

REPORT OF THE WORKING GROUP ON UNDERGRADUATE EDUCATION

Preface

The National Knowledge Commission constituted a Working Group on Undergraduate Education to identify constraints, problems and challenges relating to curriculum, teaching, infrastructure, administration and access and to suggest means of raising standards and promoting excellence in undergraduate education.

Colleges, affiliated and constituent, form the backbone of the undergraduate education system in India. At present, there are approximately 17,625 colleges and 348 universities with an enrolment of roughly 10.48 lac students in affiliated colleges and universities (Source: University Grants Commission). Approximately, 8% of the relevant age group is enrolled in higher education, which is very low as compared to other developing and developed countries. If we have to move towards a knowledge economy and society, we need to revisit the prevailing model of undergraduate colleges in terms of quantity as well as quality. It is widely recognized that colleges in different parts of the country are of varying standards with indeed a few which can compete with the best, internationally. However, with honesty one should also accept that the vast majority only serve the needs of “academic squatters.”

The identity of colleges as a distinct space has been lost sight of. Their purpose of initiating students into life long learning and skill building has been sidelined to give primacy to churning out degrees. Most undergraduate colleges suffer from a paralysis of inaction – stifled by excessive regulations and outmoded procedures, lack of resources and lack of incentives to change. They continue to merely exist.

India faces today two exciting challenges in Higher Education: to increase the access to higher education and to provide educational institutions of academic excellence. It may seem that these are contradictory challenges and that we can only address one of them at a time. However, the Working Group feels that neither challenge can be sacrificed for the other. They need simultaneous attention and given our resources and possibilities, both can be addressed effectively. Government funding of education and, in particular higher education, needs to increase. However, private and corporate funding for education cannot be avoided given the immense task ahead.

The challenge before the members of the group was to examine alternative models which could work towards academic excellence, without creating only islands of excellence. The challenge was to examine diversity rather than uniformity. The challenge was to increase access to higher education to meet the needs of school leavers, without compromising on standards. The challenge also

was to look for parallel systems which can equip students with learning skills as well as equip them with the means of earning a livelihood.

My colleagues in the Working Group have all had a long and committed engagement with undergraduate education, having taught or headed colleges in different parts of the country. They enriched the discussion with their varied experiences, shared concerns and a vision shaped by the desire to liberate institutions to work creatively, and be responsive to the changing needs of society.

The young and enthusiastic Research Team lead by Kaushik Barua and Mitakshara Kumari were ever helpful and provided excellent back-up.

**Working Group on Undergraduate Education,
National Knowledge Commission
July 6, 2006, New Delhi**





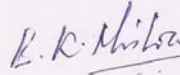

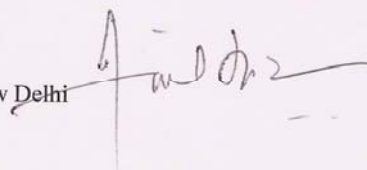
1. **Dr. Kiran Datar** (Chairperson)
Advisor, Delhi University 
2. **Dr. S.K. Garg** (Member)
Principal, Deen Dayal Upadhyaya College, Delhi 
3. **Dr. Meenakshi Gopinath** (Member)
Principal, Lady Sri Ram College, Delhi 
4. **Dr. Frazer Mascarenhas** (Member)
Principal, St. Xavier's College, Mumbai 
5. **Dr. B.K. Mishra** (Member)
Dept. of Geology, Science College, Patna 
6. **Prof. Prasanta Ray** (Member)
Formerly of Presidency College, Kolkata 
7. **Dr. Anil Wilson** (Member)
Principal, St. Stephen's College, New Delhi 

TABLE OF CONTENTS

Terms of Reference and Composition of Working Group	4
Preamble	5
1. Diversity	7
2. Access	13
3. Infrastructure	16
4. Governance	18
5. Public Private Partnerships	21
6. Curriculum	23
7. Examinations	25
8. Teachers and Teaching	26
Annexure: Data pertaining to undergraduate education	30

10 February 2006

Working Group on Undergraduate Education

The National Knowledge Commission (NKC) was set up by the Prime Minister of India in 2005, under the Chairpersonship of Mr. Sam Pitroda, to recommend and undertake reforms that will put India firmly on the path to becoming a strong and vibrant knowledge economy in the coming years. One of the main issues covered by the NKC is university reform, including undergraduate education.

In order to arrive at concrete proposals for reform in this area, the NKC has constituted a Working Group on Undergraduate Education, with the following terms of reference.

1. Identify constraints, problems and challenges relating to curriculum, teaching, infrastructure, administration, and access.
2. Recommend changes and reforms to address the problems and challenges relating to curriculum, teaching, infrastructure, administration, and access.
3. Explore possibilities for innovation in teaching methods, curriculum development and research opportunities.
4. Suggest means of raising standards and promoting excellence in undergraduate education.
5. Examine any other issues that may be relevant in this context.

The composition of the group is as follows:

1. **Dr. Kiran Datar** (Chairperson)
Advisor, Delhi University
2. **Dr. S.K. Garg** (Member)
Principal, Deen Dayal Upadhyaya College, Delhi
3. **Dr. Meenakshi Gopinath** (Member)
Principal, Lady Sri Ram College, Delhi
4. **Dr. Fraser Mascarenhas** (Member)
Principal, St. Xavier's College, Mumbai
5. **Dr. B.K. Mishra** (Member)
Dept. of Geology, Science College, Patna
6. **Prof. Prasanta Ray** (Member)
Formerly of Presidency College, Kolkata
7. **Dr. Anil Wilson** (Member)
Principal, St. Stephen's College, New Delhi

Undergraduate Education: Towards Excellence
Working Group on Undergraduate Education
National Knowledge Commission

Preamble

Colleges form the backbone of Higher Education in India since 88% of undergraduate education and 56% of post-graduate education is imparted through colleges with approximately 83.37% of the teachers being concentrated in colleges.

