

**KNOWLEDGE INITIATIVES OF
THE DELHI GOVERNMENT**
**A Blueprint for Growth, Innovation and
Inclusiveness**

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A Blueprint for Growth, Innovation and Inclusiveness

Outlined below is a blueprint of the Action Plan of the Delhi Government for the implementation of the National Knowledge Commission recommendations.

VISION

The aim of the Government of Delhi is to move from a traditional economy to a knowledge-based economy. This would entail the creation of a second-wave of institutions and generating excellence in the field of education, research and capacity building. The global knowledge trends point to the enormous potential of India's vast human resource base and the opportunities that an emerging knowledge economy brings to this vast manpower pool, which can create a virtuous cycle of innovation, economic growth and inclusiveness. To achieve this objective, the Government is envisioning and implementing various innovative initiatives – both short-term as well as long-term, in education and other sectors, that could lead to enhanced economic growth and inclusion. In this endeavour, the guiding principles of the Delhi Government have been growth, quality and inclusiveness.

I. HIGHER AND TECHNICAL EDUCATION

Excellence in Higher and Professional education is essential in ensuring that the knowledge capital of the nation remains vibrant and competitive. A well-planned and innovative system of higher and technical education is imperative for sustaining the rapid pace of development required by our country. Towards this end, the Delhi Government is taking some crucial steps. It is also working on creating a comprehensive policy document to address the needs of Higher and Technical Education.

A. New Institutions and Systems:

(1) University System for the NCT of Delhi: The Government is keen to set up a University System for the NCT of Delhi, which will build on the best high-performing university systems abroad. This envisages the possibility of creating multiple universities/campuses united by a common system of management and governance at the apex. Modular Universities, which are to be part of this University system would be different from existing universities as they would not be affiliating universities, but unitary universities which will focus on a particular discipline. Funds for individual universities/campuses would be allocated from the University System. This system would encourage flexibility in degrees/programmes, efficient administration due to the smaller size of the Universities, fostering specialisation within clusters of related disciplines and yet encouraging the breadth of education. Two issues have to be addressed to

operationalise this system (a) a legislation has to be prepared for this; (b) a roadmap for transition has to be chalked out which would focus not only on bringing new universities under the system but for creating provisions over time to incorporate existing universities. The Government aims to bring into this system new universities such as:

- The University of Science & Technology
- The University for Pharmaceutical Sciences & Research
- The National Law School University
- University College of Medical Sciences
- IIT – Delhi
- Dr. B.R. Ambedkar University

It is proposed to draw up the legislation for the University system within the next year.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (1) University System for NCT of Delhi	Department of Training and Technical Education and Higher Education	Process started	5 months for drawing up the legislation; then roadmap for transition to be created	Rs. 2 crore

(2) University of Undergraduate Education: Higher education has made a significant contribution to the social and economic development of Delhi. The University of Delhi, which was established in 1922, is a central university and an affiliating university. Starting off with a few undergraduate colleges, today it has more than 80 affiliated institutions - straining its administrative resources. The University of Delhi has 42,000 students enrolled in undergraduate programmes. As a premier university catering to the entire nation, it is the first choice for many students from all over the country. Every year, the university has to perforce turn away many aspiring students and is unable to meet the needs of the growing young population of Delhi. Notwithstanding the presence of five universities, the demand is far outstretching the availability of educational opportunities, as the admission rush in the University of Delhi every summer will testify. One of the major challenges facing us today is the need for expansion of educational opportunities for the youth, particularly, in the broad based areas of liberal social sciences and science education.

Under the new model of higher education a number of discipline-focused smaller universities are being set up in Delhi and they would be bound together by the University System. Though this system could cater to the needs of achieving excellence, the need to increase access to higher education would perhaps not be adequately served by the excellent universities that are being set up under the proposed University System. It is

therefore proposed to set up a University of Undergraduate Education with a view to increase students' access to undergraduate education. This University is expected to draw upon the initiative of self-financed institutions to set up a number of colleges in academic areas that have considerable market demand. The University would have a unique self-regulated governance structure.

Status: The proposal for setting up a University of Undergraduate Education in Delhi has been referred to the UGC and is under consideration. Once the UGC finalises its comments, the proposal will be taken forward.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (2) University of Undergraduate Education	Department of Training and Technical Education and Higher Education	Being reviewed by UGC	2009	Rs. 1 crore

(3) University of Science and Technology: The Government is also looking at setting up a University of Science and Technology (UST) and a detailed project report for this has been drawn up and the Act is expected to be drafted in the next six months or so.

