vihar University, Jaipur	26	60	170	0	256	12	25	197	0	234
	Total	192	318	535	463	1508	96	159	505	474	1234
	Tamil Nadu										
84.	Avinashilingam .Institute for Home Sc. & Higher Education for Women, Coimbatore	22	15	0	117	207	49	80	26	43	198
85.	B.S. Abdur Rahman Institute of Sc. & Tech., Chennai	50	41	44	117	252	50	41	44	117	252
86.	Chettinad Academy of Research & Education, Kancheepuram	47	30	85	75	237	47	30	85	75	237
87.	Dakshina Bharat Hindi Prachar Sabha, Chennai	4	4	16	77	101	4	4	16	77	101
88.	Hindustan Inst. of Tech. & Science, Kancheepuram	65	55	34	160	314	65	55	34	161	315
89.	Karunya Inst. of Tech. & Sc., Coimbatore	52	34	0	371	457	52	34	0	371	457
90.	Manonmaniam Sundaranar University, Tirunelveli	16	35	0	83	134	33	35	3	52	123

91.	Mother Teresa Women Univ., Kodaikanal	21	25	56	0	102	2	4	16	26	48
92.	Noorul Islam Center for Higher Education, Kanya Kumari	60	56	8	161	285	60	56	8	161	285
93.	Periyar Maniammai Instt. of Sc.& Tech., Thanjavur	30	21	26	208	285	30	21	26	208	285
94.	SRM Institute of Science & Technology, Chennai	73	73	73	514	733	75	79	136	423	713
95.	T.N. Dr. Ambedkar Law Univ. Chennai	8	9	34	0	51	6	4	18	0	28
96.	T.N. Veterinary & Animal Sciences University, Chennai	49	178	0	40	5632	100	168	0	227	495
97.	Vel Tech Rangarajan Dr. Sagunthala R& D Institute of Sc. & Tech., Chennai	0	0	0	0	0	31	180	0	24	235
	Total	497	576	376	2341	3790	604	791	412	1965	3772
	Tripura										
98.	Institute of Chartered Analysts	8	4	12	65	89	4	0	8	55	67
	Total	8	4	12	65	89	4	0	8	55	67
	Uttar Pradesh										
99.	Dayalbagh Educational Institute, Agra	6	28	0	172	206	64	70	14	44	192
100.	Integral University, Lucknow	25	62	0	210	297	8	5	121	93	227

101.	Jagatguru Ram Bhadracharya Handicapped University, Chitrakoot	14	29	0	65	108	3	1	0	34	38
102.	UP King George's University of Dental Science, Lucknow	15	30	0	60	105	8	15	0	52	75
	Total	60	149	0	507	716	83	91	135	223	532
103.	Uttarakhand										
104.	Doon University, Dehradun	8	16	0	24	48	2	0	0	7	9
105.	G.B. Pant University of Agriculture & Technology, Pantnagar	110	286	0	674	1070	48	145	0	375	568
106.	Gurukul Kangri University, Haridwar	14	22	0	76	112	8	20	0	64	92
	Total	132	324	0	774	1234	58	165	0	446	669
	West Bengal										
107.	Bengal Engineering & Sc. University, Howrah	43	95	0	138	276	84	64	0	72	220
108.	Kalyani University, Kalyani	27	57	0	168	252	80	52	0	59	191
109.	West Bengal State University, Barasat	32	43	0	86	161	4	27	65	0	96
	Total	102	195	0	392	689	168	143	65	131	107
	Grand Total	2733	4554	3344	9524	20155	2681	3686	3465	5874	15706

ANNEXURE 3(VI)

Statement of Teaching Sanctioned Staff Strength, Non-Teaching Sanctioned Staff Strength, students enrollment, teacher student ratio & TEACHER-NON-TEACHING STAFF RATION (AS ON 1.3.2010)