The structure of undergraduate education in India is broadly similar all over the country, following the pattern of a three year programme. The UGC has formulated Regulations for the recognition of colleges under Section 2(f) of the UGC Act, 1956 as per the powers contained in Section 26(1)(d) of the UGC Act, 1956 on 12th July 1974. The UGC also included colleges under Section 12(b) of its Act in terms of Rules framed under the Act. This makes the colleges available for central assistance from the central Government, or any other organization receiving funds from the central Government (see Tables 1, 2 and 3 in Annexure).

The majority of undergraduate colleges are affiliated or constituent, with a few autonomous colleges. There are currently about 200 autonomous colleges and over 17,000 affiliated colleges in 131 affiliating universities. 89% of the total enrolment is in the affiliated colleges. However the levels of performance and academic excellence vary greatly. A few colleges are nationally and internationally renowned, while the majority of colleges unfortunately barely survive as teaching shops.

Undergraduate education in India is primarily disseminated through affiliated colleges, many of which are marginally better than higher secondary schools. They do not have adequate infrastructure or libraries worth the name. Most of them have a poor student-teacher ratio and the number of faculty with doctoral qualifications is pitifully low or nil in many cases. The institutions of higher learning often perform only classroom teaching, preparing students for examinations like tutorial colleges. The standards and quality of governance vary considerably in terms of internal administration and performance and interface with the external environment.

Except for the autonomous colleges, which have the flexibility to introduce new courses and review curriculum, all colleges suffer from the rigidities of affiliation procedures and the lack of autonomy to innovate. Most undergraduate colleges have internalized the ‘minimum levels of learning’ approach that characterizes much of the orientation towards undergraduate education. The majority of colleges replicate a set pattern of curricula, broadly described as the BA (Bachelor of Arts) with specialization in some subjects. The particularities and special needs of geographical location or a changing environment are not kept in mind. We need a pluralized model of the educational system.

Affiliation procedures place constraints on innovation and creativity and many colleges are forced to work around the system to offer short term courses, or skill based courses, without university certification. University procedures for changes in syllabi and curriculum and introduction of new courses are long and cumbersome, resulting in the status quo being maintained over a length of time. Rigid course structures prevent colleges from responding to diverse and emergent needs of the student community and society.

It is necessary to recognize that colleges are diverse and should ideally be responding to diverse needs, depending on location, and the needs of the community. Many colleges are constrained by historical development, inadequacy of infrastructure and financial support, political environment and quality of governance. Given their constraints and geographic location, all colleges cannot meet the same levels of academic excellence or serve the same needs. A rapidly changing material and global environment has resulted in changing patterns of employment and communication. Higher education will need to meet the challenges of creating space for such diversity within the structure and curriculum,

It would be desirable to accept the diversity instead of duplicating the existing framework, and to explore different models which can co-exist, meeting the varied needs of a diversified and expanding student population.

Recommendations

Explanatory Note: We choose to make our comments and recommendations in the point format, so as to be clear and concise, avoiding a multiplicity of words, yet highlighting the practical changes needed urgently. In each area, we have identified specific constraints and the recommendations that would address these bottlenecks. We are also conscious of the fact that we are dealing with a large country and diverse types of institutions and communities. Therefore we aim to be indicative rather than prescriptive.

1. Diversity:

One size does not fit all.

We need to review the existing model of providing undergraduate education to meet the emergent needs of a knowledge society and the divergent requirements of the student community.

We do not need replication of the same model but diverse models of providing higher education. With the emerging divergent needs of the student community, such institutional diversity will better serve the student community.

Most undergraduate colleges have internalized the ‘minimum levels of learning’ approach that characterizes much of the orientation towards primary education. All colleges replicate a set pattern of curricula broadly described as the Bachelor of Arts/ Sciences/ Commerce, with early specialization in some subjects. The particularities and the needs of geographical location and clientele are not kept in mind when setting up a college.

The colleges need a graded series of experiments without unnecessarily hierarchizing them. We need a pluralized model of the education system. Again, it is neither in privileging sciences over the liberal arts or in becoming a supermarket for subjects and courses, that the identity of the undergraduate college is redeemed. It is in its ability to be not just syllabi centred but in generating alternative ways of Being and Seeing that the college fills an important gap in the continuum of knowledge and skills. Colleges must provide a context for an intellectual hospitality for encouraging the colliding and flux of ideas, as a panacea for homogeneity or closure or fixed positions. This is its democratic mandate.

The plurality of knowledge systems is best respected in a commitment to multidisciplinary where understandings of science, literature, culture, philosophy and the social sciences cohere to provide a non-compartmentalized context for integrated learning.

1.1 Constraints:

- **Duplication of the same course structure does not enable colleges to respond to diverse and emergent needs of the student community and society at large.**
- **In the absence of community colleges or other viable alternatives, most students are compelled to pursue the conventional courses in degree colleges. Short-term skill-based courses are almost a non-entity in our educational institutions. Thus increasing numbers of students are looking for other viable options including going abroad for undergraduate education. (see Table 4- currently Table 9 in the annexure)**
- **Colleges are constrained by affiliation procedures in timely responses to initiation of new courses and revision of syllabi.**
- **Generally, colleges are not allowed by universities and other regulatory bodies to start any course of unconventional design.**

1.2 Recommendations:

- **Since all colleges can not be brought to the same level of excellence overnight, diversity in college types has to be accepted keeping in mind the needs of locale and clientele. Within this broad framework there could be room for a 2 year community college type program with skill development emphasis, a 3 year Arts or Science program, or a 4 year professional degree program with mobility possible between programs. Ideally colleges should present a mix of these programs. (The modalities of these would need to be worked out by an expert committee)**

The restructuring of colleges that has been indicated below will encourage institutional diversity and help to build excellence in the system.