The science departments being a small presence in an engineering institution have little to contribute beyond teaching. The massive technical education infrastructure of the country thus remains largely devoid of a world-class science education and research environment, which besides limiting the growth of applied sciences in an engineering institution also cripples engineering research and development, more so the engineering innovations which require a sound science base for modern engineering.

This proposed Science and Technology University is expected to fill the gap in international quality science and technical education at the undergraduate, post-graduate and research levels. The proposed UST of Delhi is conceived from the point of view of equipping the national capital with a knowledge infrastructure in science and engineering to foster the growth of world-class science and technology education, research and science and technology propelled innovations in an environment of integrated science and technology education and research.

Status of Initiative:

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education (3) University of Science and Technology	Department of Training and Technical Education and Higher Education	Feb. 2009 Detailed Project Report	2010-11	Rs. 200 Crores

(4) University of Pharmaceutical Sciences and Research: This University envisaged by the Government is expected fill the gap in international quality science and technical education at the post-graduate and research levels. In view of the recommendations of National Health Policy (2002) & growing manpower needs of the Pharma Industry in the country and to bring quality healthcare to the disadvantaged a need was felt to set up a dedicated university to encourage research on products in the field of allopathic, homeopathy, ayurvedic, Unani and other forms of medication. The Medication Delhi Pharmaceutical Sciences and Research University (DPSAR-U) is expected to be an international centre of excellence in identified areas and in developing new drugs that are specific to India or for validation of the efficacy of existing drugs to the Indian population. To start with, the university will have two constituent colleges which are – (1) Delhi Institute of Pharmaceutical Sciences & Research (DIPSAR) and (2) The Integrated Polytechnic, which needs to be upgraded into another College under the DPSAR-U.

Eight to nine independent departments will be started in the 8 + 1 storied building for which the EFC has already been done. The construction is likely to be started soon.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (4) University of Pharmaceutical Sciences and Research	Department of Training and Technical Education and Higher Education	Detailed Project Legislation passed; status under development	University is expected to commence from the academic year 2010-11	Rs. 100 Crore

(5) National Law School: The Delhi Government has enacted the National Law School of Delhi University Act, 2008 to impart education to Law students based on international

standards. The National Law School has begun functioning from its campus at Dwarka and is expected to become an international centre of excellence in legal studies, drawing upon the huge pool of legal talent that is available in Delhi.

(6) Starting of New Discipline Focused Institutions: Government of Delhi has started a new **Indian Institute of Information Technology (IIIT)**, which it is hoped would be a role model for other IIITs in the country. This distinct IIIT will focus attention on IT applications in specific domains of Health & Life Sciences, Finance and Government. The effort would be to change the paradigm of business in these sectors through application of IT to improve the delivery of services.

Likewise, **discipline specific engineering institutions** have also been started for the first time at various levels and these include: an Engineering College at Okhla focussing on the manufacturing sector and another at Jaffarpur focussing on civil and environmental engineering. These discipline specific engineering colleges have been started in the Government providing training in core engineering disciplines. This public sector initiative has been developed, to balance the creation of training facilities in IT related areas, which are less expensive for self-financed institutions to set up and offer better employment opportunities. This exclusively IT – focused approach has led to a neglect of the traditional disciplines of manufacturing and civil engineering, because of which there is a huge shortage of manpower in these areas and self-financed institutions are not willing to invest in training this manpower. Over a period of time, it is proposed to develop these discipline specific institutions, into institutions of international excellence, based on the IIIT model. A Delhi Institute of Tool Engineering has been added during 2008-09, as an institute specialising in the design of development of machine tools.

IIIT Delhi:

The IIIT-Delhi is an IT specific institute being established on the pattern of an IIT and aims not only at meeting the opportunities thrown up by global IT outsourcing, but also at changing the paradigms of business in specific industry/work domains through increasing the ease of access, quality and cost-effectiveness of services in these domains. It is expected that such paradigmatic changes could be enabled through project based consultancy services and by producing high quality manpower that will enable the movement of these industries/ work domains to a more efficient plane on the aforementioned lines. IIIT Delhi also aims at developing into an institution with a strong international presence in IT product development.