S. No	Name of University	Sanctioned Teaching Position (As on 1.3.2010)					Sanctioned Non-Teaching Position (As on 1.3.2010)						Students Enrollment (As on 1.3.2010)						Teacher Student Ratio	Teaching NON-Teaching Staff Ratio
		Professor	Reader	Lecturer	Others	Total	Group A	Group B	Group C	Group D	Others	Total	Diploma/Certificate	U.G	P.G	M.Phil / M.Tech	Ph.D	Total		
1	2	3					4						5						6	7
1	Aligarh Muslim University	172	355	860	0	1378	170	606	2167	3072	0	6015	2157	10995	3048	421	1333	17954	1:12.94	1:4.34
2	Banaras Hindu University	347	680	1368	0	2395	231	297	3127	3568	0	7223	213	10500	5286	0	2605	18604	1:7.77	1:3.02
3	Delhi University	307	654	691	0	1652	185	520	1257	1077	134	3173	3054	284	11145	586	3172	18241	1:11.04	1:1.92
4	Hyderabad University	106	221	214	0	514	87	195	426	629	0	1337	42	0	1827	520	1037	3426	1:6.33	1:2.47
5	Jamila Millia Islamia	113	176	434	47	770	65	59	645	447	0	1216	2953	6936	2632	124	1129	13774	1:17.89	1:1.58
6	Jawaharlal Nehru University	165	287	271	0	723	102	144	646	626	0	1518	0	728	1598	0	3699	6025	1:8.33	1:2.10
7	North Eastern Hill University	88	133	186	0	407	67	121	504	325	0	1017	74	512	1839	36	603	3064	1:7.53	1:2.50
8	Pondicherry University	69	138	253	0	460	67	65	298	228	0	658	2	0	1984	289	462	2737	1:5.95	1:1.43
9	Visva Bharati	62	128	359	163	712	85	109	642	878	0	1714	963	2278	1515	27	200	4983	1:7.00	1:2.41
10	Assam University	32	94	199	0	325	23	37	162	66	0	288	36	695	1342	165	237	2475	1:7.62	1:0.89
11	Tezpur University	47	64	119	0	230	39	25	116	74	0	254	22	259	812	0	223	1316	1:5.72	1:1.10
12	Nagaland University	32	59	120	5	216	37	84	229	261	0	611	0	360	835	14	206	1415	1:6.55	1:2.83
13	Mizoram University	43	67	228	0	338	40	80	384	0	0	504	0	0	681	0	115	796	1:2.36	1:1.49
14	BabaSaheb Bhimrao Ambedkar University	22	43	65	0	130	17	8	53	28	0	106	0	0	754	15	229	998	1:7.68	1:0.82

15	Mahatama Gandhi	16	10	43	0	69	13	9	46	23	0	91	0	0	92	67	99	258	1:3.74	1:1.32
16	Maulana Azad National Urdu University	35	58	155	15	263	48	80	169	84	0	381	530	154	549	90	35	1358	1:5.16	1:1.45
17	Allahabad University	59	151	330	0	540	55	16	613	654	0	1338	659	7674	4456	21	1547	14357	1:26.59	1:2.48
18	Manipur University	35	81	141	3	260	35	25	236	119	0	415	0	0	1565	98	950	2613	1:10.05	1:1.60
19	Rajiv Gandhi University	16	31	95	0	142	20	49	85	78	0	232	149	0	4332	15	40	636	1:4.48	1:1.63
20	The English & Foreign Language University	32	60	145	0	237	42	101	184	106	0	433	989	241	209	162	106	1707	1:7.02	1:1.83
21	Tripura University	17	29	57	0	103	20	14	75	42	0	151								
22	H.N.B. Garhwal University	29	55	243	41	368	17	55	392	378	0	842	31	321	1588	12	127	2079	1:20.18	1:1.47
23	Guru Ghasidas University	38	63	137	2	240	50	41	351	192	0	634	120	5826	2084	28	343	8401	1:22.83	1:2.29
24	Dr. Harisingh University	50	92	178	4	324	32	159	456	442	0	1089	118	1982	713	124	314	3251	1:13.55	1:2.64
	Total	1932	3729	6891	280	12832	1547	2899	13263	13397	134	31240	12224	55934	48628	2939	19377	139102	1:10.84	1:24.43
25	University College of Medical Sciences	31	55	97	105	288	20	9	259	202	0	490	0	628	151	0	27	806	1:2.80	1:1.70
	Grand Total	1963	3784	6988	358	13120	1567	2908	13522	13599	134	31730	12224	56562	48779	2939	19404	139908	1:10.66	1:2.42