Type 1: Autonomous Colleges: Self-Governing Colleges for Capacity Building

Model 1

- **Colleges with a proven record of academic excellence should be granted academic self-governance.**
- **Existing affiliated or constituent colleges should be granted autonomy in phases after due assessment by professional accreditation bodies.**
- **The post of professors should be created in autonomous colleges.**
- **Autonomous colleges should be granted university status on the fulfillment of stated criteria of academic and administrative performance.**
- **A review of performance (peer review, students' review, and review by an outside agency) should be institutionalized.**
- **The college authorities should be given financial autonomy with regard to internal allocation of resources and to raise resources within the broad parameters of transparency and accountability.**
- **Colleges should be allowed to avail of funding by public agencies as well as private funding particularly for the creation of a corpus fund within guidelines of transparency and accountability.**
- **Colleges to have the freedom to adopt procedures of admission, based on fair and transparent criteria.**
- **A minimum number of non-transferable teaching positions must be safeguarded in autonomous colleges.**
- **Curricula setting and evaluation work should be participatory.**
- **Eminent scholars should be associated with both curricula setting and evaluation.**
- **Proper attention should be paid to available teaching expertise and feasibility of collaboration with appropriate institutions at the time of curricula setting to eliminate the possibility of an unviable curriculum.**
- **There should be a regular assessment of performance of self-regulating colleges by some accreditation body/ bodies.**

Model 2

- **Academic autonomy may be granted to a cluster of territorially contiguous/commutable colleges, a maximum of 10 and a minimum of 5 colleges, with one college acting as the coordinating college, along with a representative body of teachers from the**

- cluster colleges; the status of the coordinating college to be based on the principle of rotation.
- A mechanism for the administration of courses across colleges and for the resolution of problems should be institutionalized with provision for democratic representation in committees.
 - The colleges in a cluster would share resources.
 - Students should be allowed to study courses offered by colleges in a cluster, on the basis of the credit system.
 - Not all colleges in a cluster should teach the same subject.
 - Curricula setting and evaluation should be participatory.
 - Eminent scholars should be associated with both curricula setting and evaluation.
 - Proper attention should be paid to available teaching expertise and feasibility of collaboration with appropriate institutions at the time of curricula setting to eliminate the possibility of an unviable curriculum.
 - A review of performance should be institutionalized.
 - College authorities should be granted financial autonomy with regard to internal allocation of resources and to raising resources within the broad parameters of transparency and accountability.
 - Colleges should be allowed to avail of funding by public agencies like the Education Department of state governments and the UGC, combined with private funding with public control.
 - The scope for local/community funding should be explored within well-defined parameters.

Broad guidelines to set criteria for judging whether colleges are suitable for the status of autonomy, be it a single college or a cluster(s) of colleges:

The following aspects must be taken into consideration for granting the status of *autonomy*:

- A critical minimum number of faculty and disciplines essential for inter-disciplinary teaching and research.
- The introduction of new/ innovative courses
- A minimum number of postgraduate departments.

- **In the case of government colleges, a minimum number of non-transferable faculty positions.**
- **Governance in the hands of an appropriate body, depending on the type of college, and including representatives from the university, the college, members of civil society, and industry.**
- **The track record of the institution (results of students in university exams, research and research publications of the faculty in refereed journals)**
- **The profile of teachers (research work, seminars/conferences attended, innovative teaching practices, participation in corporate life of the institution.)**
- **Evidence of administrative competence in the following areas:**
 - **The utilization of grants/ percentage of grants returned**
 - **The regularity of audits**
 - **The office size**
 - **The degree of computerization/ use of ICT**
 - **Account maintenance**
 - **Library holdings**
 - **Laboratories**
 - **Linkages with other universities**
 - **Good practices**
 - **The contribution to university processes of the institution as well as of individual teachers**
- **Placement records**
- **The involvement in community**
- **Accreditation through a recognized body/ bodies (having other accreditation agencies will create helpful competition and make assessment itself more rigorous)**

The different criteria should be assigned different weightages and an overall index should be developed to assess the

suitability of a college for the status of Autonomous Affiliated Colleges.

Type 2: Non-autonomous Affiliated colleges:

Constraints:

- **The large size of affiliating universities hinders speedy and effective decision-making.**
- **Excessive control from the affiliating university over the affiliated colleges hampers the latter's desired growth and development.**
- **The affiliating universities, due to cumbersome statutory provisions, seldom take initiative to modernize syllabi and undertake examination reform.**
- **Syllabi are not revised frequently because of 'pressure' of the average and below-average colleges.**
- **Most affiliated colleges are victims of inefficient governance.**
- **More often than not, there is political control/interference in management, recruitment of teachers and admission, leading to dilution of academic standards.**
- **The lack of transparency in the functioning of most affiliated colleges not only adversely affects the work culture but also gives rise to unwarranted confrontations amongst the stake holders.**

Recommendations:

- **The size of the existing large universities needs to be reduced.**
- **More new universities need to be set up to share the burden of affiliated colleges. By an approximate estimate, 2500-3000 new universities should be set up by the year 2020, each having a maximum of 25 affiliated colleges and 50,000 students.**
- **The affiliating university should initiate curriculum revision every 3-5 years and continuously engage with examination reform.**
- **Examinations should be decentralized with a view to ensuring fairness and timely publication of results.**
- **Colleges should be encouraged to collaborate on resource sharing.**
- **Substandard colleges should not be allowed to continue indefinitely. Performance indicators must be put in place and if colleges are not able to achieve minimum standards over a period**

- of time, say 3 years, they should be reconstituted as junior colleges offering skill-based diploma courses or associate degrees of 2 years duration.
- The government must formulate clear-cut guidelines for granting affiliation to new colleges which should provide, among others, the minimum academic standards and facilities required in each institution.

2. Access:

Securing social justice for a greater number of learners requires the present state of access to be reexamined in terms of opportunities, enrolment and physical access.