The Delhi Legislative Assembly has passed the IIIT-Delhi Act and the Board of Governors headed by Mr. Kiran Karnik, former president of NASSCOM has been constituted. The IIIT – Delhi, which became operational during 2008-09, is also expected to house an IT Academy that would act as a mentor institution for other IIITs in the country.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education (6) IIT, Delhi	Department of Training and Technical Education and Higher Education	Delhi Legislative Assembly has passed the IIT-Delhi Act and a Board of Governors has been constituted Process initiated for appointment of a Founding Director	IIT to start functioning by 2008-09; Arrangements being lined up for construction of buildings, and starting of research programme.	Rs. 15 crore for 2008-09

B. Public Private Partnership Initiatives:

(7) **Knowledge City:** To take steps towards creating state-of-the-art knowledge hubs the state Government is setting up a Knowledge City which will allow self-financing institutions to come up. Here the building infrastructure, etc would be provided by the Department of Higher Education which in turn would charge a lease rent, and private colleges would run on this allocated space. The Government, however, will maintain policy control over implementation of the initiative. The scheme has been cleared by the Planning Commission and land has been earmarked.

The Knowledge City would offer state-of-the-art shared infrastructure and services across a number of self-financed institutions, so that the growth of self-financed institutions that is stymied by the constraint of land availability could be overcome. It is proposed to develop the Knowledge City on Public Private Partnership (PPP) basis, with Delhi Government contributing land for development of the initiative. Resources that would accrue to the Government from this Knowledge City Project could be utilized for further developing technical and higher education opportunities in Delhi.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (7) Knowledge City	Department of Training and Technical Education and Higher Education	August – Signing of Agreement with DSIIDC Feasibility Report being prepared by DSIIDC	2009-10 For completion of project documentation and Bid Process Management	Rs. 2 Crores

(8) Increase in Technical Education opportunities, in the public and private institutions: A number of self-financed technical education institutions, affiliated to the Guru Gobind Singh Indraprastha University (GGSIP University) have come up due to a change in the policy framework for technical & professional education. This is a positive step towards meeting the increasing demand for technical and professional education.

Following the decision of the Government to provide for OBC reservations, it is proposed to add up to 54 per cent seats in degree level technical, professional and higher education institutions and 25 per cent seats in diploma level institutions over a period of 5 years. However, while bringing about this change the overall theme of growth with quality has been kept in mind and a number of concomitant steps are proposed to be taken for improving the quality of education in Delhi Government's technical, professional and higher education institutions. These steps include granting **functional autonomy** to institutions, wherever possible, and taking steps to encourage renowned academics and professionals to join the Delhi's educational institutions.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (8) Delhi Knowledge Development Foundation	Department of Training and Technical Education and Higher Education	Operational; Three Groups on Strengthening of Vocational Education, Diploma Education and EDUSAT have been constituted	Ongoing; A roadmap of DKDF initiatives is expected by February, 2009.	Rs. 100 Lakh Initial Grant

(9) Research and Development: Industry relevant R & D efforts in India have lagged behind those of China, which has strategically used its R & D Parks, to propel a substantial part of its economic growth. To capture this potentially lost value, the Netaji Subhash Institute of Technology (NSIT), a leading engineering institution fully funded by the Government of Delhi is setting up on a PPP model, a state-of-the-art Science & Technology Park in collaboration with NASSCOM. This ambitious Science & Technology Park with a floor area of about 2 million square feet will provide for effective industry-institute linkages and would be the largest R & D Park in South Asia. The Park will act as an innovation hub for Delhi and will incorporate R & D centres, an incubation facility, a plug and play facility and other common facilities. The Project report for the Science & Technology Park has been developed in partnership with NASSCOM and it is under development on public-private partnership basis, following advisory inputs from the Planning Commission.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education (9) S&T Park	Department of Training and Technical Education and Higher Education	August-08 Detailed Project Report prepared in partnership with NASSCOM	2009-10 Development of concession agreement, Completion of bidding. Project is expected to be completed in 2 years thereafter (09-11)	2 crores

Knowledge Park at DCE is being conceived from the point of view of developing an environment in which the synergy between Science and Engineering is created in education and research. The Knowledge Park would have a Tower of Science and a Tower of Engineering each, housing world-class facilities for research and knowledge incubation. The Twin Towers will have a bridge and would create the vital Knowledge Power to propel the growth of knowledge and innovation driven enterprises in the diverse areas covering automobiles of the future, green energy technologies, multidisciplinary design engineering, new materials, bioinformatics and communication technologies. A Detailed Project Report for the Knowledge Park will be ready in the next two months.