New appraisal system based on scores for Academic Performance Indicators (API) as recommended by Prof. S.P. Thyagarajan Committee

CATEGORY I: TEACHING, LEARNING AND EVALUATION RELATED ACTIVITIES

Brief Explanation: Based on the teacher's self-assessment (and also student feedback, wherever applicable), API scores are proposed for (a) teaching related activities; (b) domain knowledge; (c) participation in examination and evaluation; (d) contribution to innovative teaching, new courses etc. The minimum API score required by teachers from this category is 75. The assessment should be based on objectively verifiable criteria wherever possible and should be finalized by a core committee for every institution comprising of at least five senior teachers. Universities will be required to detail the activities and in case institutional specificities require, adjust the weightages, without changing the minimum total API scores required under this category.

S. No.	Nature of Activity	Maximum Score
1.	Lectures, seminars, tutorials, practicals, contact hours	
	undertaken taken as percentage of lectures allocated ^a	50
2.	Lectures or other teaching duties in excess of the	
	UGC norms	10
3.	Preparation and Imparting of knowledge / instruction	
	as per curriculum; syllabus enrichment by providing additional resources to students	
	(i) Self Assessment	10
	(ii) Student Feedback	10

4.	Use of participatory and innovative teaching-learning methodologies; updating of subject content, course improvement etc. (i) Self Assessment (ii) Student feedback	15 05
5.	Examination duties (Invigilation; question paper setting, evaluation/assessment of answer scripts) as per allotment.	25
	Total Score	125
	Minimum API Score Required per year	75

Note: ^a Lectures and tutorials allocation to add up to the UGC norm for particular category of teacher. University may prescribe minimum cut-off (net of due leave), say 80 %, for 1 and 5 above, below which no scores may be assigned in these sub-categories.

CATEGORY II: CO-CURRICULAR, EXTENSION AND PROFESSIONAL DEVELOPMENT RELATED ACTIVITIES

Brief Explanation: Based on the teacher's self-assessment (and also student feedback, wherever applicable) category II API scores are proposed for co-curricular and extension activities; and Professional development related contributions. The minimum API required by teachers per year is 15. A list of items and proposed scores is given below. It will be noticed that all teachers can earn scores from a number of items, whereas some activities will be carried out only by one or a few teachers. The list of activities is broad enough for the minimum API score required (15) in this category to accrue to all teachers. As before, the assessment score should be based on objectively verifiable criteria and will be finalized by the core committee for every institution comprising of at least five senior teachers

The model table below gives groups of activities and API scores. Universities may detail the activities or, in case institutional specificities require, adjust the weightages, without changing the minimum total API scores required under this category.

S. No.	Nature of Activity	Maximum Score
1	Student related co-curricular, extension and field based activities (such as extension work through NSS/NCC and other channels, cultural activities, subject related events, advisement and counselling)	
	(i) Self Assessment	10
	(ii) Student feedback	10
2	Contribution to Corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities.	15
3	Professional Development activities (such as participation in seminars, conferences, short term, training courses, talks, lectures, membership of associations, dissemination and general articles, not covered in Category III below)	15
	Minimum API Score Required per year	15

CATEGORY-III: RESEARCH AND ACADEMIC CONTRIBUTIONS

Brief Explanation: Based on the teacher's self-assessment, API scores are proposed for research and academic contributions. The self-assessment score will be based on verifiable criteria and will be finalized by the core committee comprising of five senior teachers of the institution.