Opportunities for access must extend to not only a greater number of students but also to marginal groups. To ensure social justice to a greater number, opportunities for access are to be increased. In terms of enrolment, we should target a rise from 8% to 20%.

There should not be replication of the same degrees and structures but there should be diversity in the structures for providing undergraduate education. Access also needs to be viewed at three levels- providing meaningful and relevant education for larger numbers of students, focusing attention on marginalized students, and enhancing access on a purely physical basis. (For government spending on education, overall and on a per student basis see Tables 5 and 6. For educational levels across different social groups see Table 7)

2.1 Constraints:

- Processes and procedures for opening new colleges are so lengthy and cumbersome that they deter new entrants and do not provide the necessary environment for growth. Excessive bureaucratic regulations at the entry point hampers growth and has resulted in a situation where only a few government institutions are being added along with many unwanted and undesirable private players.

- **The insufficient number of good colleges in different regions fails to cope with the ever-increasing number of education seekers.**
- **Colleges lack basic infrastructure like spacious classrooms, libraries, laboratories, playground, and canteens.**
- **Most colleges are still running stereo-typed, conventional courses without providing alternatives and meeting the needs of different kinds of students. There is very little scope for studying new career-oriented courses in most institutions.**
- **Traditional course structures offered by most colleges do not provide the space to many students from financially disadvantaged backgrounds who need to pursue their studies and work simultaneously. The declining utility of traditional courses in the current economic scenario reduces the motivation of students to pursue higher education.**
- **Most colleges do not provide any special assistance, both academic as well as financial, to students belonging to SC, ST, OBC and economically backward categories.**
- **Many girls are unable to pursue higher education owing to lack of girls' colleges in the vicinity.**

2.2 Recommendations:

- **There should be simplified entry regulations for new colleges along with periodic assessment of performance of the new colleges before regularization.**
- **The government needs to make a greater commitment to starting more universities and colleges.**
- **Public private partnerships have to be encouraged and rules and procedures and regulatory issues need to be revisited so as to facilitate new entrants within guidelines of transparency and accountability.**
- **New colleges should be set up after a region-wise survey indicating lack of access in specific regions.**

- **The same model should not be replicated in all areas. Keeping in mind the locale and clientele, and specific needs of the clientele, different types of colleges should be established.**
- **Special attention should be paid to backward areas so as to expand educational opportunities particularly for SC/ST/OBC communities.**
- **Special efforts should be made to increase the enrollment of girl students. Colleges meant exclusively for girls should be opened in rural areas with a view to promoting higher education among women.**
- **The colleges must make provisions for the following:**
 - **Adequate stipends/scholarship/education loans for economically weak students.**
 - **Appropriate student-text book ratio should be ensured in all colleges.**
 - **Subsidized sale of study materials and accessories to students to overcome their financial hardship.**
 - **Preparatory courses for weak students.**
 - **Counseling centers for students at entry point to guide them in choosing the right courses so as to reduce the drop-out rate.**
- **Existing colleges should be allowed to teach in shifts in the same campus with additional teachers offering a bouquet of courses.**
- **A *twinning system* need to be developed to foster linkages between rural college and nearby city-based college for resource sharing, human as well as infrastructure.**
- **Steps should be taken to establish closer links between classroom-based teaching and distance education.**
- **Well-equipped community colleges imparting short-term skill-based courses should be opened both in urban and rural areas.**
- **Technology-enhanced learning through a distance learning mode or a convergence of conventional and distance mode should be a**

major component of delivery of higher education because of its potential of accessing large numbers with relevant state of the art courses.

3. Infra-structure:

Infrastructure development, educational and physical, is necessary for access and excellence. Inadequate and uneven infrastructure, both physical and educational, poses impediments for the teaching learning process.

3.1 Constraints:

- Many colleges lack basic facilities such as adequate classrooms, examination halls, libraries, laboratories, computer centers, auditorium, play grounds, health centers, common rooms and canteens.
- Lack of adequate funds and proper planning inhibits proper infrastructural development in most colleges.
- Lack of qualified and competent office staff and technical personnel leads to improper use of resources.
- The available infrastructure in most colleges is unable to cope with the emergent needs of quality education.

3.2 Recommendations:

- The wide gap in existing infrastructure facilities in different colleges should be minimized. Minimum basic infrastructure must be provided particularly in colleges located in rural and suburban areas.
- Colleges must get adequate financial grant from the government for developing their infrastructure.

- **Financial allocation to colleges should be made on the basis of block grants keeping in mind the individual needs of colleges.**
- **Necessary steps should be taken for optimization of existing infrastructure and sharing of resources. If needed, a centralized pool may be created for utilization of resources by different colleges located in the same region and functioning within the same university.**
- ***Local Area Network (LAN)* facility should be provided in each college for wider and easier dissemination of knowledge. This would facilitate the flow of information to support the teaching-learning process through multimedia material, computer graphics support material, reference material (in print form) and audio material.**
- **Colleges must be enabled to generate sufficient funds both from external agencies and internal sources for augmenting growth and development.**
- **Statutory grants given to colleges must be revised regularly, at least after every five years. New colleges should be given a one-time substantive foundation grant for infrastructural development.**
- **There must be regular auditing of accounts so that colleges are able to derive the full benefit of the funds received /generated.**
- **Appropriate training programs should be put in place for upgrading management skills of heads of institutions and administrative staff for greater efficiency.**
- **Each college should develop its vision plan for the next 10 years and act accordingly.**

4. Governance

University acts, statutes and ordinances which have outlived their times need to be reviewed and revisited and new systems need to be put in place for better governance.