C. Development Initiatives:

(10) EDUSAT Facility: The Government of Delhi in collaboration with ISRO has set up an EDUSAT facility to enable distinguished faculty members to deliver lectures in multiple locations. This facility is contributing to mitigation of the shortages in technical education faculty. Delhi's EDUSAT facility is now touching 50 different institutions. EDUSAT facility of Delhi also provides a platform to capture content from the large number of conferences, seminars and workshops that take place in Delhi and to use it as a national repository of these events. The recordings and documents of these events would be made available to the public through a web interface by Delhi's EDUSAT facility.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Higher and Technical Education (10) EDUSAT	Department of Training and Technical Education and Higher Education	Operational, through the Delhi Knowledge Development Foundation, Efforts to develop Delhi's EDUSAT into a national knowledge repository of conferences, seminars & workshops that take place in Delhi	Ongoing; Consolidation and Concretisation of initiative would take place during 08-09	40 lakhs

enabled to provide real life work situations to students, so that the education of students in technical education institutions becomes more practice-oriented.

(13) Public Lecture Series: The Government has started a public lecture series for the general public to inform it of the emerging developments in Science and Technology. In today's world, where knowledge is power, dissemination of knowledge is critical in enabling citizens to take informed decisions. It is proposed that public lectures will be delivered on a fixed day of every week by an eminent expert. The organisation of public lecture series will be coordinated by a committee of experts headed by a leading technical education specialist. A target of 10 lectures has been proposed during 2009-10.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget (in lakhs)
1	Technical Education (13) Pubic Lecture Series	Department of Training and Technical Education and Higher Education	2009	Ongoing	Rs. 10.00 Lakhs

D. Initiatives for Quality Improvement:

(14) Review and Restructuring of Institutions: Delhi College of Engineering (DCE) during its 65 years of dedicated service to the nation has produced a large number of distinguished engineering and technology professionals through its Graduate, Post-Graduate and Doctoral Research Programmes. During the last five years DCE Student innovation teams have designed and developed DCE Hybrid Car (winning first place in student category green car competition in US), DCE Supermileage Car (achieving 165 km/ltr and winning the Best Aerodynamic Design Award at Marshall, US), DCE UAV (Unmanned Aerial Vehicle winning the Most Innovative Design 2006 at Georgia) and most recently DCE UAV, the Robotic Submarine winning the Most Improved Design Award 2008 at Marshall in US in the world competition. All these initiatives have been supervised by DCE faculty and well supported by the industry and Government of India. DCE has also figured in the top 10 best engineering institutions (including the IITs) in India several times in the INDIA TODAY surveys. DCE thus has demonstrated its potential to emerge as a leading centre of world-quality education, industrially relevant R&D, and also an innovation hub. Government has set up a Committee to review and

Restructure DCE to grant autonomy, the freedom to excel, as also to elevate DCE to the level of a world-class University of Technology. This Committee's guidelines could provide the basis for restructuring other reputed institutions.

(15) Strengthening the Board of Technical Education: The Board of Technical Education was established in 1961 with the objective of conducting examinations for awarding certificate/diploma in various Engineering, Non-Engineering courses being conducted by the Government and privately-managed affiliated institutions. Due to the various initiatives taken by the Department of Technical Education there has been an annual growth of about 25 per cent in the number of applicants for diploma seats in Delhi. The existing staff structure of the Board is quite inadequate to handle and cope with the work of examination, curriculum revision, affiliation and monitoring of the standards of education in the affiliated institutions etc, for the increasing number of students. Consequently efforts are underway to strengthen the Board. Major areas of concern for BTE are the issues of autonomy for BTE, creation of additional posts, revision of curriculum and awarding distance education-based certificates and diplomas. To strengthen the Board there is an e-governance initiative which would involve online compilation of results and provision for availability of applications for examinations and certificates online.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education (15) Board of Technical Education	Department of Training and Technical Education and Higher Education	Ongoing	e-Governance interface for the Board is expected to be completed during Financial Year 2009-10	Rs. 190 Lakhs

(16) Faculty Reforms: Faculty reforms are critical for ensuring and maintaining the quality of institutes. The Government is taking steps in this direction by ensuring timely implementation of the AICTE scheme, giving adequate research and travel grants, providing computers, professional society membership of any two bodies (one national and one international), sanction for purchase of books / magazines etc., encouraging faculty exchange by deputation, filling of vacant staff positions and sponsorship for higher studies.