S No.		Max. points for University and college teacher position	
III A	Research Papers published in	Refereed Journals *	15 / publication
		Non-refereed but recognized and reputable journals and periodicals, having ISBN/ISSN numbers.	10 / Publication.
		Conference proceedings as full papers, etc. (Abstracts not to be included)	10/ publication.

III (B)	R e s e a r c h Publications (books, chapters in books, other than referred journal articles)	Text or Reference Books Published by International Publishers with an established peer review system.	50/ books; and 10/ chapter in an edited book.
		Text or Reference Books Published by International Publishers with an established peer review system.	25/ book ; and 5/ chapter in edited books.
		Subjects Books by National level publishers/State and Central Govt. Publications with ISBN/ISSN numbers.	15/ book ; and 3/ chapter in edited books.
		Subject Books by Other local publishers with ISBN/ISSN numbers.	

III (C) RESEARCH PROJECTS

(i)	Sponsored Projects carried out/ongoing	Major Projects amount mobilized with grants above ₹30.0 (5.0) lakhs +	20 for each Project in the year of award and 10 per year for the approved duration.
		Major Projects amount mobilized with grants above ₹ 5.0 (3.0) lakhs up to ₹ 30.00 (5.0) lakhs +	15 for each Project in the year of award and 7.5 per year for the approved duration.
		Minor Projects (Amount mobilized with grants above ₹ 50,000 (25,000) up to ₹ 5 (3) lakh) +	10 for each Project in the year of award and 5 per year for the approved duration.
(ii)	Consultancy Projects carried out/ongoing	Amount mobilized with minimum of ₹10.00 lakh(2 lakhs) +	10 per every ₹10 (2) lakhs + received during the year.
(iii)	Projects Outcome/ Outputs	Patent/Technology transfer/ Product/ Process/ Major Policy document of Govt. bodies at Central and State level.	30 / each national level output or patent /50 / each for International level.

III (D) RESEARCH GUIDANCE

(i)	M.Phil	i) Registered for Degree ii) Degree awarded	3 per candidate (for almost 1 year) 5 per candidate
(ii)	Ph.D	i) Registered for Degree ii) Degree awarded	5 per candidate per year (for almost 3 years) 10 per candidate

III (E) TRAINING COURSES AND CONFERENCE/SEMINAR/WORKSHOP PAPERS

(i)	Refresher courses, Methodology workshops, training, teaching-learning	Not less than two weeks duration One week duration	20 per course organized & 10 per attended 10/each course organized & 5 per attended
(ii)	Papers in Conferences/ Seminars/Workshops etc.**	Participation and Presentation of research papers (oral/poster) in	
		International conference	10 each
		National	7.5 each
		Regional/State level	5 each
		Local –University / College level	3 each
(iii)	Invited lectures or presentations for conferences/symposia	International	10 each
		National level	5 each

*Wherever relevant to any specific discipline, the API score for paper in refereed journal would be augmented as follows: (i) indexed journals – by 5 points; (ii) papers with impact factor between 1 and 2 by 10 points; (iii) papers with impact factor between 2 and 5 by 15 points; (iv) papers with impact factor between 5 and 10 by 25 points.

** If a paper presented in Conference/Seminar is published in the form of Proceedings, the points would accrue for the publication (III (a)) and not under presentation (III (e) (ii)). Also if the teacher has organized the conference at the levels indicated, his/her Weight age points will be doubled.



ज्ञान-विज्ञान विमुक्तये

UNIVERSITY GRANTS COMMISSION

TASK FORCE ON FACULTY SHORTAGE AND DESIGN OF PERFORMANCE APPRAISAL SYSTEMS APPOINTED BY THE MHRD

Questionnaire to be sent to universities/institutions for collection of data on
faculty shortage and performance appraisal.