4A.1 Constraints (external):

- **The unmanageable size of most of the affiliating universities creates problems in speedy decision making.**
- **The unwieldy size and composition of the university's statutory bodies like the university court, senate, syndicate , academic council, etc. , which have been given the mandate of taking decisions on academic matters, impedes speedy decision-making.**
- **Most administrators are involved in routine crisis management, getting very little time or resources for long-term management and planning.**
- **Hijacking of the academic agenda by domineering stakeholders in the name of democratization or representation subverts implementation of many schemes of academic excellence.**
- **Excessive politicization proves counter-productive to effective academic functioning, hence inordinate amount of time is spent on routine administrative matters.**
- **Complicated, ineffective and multi-tiered processes and procedures, and the multiplicity of these procedures cause inordinate delay in the academic and administrative tasks of colleges.**
- **Educational institutions are today faced with the task of multi-tasking for which teachers and administrators are ill-prepared.**

4A.2 Recommendations:

- **Affiliating universities should have a maximum of 25 affiliated/ constituent institutions with not more than 50,000 students.**
- **Suitable mechanisms be devised to take action towards reducing the size of existing large universities.**
- **A review should be conducted to examine the size, role and composition of statutory bodies such as Academic Councils, Senates, University Courts and suitable amendments be proposed to make them more effective and meaningful.**
- **The hierarchical structure of the relationship between the universities and colleges should be redesigned to change from paternalistic control to a partnership.**

4B.1 Constraints (internal):

- **Colleges over a period of time have grown in size and in the multiplicity of their functions and roles without a corresponding change in structures of governance.**
- **Outmoded administrative structures are unable to deliver the efficiency needed.**
- **Most colleges lack adequate support systems for their effective administrative functioning.**
- **Democratization without effective accountability has eroded the functioning of academic institutions.**
- **Lack of training in administrative and financial procedures creates obstacles in the smooth functioning of colleges.**
- **Principles of seniority and rotation in matters of appointment of principals or heads of departments have worked against effective performance.**

- **There are neither any incentives for performance nor any sanctions for non-performance among teachers.**
- **Colleges are yet to develop an effective system of obtaining feedback on the performance of teachers and non-teaching staff.**
- **Colleges lack adequate competent administrative staff due to outmoded staffing patterns and recruitment policies.**
- **A mechanical system of promotion of the non-teaching staff is not conducive to efficiency.**
- **Growing politicization of students' unions causes hindrances in effective and peaceful functioning of colleges.**

4B.2 Recommendations:

- **There is an urgent need of a review of administrative structures to meet the current administrative and financial needs of colleges.**
- **Administrative structures should be reviewed to create tiers of accountability.**
- **Necessary steps should be taken for capacity building in terms of training for college officials and administrative staff for effective functioning; Professional inputs should be sought for specialized tasks within the college. Colleges should be encouraged to creatively design schemes to empower and motivate teachers to perform.**
- **Promotional avenues need to be performance-linked.**
- **The college principal should be empowered to select his/ her team for effective administration and planning.**
- **Headships should be performance-based and with a longer tenure of 3-5 years.**
- **Peer review of institutions should be done on a periodic basis.**

- **Annual Confidential Reports/ Self-appraisal forms, peer review and student assessment should be made mandatory for teachers.**
- **Rules and procedures of recruitment and staffing patterns of non-teaching staff should be reviewed periodically.**
- **Mechanism of performance based promotion of non-teaching staff should be developed to increase work efficiency.**
- **Setting up of internal quality assurance cells would go a long way in raising the standard of teaching.**
- **Colleges should have nominated students' councils in stead of the elected ones.**
- **The age-old fee structure needs to be reviewed and rationalised.**
- **Colleges should be granted flexibility to generate internal resources and create a corpus fund.**
- **Professional accreditation agencies should monitor and assess the performance of colleges.**

5. Public-private partnership:

The state cannot abdicate its responsibility with regard to providing access to higher education to larger numbers. However education has to be part of larger societal concerns which need to be expressed and encouraged through public private partnerships within the framework of transparency and accountability.

5.1 Constraints:

- **Most colleges are facing an acute financial crunch, particularly in the areas of development and growth. Lack of resources has affected vital functions in the college sector including expansion, affordability and accessibility.**

- The grants sanctioned from the government are thoroughly inadequate and colleges are not in a position to seek funds from outside private agencies as no well-defined policies have been laid down to facilitate public-private partnerships.

5.2 Recommendations:

- The state at both national and regional level should continue to discharge and increase its role in the disbursement of financial grants.
- Well-defined policies should be put in place to facilitate public-private collaborations within the parameters of transparency and accountability.
- Opportunities for a three-way support from the state, the community and the corporate sector may be explored.
- Colleges should be free to initiate dialogue with the corporate sector for financial grant, preferably in the form of corpus fund.
- Public-private partnership should also be developed beyond the financial level: sharing a laboratory, or human expertise.
- The social sciences and the humanities, which are unlikely to draw private support, should continue to be state-funded.
- Well-defined provisions of transparency, accountability and accreditation should be put in place for the entry of private universities as the absence of a well-defined structure has brought in many fly-by-night operators and discouraged serious entrants (for growth of the private sector, see Table 8). A periodic assessment through accreditation agencies should be mandated.

6. Curriculum:

Curriculum concerns are central to the teaching-learning process and need to focus on choice, relevance and renewal. Curriculum

development is a very lengthy process in the current system due to which the curriculum loses relevance.