As there is acute shortage of technical faculty at the higher level, the Government has proposed to invite eminent professors from foreign universities or prestigious institutions like IIT for a period of six months, for teaching a one semester course. At the same time

it is proposed to run a series of Faculty Development programmes to build world class faculty competence.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education	Department of Training and Technical Education and Higher Education			
	Faculty Reforms		Ongoing		Rs. 40 Lakhs
	Creating adjunct positions		2009-10		Rs. 50 Lakhs

(17) Collaborative Arrangements: To encourage synergies in academia, Delhi Government is creating schemes to develop collaborative arrangements with institutes, organizations and individuals of repute. These would focus on:

- Student and Faculty Exchange programmes in India and abroad
- The institutes in collaboration with reputed institutions such as leading industrial houses, R & D organizations etc, are expected to develop synergies in technology transfer
- Developing support mechanisms for sponsoring machinery & equipment, and setting up of laboratories
- Sponsoring of students and faculty for R&D or application development projects as per requirement
- Core experts of their respective fields from the industry may be invited on regular basis as an expert faculty to provide latest training as per industry standards
- Creating Chair Professorships in Prominent Colleges

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Technical Education	Department of Training and Technical Education and Higher Education			
	(17) Collaboration		Ongoing		Rs. 10 Lakhs

E. Initiatives to Improve Access:

(18) Delhi Higher Education Aid Trust: The Government has constituted a trust called the “Delhi Higher Education Aid Trust” to provide scholarships on merit-cum-means basis to the socially and economically backward students admitted in a constituent college or institution, aided or unaided, affiliated to a University located in Delhi. Besides providing scholarships to needy students of higher education students, the trust would also enable the strengthening of student activities related facilities, in Delhi’s institutions.

II. VOCATIONAL EDUCATION

While higher education enrolment has to increase markedly, a growing economy requires that a large proportion of our labour force needs to be provided world-class vocational education. The Delhi Government has initiated several schemes to expand capacity in VET through innovative PPP models along with other steps.

(1) Technical Education Community Outreach Scheme (TECOS): It is estimated that out of the 5 lakh people who migrate into Delhi every year, about 2.5 lakh persons need to be vocationally skilled for them to find a useful place in society and to give a boost to Delhi’s growing economy. However, opportunities for vocational training in Delhi are limited to about 15000 seats annually. A large number of these impoverished immigrants are engaged in low level informal sector work through which they add little value to the work stream and earn low level of wages. To increase the reach of technical education and to bring the informal sector workers into the technical education stream, TECOS was developed by the Government. Under this scheme the Government partners with NGOs, and provides them financial assistance to render specified training and technical education services in Delhi. The scheme also provides for performance linked funding to the NGOs, as the NGOs have to get at least 40 per cent of the trainees and informal sector workers certified under the Flexible, Modular Training Scheme of the Government. This training is both flexible and modular, allowing the trainees to go through the training at their own pace and up to the level to which they would like to be trained. The institutes are cast with the responsibility of monitoring the performance of the NGOs, thus bringing about a spilt in the implementation and regulation of responsibilities of the private sector providers and the Government.

A range of approximately 400 courses is available to trainees and funds in the range of Rs. 21000 per month are being released to NGOs for 50 students (2 batches of 25 students per batch). These courses usually have a duration of about 3 months. Under the Scheme, 15 NGOs have started providing training in various locations to informal sector workers and school dropouts in some slum clusters of Delhi. It is proposed to rapidly expand this pioneering programme in the slum clusters of Delhi for the skill upgradation of informal sector workers and school dropouts. Two batches trained under **TECOS** have passed out, and the second batch of trainees is currently being trained by the identified NGOs, in various slum clusters of Delhi.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Vocational Education (1) TECOS	Department of Training and Technical Education and Higher Education	Starting 50 vocational courses in the first phase in 2008-09; Commenced; First four batches of trainees graduated & the fifth batch is due to commence shortly		Rs. 70 Lakhs