PART-I

I. Basic Data

1. Name of the university/institution
2. Mailing Address
3. Affiliation(in case of colleges affiliated to a university)
4. Website
5. Location (please tick the appropriate box in all such questions)
Urban Rural Semi-Urban
6. Type of institution

Central University	State University	Deemed University	Private University	IIT	IIM	NIT	IISER IIIT	Others
-----------------------	---------------------	----------------------	-----------------------	-----	-----	-----	---------------	--------

II. Details of faculty positions in the university/institution

1. Please indicate the faculty position as under:

Posts	Sanctioned			Filled Up			Vacant Posts								
	Permanent	Temporary		Permanent	Temporary		Permanent	Temporary							
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Professor															
Associate Professor/Reader															
Asstt. Professor/Lecturer															

2. Please indicate the representation of socially marginalized groups in faculty

Posts	SC	ST	OBC	Minority	Percentage	Total
Professor						
Associate Professor/Reader						
Asstt. Professor/Lecturer						

3. Has a ban been imposed on filling up of vacant positions of faculty in your university/institution? Yes No

4. If yes, since when (mention the year)
Also, give the reference of relevant documents, if available.
-

5. When was the last recruitment of faculty made in your institution (give the year of recruitment)?

III. Service Conditions of faculty members.

1. What is the age of superannuation of faculty in your university/ institution
2. Is there a provision for reemployment of superannuated teachers ?
Yes No
3. If yes, for how many years
4. Are there any superannuated teachers reemployed in your university/institution at present? Yes No
5. If yes, how many
6. Are there any permanent teachers in your university/institution who are not drawing the latest scales of pay recommended by UGC/AICTE/Other Statutory Organization? Yes No
7. If yes, the reasons thereof _____

8. Does your Institute provide other perks or benefits?
Yes No

9. If yes, then are these following:
- i) Housing
 - ii) Medical
 - iii) Gratuity/PF/Pension
 - iv) any other
10. Do you provide financial incentive to the faculty in addition to the latest recommended scales of pay? Yes No
11. Give the number of non-permanent teachers employed in your university/institution at present.
- Ad-hoc Temporary Contractual
- Guest Faculty Honorary
12. How many of these are working against permanent positions lying vacant?
13. Since when have they been working against these posts?

IV. Cadre ratio and Teacher-Student ratio

1. Do you follow a fixed cadre ratio? Yes No
2. If yes, what is the sanctioned cadre ratio of Professor: Associate Professor/Reader: Asstt. Professor/Lecturer
-
3. What is the approved ratio between teachers and students in your university/institution? Teacher : Student
- UG 1 :
- UG 1 :

V. Recruitment of Faculty

1. Does your university/institution adhere to the minimum qualifications including NET/SLET as laid down by the UGC or other Statutory Council for the recruitment of teachers?

Yes No

2. If No, the reasons thereof _____
- _____

3. Does your university/institution recruit faculty as per the procedures laid down by the UGC/Affiliating Council?

Yes No

4. If No, the reasons thereof--- _____
- _____

5. What is the procedure followed by your university/institution for appointing contractual teachers:

- (i) Through duly constituted selection committee
(ii) Directly appointed by the university

VI. Faculty Quality Enhancement

1. What is the annual research budget of your institute? _____

2. What is the amount of annual field grant? _____

3. Does your Institute have any training program for the faculty?

Yes No

4. If yes, the details thereof _____

5. Does your Institute have any externally funded program of study? Yes No
6. If yes, the details thereof _____
7. Does your Institute provide support to the faculty for organizing/ participation in seminar and conferences?
Yes No
8. If yes, the annual amount allocated for each of the following
- i) Organizing seminar/conferences
 - a) International
 - b) National
 - ii) Participation in seminar/conferences
 - a) International
 - b) National