6.1 Constraints:

- **The size of most universities and the structure and composition of academic bodies statutorily empowered to approve new courses and curricula act as major impediments to timely and speedy revision of curricula.**
- **The conventional courses offered in the majority of undergraduate colleges are based almost entirely on rigid discipline boundaries.**
- **Colleges are too dependent on university departments for academic direction in the areas of structuring of courses and syllabi.**
- **The presence of a very large number of colleges affiliated to the same university means the syllabi are approved as per the ‘lowest common denominator’, i.e. the quality and comprehensiveness of the courses rest on the ability of all the colleges to implement the courses.**
- **Infrequent syllabus updating proves a major deterrent in the dissemination of the latest knowledge in different subjects.**
- **Rigidity in the selection of a combination of subjects offers little choice to students for studying subjects of their interest.**
- **A fixed three -year degree course offering conventional courses prevents many students from pursuing areas of their choice.**
- **Students studying vocational courses face problems in lateral and vertical entry into the general stream.**

6.2 Recommendations:

- **There is a need to simplify processes and procedures for timely and speedy curricula revision and introduction of new courses. There is a need to review and revisit the statutory provisions in this regard. Greater autonomy should be given to colleges to initiate curricula changes with checks and balances through supervision by expert and professional bodies.**
- **There should be a statutory review of syllabus, every 3-5 years with participation by mostly under-graduate teachers, along with some post-graduate teachers and other subject experts, at the initiative of a convener, and its subsequent endorsement by an appropriate body;**
- **Students should be allowed to earn credits from different departments during their college education to enable them to acquire a multi-disciplinary perspective.**
- **A greater degree of choice be integrated into the experience of undergraduate education by making syllabi indicative and not prescriptive.**
- **In addition to the core disciplinary courses a greater variety of courses should be introduced in response to changes in work-related opportunities and the needs of the economy.**
- **Steps should be initiated for introducing skill-based courses with a component of basic knowledge, leading to a two year associate degree with the scope for a student to join the third year of a degree course for a full degree.**

7. Examinations:

The existing moribund system which is primarily a test of uncritical learning needs to be revitalized through a process of continuous examination reforms.

7.1 Constraints:

- **Terminal examinations induce selective teaching and learning.**

- **Lack of continuous internal assessment proves detrimental to the teaching-learning process as neither teacher nor taught gets a continuous feedback.**
- **The existing system of examinations fails to adequately assess students' creativity and sensitivity.**
- **The repetitive nature of questions feeds into the predictability of the examination system.**

7.2 Recommendations:

For autonomous colleges:

- **Introduction of semester system at the undergraduate level for keeping the students engaged in academic activities throughout the session.**
- **The examination system in autonomous colleges should consist of the following:**
 - **Continuous internal assessment as well as external assessment.**
 - **Provision for a repeat test for grade improvement**
 - **Provision for dissertation/ project**
 - **Emphasis on problem-solving and analysis rather than descriptive questions.**
 - **Inclusion of oral presentations to promote thinking ability and communication skills.**
 - **Clear and transparent rules and procedures to facilitate uniformity in evaluation.**

For affiliated colleges:

- **In affiliated colleges, the examination system should include the following :**
- **University administered examination should be combined with continuous internal assessment.**

- **The first and second year examinations should be conducted by colleges ,while the third year examination should be conducted by the university; 20% of the final score to be carried over from each of the first two years (total of 40%) towards the final score.**
- **In designing question papers emphasis should be laid on problem-solving and analysis rather than descriptive questions.**
- **Dissertation work and oral presentation should be introduced for honours level students**
- **Examinees' must have access to their answer books in case of doubts about evaluation.**

8. Teachers and Teaching:

Teachers are at the heart of the education system and a de-motivated environment cripples the entire system, acting as a deterrent to creativity and innovation.

8A Teachers:

8A.1 Constraints:

- **Lack of motivation/ incentives to sincere teachers discourages most faculty members from making any innovation.**
- **Lack of a performance-linked appraisal and promotion system is a demotivating factor for sincere and committed teachers.**
- **Inadequate career mobility opportunities induce stagnation and passivity.**
- **Outdated and irrelevant syllabi are major deterrents to good teaching.**
- **A poor student-teacher ratio places teachers under great pressure.**

- **Under-developed library/laboratory facilities, particularly in remote and infra-structurally under-developed colleges, hamper quality teaching.**
- **Excessive control by the affiliating university dampens the enthusiasm of teachers and retards the academic progress of colleges.**

8A.2 Recommendations:

- **A suitable performance linked appraisal and promotion system for fast-track career growth should be put in place.**
- **Innovative practices should be developed to involve larger number of teachers in the administration and planning tasks of colleges so as to create a sense of ownership.**
- **Posts of professors should be created in colleges.**
- **Some incentives must be given to attract quality teachers in rural and remote areas.**
- **There should be provision for on-the-job training of teachers for improving their teaching skills and updating their knowledge.**
- **Teachers of under-performing colleges should have an easy access to more infra-structurally developed colleges for library and laboratory facilities.**
- **Teachers, particularly of autonomous colleges, must be given freedom to devise courses, facilitating linking of research and teaching.**
- **Liberal research grants must be made available to teachers for carrying out meaningful research.**
- **Twinning colleges for human and infrastructure resource sharing; this could be done between urban and rural colleges.**

8B Teaching:

8B.1 Constraints:

- **Lack of performance-linked rewards for good performance demotivates sincere teachers.**
- **In the absence of effective accountability performance-linked appraisal, it is very difficult to ensure quality teaching and achieve academic excellence.**
- **Most colleges have inadequate teaching staff, hampering their desired academic growth.**
- **There is a lack of motivation among teachers for continuous upgrading of their knowledge, and a lack of initiative in devising appropriate method of teaching and teaching aids.**
- **Absence of infrastructural support acts as a major deterrent to quality teaching.**
- **Over-activism of teachers' unions and provisions for assured promotion to teachers prove counter-productive.**
- **Reduction in quality teaching time due to take-over of colleges for university and other examinations, unwarranted holidays, frequent strikes by teachers, non-teaching staff and students , etc. reduce quality teaching time.**
- **The widespread practice of private tuition/coaching adversely affects teaching in colleges.**

8B.2 Recommendations:

- **Appropriate systems must be put in place to reward performance and ensure accountability.**
- **There must be a provision for an anonymous student review and peer review of teachers.**
- **Internal quality assurance cells should be set up to raise the standard of teaching.**