VII. Mobility of Teachers

1. How many teachers have left your university/institution during the last 5 years?
2. Other Universities/Educational Institutions
Public Sector Private Sector/Industry
3. From among the various academic disciplines, which disciplines has seen the highest exodus of teachers from your university/institution? Please enumerate your rankings below, giving 1 for the highest and 2,3,4, etc.
- Arts Science Commerce
- Education Engg. /Tech Architecture

- Medicine Pharmacy Dentistry
 Law Management Agriculture
 Others

4. Which level of faculty has seen the highest exodus?
 Professor Associate Professor/Reader
 Assistant Professor/Lecturer

5. Has your university/institution taken any measures to retain the faculty?
 Yes No

6. If yes, the details thereof may be given.
 What measures, according to you, can be taken to retain the faculty in your university/institution?

VIII. Performance Appraisal of Faculty

1. Does your university/institution have a scheme for Annual Performance Appraisal of faculty members? Yes No

If yes, a copy may be enclosed.

2. Does it include performance appraisal of faculty by students?
 Yes No

If yes, a copy may be enclosed.

3. Does your university/institution have a Career Advancement Scheme (CAS) for faculty at various levels? Yes No

4. Is it the same scheme as recommended by the UGC or concerned statutory Council?
Yes No

If no, the details of the scheme may be given _____

5. Does your university/institution adhere strictly to the Performance Appraisal Norms for promotion of faculty as laid down by the UGC or concerned Statutory Council? Yes No

If no, the reasons thereof _____

6. Does your university have a performance based 'Best teachers Award'?

If yes, the details of the scheme may be given.

PART -B

Institutional Perception

I Demand Trends

1. Total No. of students admitted every year to the various disciplines _____

2. Which disciplines are more in demand? List the three most demanded by the students during the last 5 years.
 - i) No. of applications received No.of students admitted
 - ii) No. of application received No.of students admitted
 - iii) No. of applications received No.of students admitted

3. What is the cut off point/percentage for each of these disciplines during the last 5 years?
 - i) _____(2006) _____(2007) _____(2008)_____(2009) _____ 2010
 - ii) _____(2006) _____(2007) _____(2008)_____(2009) _____ 2010
 - iii) _____(2006) _____(2007) _____(2008)_____(2009) _____ 2010

II. Innovation in Education Quality

1. Have any new program of study being introduced by your institution during the last five years? Yes No

2. If yes, the details there of _____

3. Does your institute have a doctoral program of study?

Yes No

4. If yes, the details of various disciplines in which the doctoral program exists, together with the no. of students admitted to each every year for the last 5 years.

5. What is the no. of teachers approved as research guides for M.Phil and Ph.D ? _____

6. Does your institute provide courses relating to vocational education? Yes No

If yes, the details thereof _____

III. Institutional Dimensions

1. Does your institute have collaboration with other institutions?

Yes No

2. If yes, is it with i) other Govt. Institutions ii) Private Academic Institutions iii) Industries iv) Corporate Sector

3. Is your institution is part of any larger academic network?

Yes No

4. Does your Institution have a Vision Document?

Yes No

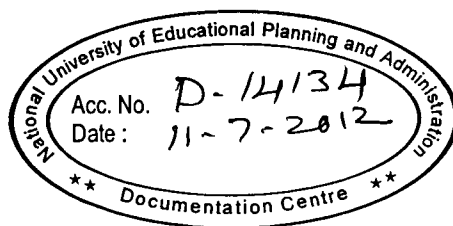
5. If yes, when it was last revised? _____

6. What is your perception of constraints on faculty recruitment?

7. Who /what do you think is responsible for faculty shortage?

8. How important is the role of faculty shortage in the imparting of quality education?

9. Where, according to you, is a competition to quality education being imparted by the institutions like yours, coming from? Name the sector (Private colleges / universities / foreign universities, industries / corporate sector etc.)



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