- **The method of teaching through lectures should be complimented with interactive methods, such as self-study, personal consultation and seminars and workshops.**
- **Technology enhanced learning should be promoted for ensuring faster and wider dissemination of knowledge.**
- **The services of research scholars and retired teachers should be utilized to make up the loss of teaching due to shortage of teachers.**
- **An academic calendar should be maintained by all institutions with details of courses to be offered, assignment of courses to individual teachers and examination schedules.**

Annexure: Data pertaining to undergraduate education

Table 1: Number of universities, colleges and higher education institutions and enrolment

Type (by management/ funding)		Universities		Colleges		Higher education institutions		Enrolment (in thousands)	
		2000-01	2005-06	2000-01	2005-06	2000-01	2005-06	2000-01	2005-06
Public	Govt.	245	268	4097	4225	4342	4493	3443	3752
	Pvt. (aided)	-	10	5507	5750	5507	5760	3134	3510
Private	Pvt. (unaided)	21	70	3202	7650	3223	7720	1822	3219
Total		266	348	12806	17625	13072	17973	8399	10481

Source: University Grants Commission, breakup by type of management in 2005-06 is based on projections

Table 2: State-wise number of colleges under Section 2(f) and 12 (b) of the UGC Act as on 31st March 2004

	State/ U.T.	Number of colleges under section											
		2(f) and 12 (b)				2 (f)				Total			
		UG		PG		UG		PG		UG		PG	
		G	NG	G	NG	G	NG	G	NG	G	NG	G	NG
1	Andhra Pradesh	151	191	26	32	2	5	0	1	153	196	26	33
2	Arunachal Pradesh	5	0	0	0	0	0	0	0	5	0	0	0
3	Assam	26	139	0	3	0	3	0	0	26	142	0	3
4	Bihar	171	85	34	3	0	9	0	0	171	94	34	3
5	Chattisgarh	86	22	25	6	1	0	0	0	87	22	25	6
6	Delhi	20	16	16	24	0	1	0	0	20	17	16	24
7	Goa	2	3	3	11	1	0	0	2	3	3	3	13
8	Gujarat	21	193	15	92	2	5	0	2	23	198	15	94
9	Haryana	36	75	10	21	0	0	0	0	36	75	10	21
10	Him Pradesh	25	13	4	0	4	0	0	0	29	13	4	0
11	J & K	27	6	0	1	0	0	0	0	27	6	0	1
12	Jharkand	47	19	13	2	1	1	0	0	48	20	13	2
13	Karnataka	69	366	10	14	20	27	0	0	89	393	10	14
14	Kerala	20	103	22	49	1	5	0	0	21	108	22	49
15	Mad. Pradesh	146	89	109	35	34	6	0	3	180	95	109	38
16	Maharashtra	10	320	57	258	3	65	1	8	13	385	58	266
17	Manipur	36	8	0	0	0	0	0	0	36	8	0	0
18	Meghalaya	2	12	0	1	0	0	0	0	2	12	0	1
19	Mizoram	7	1	0	0	2	0	0	0	9	1	0	0
20	Nagaland	3	5	0	0	0	2	0	0	3	7	0	0
21	Orissa	35	190	26	0	0	5	0	0	35	195	26	0
22	Punjab	24	130	24	32	0	3	0	0	24	133	24	32
23	Rajasthan	51	63	44	27	3	10	1	0	54	73	45	27
24	Sikkim	2	0	1	0	0	0	0	0	2	0	1	0
25	Tamil Nadu	25	55	56	141	2	7	0	4	27	62	56	145
26	Tripura	12	1	0	0	0	0	0	0	12	1	0	0
27	Uttar Pradesh	27	193	16	197	4	51	2	3	31	244	18	200
28	Uttaranchal	7	7	11	7	2	0	0	1	9	7	11	8
29	West Bengal	27	326	11	1	0	0	1	0	27	326	12	1
30	A & N Islands	1	0	1	0	0	0	0	0	1	0	1	0
31	Chandigarh	8	7	3	0	0	0	0	0	8	7	3	0
32	Lakshwadeep	0	0	0	0	0	0	0	0	0	0	0	0
33	Daman& Diu	1	0	0	0	0	0	0	0	1	0	0	0
34	D&N Haveli	0	0	0	0	0	0	0	0	0	0	0	0
35	Pondicherry	4	1	6	0	0	0	0	0	4	1	6	0
	Total	1134	2639	543	957	82	205	5	24	1216	2844	548	981

Source: University Grants Commission

Table 3: Broad faculty-wise number of colleges under Section 2(f) and 12 (b) of the UGC Act as of 31st March 2004

Number of colleges under Section			
Faculty	2 (f) and 12 (b)	2 (f)	Total
Arts	628	56	684
Science	137	11	148
Commerce	165	7	172
Arts and Science	533	20	553
Arts and Commerce	664	62	726
Science and Commerce	52	6	58
Arts, Science and Commerce	2142	58	2200
Education	314	15	329
Engineering/ Technology	93	8	101
Medicine/ Pharmacy	161	17	178
Agriculture/ Vet Sc.	4	1	5
Law	135	10	145
Fine Arts/ Music	42	2	44
Physical Education	26	11	37
Social Work	13	4	17
Others	164	28	192
Total	5273	316	5589

Source: University Grants Commission

Table 4: Country-wise number of Indian students studying in foreign universities

Countries	Number of Indian Students Studying in		
	1999-00	2000-01	2001-02
Argentina	m	m	n
Australia	4578	6195	9539
Austria	98	104	78
Belgium	113	129	137
Canada	867	-	-
Chile	2	-	8
Czech Republic	24	27	36
Denmark	17	19	25
Finland	44	47	55
France	185	239	309
Germany	1282	1412	2196
Hungary	0	60	64
Iceland	1	2	1
Indonesia	1	1	1
Ireland	53	68	108
Italy	67	115	138
Japan	195	202	199
Korea	34	-	52
Luxembourg	0	0	m
Malaysia	91	714	497
Netherlands	38	49	53
New Zealand	201	355	952
Norway	102	103	114
Philippines	83	66	80
Poland	12	22	24
Portugal	19	-	-
Slovakia	6	6	6
Spain	62	46	53
Sweden	85	97	122
Switzerland	93	120	162
Thailand	-	56	104
Turkey	11	10	6
United Kingdom	3962	4302	6016
United States	39084	47411	66836
Total	51414	61977	87987

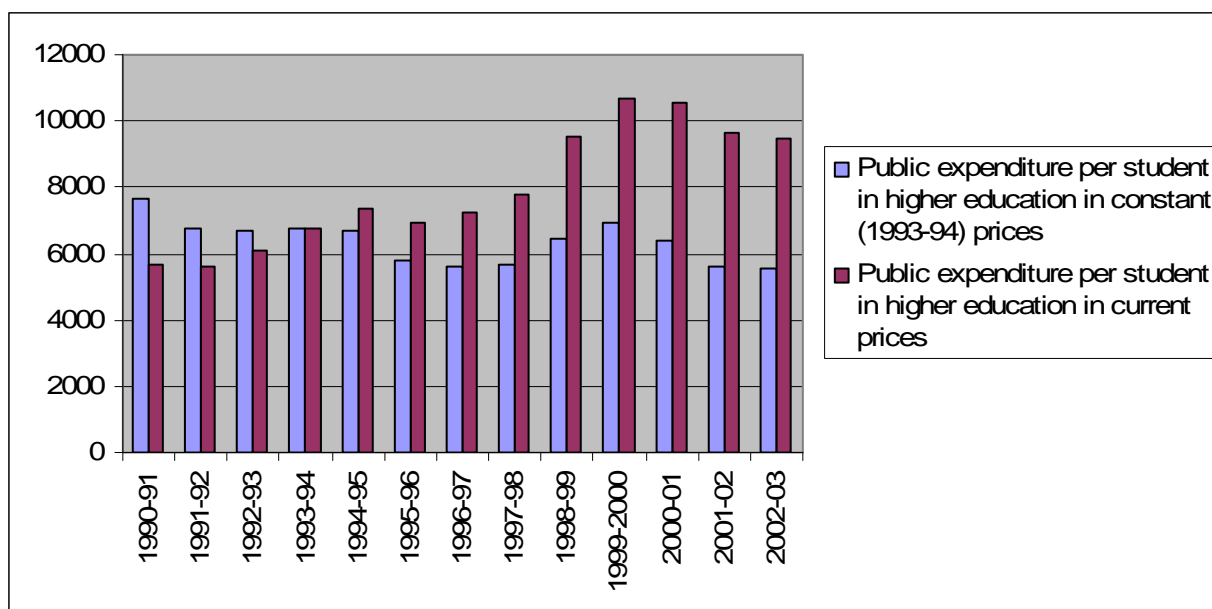
Source: Department of Secondary and Higher Education, Ministry of Human Resource Development

Table 5: Public expenditure on higher education in India (2003-04 BE) (In rupees crores)

	Higher Education	Technical Education	Other	Total
Central Government				
Plan	615	700	65	1380
Non plan	1157	845	45	2047
Subtotal	1772	1545	110	3427
State Governments				
Plan	423	377	115	915
Non plan	7084	1261	375	8720
Subtotal	7507	1638	490	9635
Total	9279	3183	600	13062

Source: Analysis of budgeted expenditure on education (2001-02 to 2003-04), Ministry of HRD Annual Reports

Table 6: Government spending on a per student basis



Source: Analysis of budgeted expenditure on education (2001-02 to 2003-04), Ministry of HRD Annual Report

Table 7: Educational levels across different social groups

	Literate		High school		Graduate		Post graduate	
	Men	Women	Men	Women	Men	Women	Men	Women
Upper caste								
Upper	93	81	73	57	39	24	10.4	6.3
Middle	88	69	52	30	13	6	2.2	1.0
Lower	79	59	31	17	7	3	1.1	1.0
Poor	64	41	18	9	4	1	1.1	0.3
Other backward castes								
Upper	92	77	67	43	29	15	7.7	3.3
Middle	85	65	44	25	10	4	2.2	0.5
Lower	76	49	29	13	4	2	1.2	0.2
Poor	55	34	14	6	2	1	0.9	0.1
Scheduled castes								
Upper	86	67	62	42	27	12	5.3	3.3
Middle	84	56	39	18	11	2	2.6	0.4
Lower	68	39	28	7	9	1	1.0	0.2
Poor	51	24	11	4	2	-	0.5	0.1
Scheduled tribes								
Upper	91	86	67	55	40	19	7.5	1.6
Middle	87	75	39	31	9	5	0.9	0.5
Lower	74	54	24	16	4	3	0.7	0.5
Poor	54	35	10	4	2	-	0.2	0.1

Source: National Election Survey 2004, Lokniti

Table 8: Typology and growth trends of higher education institutions

Type	Ownership	Financing	No. of institutions	Enrolment	Growth trends
Government university	Public	Public	240	1000000	Stagnant
Private university	Private	Private	7	10000	Emerging
Deemed university-govt. aided	Private or public	Public	37	40000	Growing slowly
Deemed to be university-private unaided	Private	Private	56	60000	Growing rapidly
Government to be colleges	Public	Public	1500	1000000	Stagnant
Private aided colleges	Private	Public	5000	5000000	Stagnant
Private unaided colleges	Private	Private	4000	3000000	Growing rapidly
Foreign institutions	Private	Private	150	8000	Emerging

Source: These are approximate figures based on various sources, from Pawan Agarwal, "Higher Education in India- the need for a change", ICRIER Working Paper 2005