(2) Strengthening of ITIs: A number of steps have been taken to strengthen vocational education provided by the ITIs of Delhi, which provide training to about 10,000 students every year. Following are some of the major initiatives for improving the quality of training in the ITIs:

- In the last year about 58 outmoded training courses have been replaced with courses in demand in the market and a similar number of outmoded courses are proposed to be replaced with courses in demand during the current year also.
- With a view to encourage the increased participation of girls in technical education no fees is charged from girls for vocational education in ITIs. Also an ITI for Women focusing on the IT sector has also been started at Vivek Vihar, and is the first such discipline specific ITI of its kind in the country.
- From the academic year 2008-09, fees being charged for vocational training in ITIs has been reduced to half the amount being charged previously. It is expected that this step would considerably help in improving access of the Delhi's impoverished to vocational education opportunities in Delhi.
- A Job Fair was organised for placement of students passing out from ITIs. About 7000 students, who were passing out and 76 companies participated in the Job Fair.

(3) German Model of Vocational Training: For developing vocational training, active collaboration between government and industry-associations is needed. To align vocational training to the market and industry needs, the Government is also looking at incorporating the **German Model** of vocational training. In this model one day is spent in an institute and four days are spent in an industrial setting as part of the training. This model is being developed in partnership with CII and GTZ (the technical collaboration arm of Germany) and CII is preparing a blueprint for this. It will be operationalised next year.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Vocational Education (3) German Model	Department of Training and Technical Education and Higher Education	2009-10	Ongoing	

(4) Takniki Shiksha Sansthan Kalyan Samiti (TaSSKS): Alongside efforts for improving process quality, steps are also being taken to strengthen the edifice of our technical education system by increasing the interaction between institutes and industry. As a further move in the direction of improving industry-institute interaction the Government has taken the momentous step of setting up Takniki Shiksha Sansthan Kalyan Samitis (TaSSKS) in each of the State's technical education institutes. These management committees, which are headed by the leaders of industry in Delhi, are expected to give a new dynamism to technical education by making it more practice oriented and by decentralizing powers for operational decision making to heads of these institutes. The Government is now looking at creating a roadmap for strengthening and operationalising TaSSKS and to develop a mechanism to give more financial powers for them.

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S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Vocational Education (4) TaSSKS	Department of Training and Technical Education and Higher Education	2008	Ongoing	Rs. 75 Lakhs

(5) Restructuring Employment Exchanges: In their present state employment exchanges just operate as sites for registration and only offer data services. They are ill-equipped to match qualifications of employment seekers to the demands of the market and Government. Keeping this in mind, a scheme to reposition employment exchanges as outreach points for storing and providing information on employment and skill development and to enable them to function as career counselling centres is underway. Under this initiative a computerised database of employment seekers is being developed which would not only be available to the Government but also to private companies (a detailed model for Restructuring Employment Exchanges can be seen in **Annexure 1**). The Department of Training & Technical Education has also launched a Job Portal (www.delhitechplacements.com). The Job Portal has the profile of students studying in various technical and vocational education institutions. Companies can also register on the portal and access the profiles of students from the comfort of their own offices. The job portal and the job fairs are an effort on the part of the Department to find a good fit between employers' requirements and the students' profiles.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Vocational Education (5) Restructuring Employment Exchanges	Department of Training and Technical Education and Higher Education	Ongoing		

(6) Training of Domestic Workers on a Cluster based Approach: The Delhi Government in collaboration with the International Labour Organisation (ILO) has started a programme for training of domestic workers in the state. The aim is to provide vocational training to domestic workers to enable them to upgrade their skills to a higher value. Efforts are underway to train them in child care, care for the aged etc. In the initial phase of this project three clusters have been identified (Sayedagherva, Jahangirpuri and Sangam Vihar) and skill mapping and profiling of domestic workers in these areas has been completed. Materials for the basic training of domestic workers have been developed, and the programme is set to be launched shortly.

(7) Delhi Skills Mission: It is proposed to launch Delhi Skills Mission to make concerted and time-bound efforts for making Delhi's disadvantaged sections of society skill-empowered. Following is a brief description of the key elements of Delhi Skills Mission:-

Vision:

The Delhi Skills Mission will aim to contribute to Delhi's development by skilling the requisite number of persons in areas that have high market demand, and by means of such skilling contribute to Delhi's inclusive economic growth through wage and self-employment of its skilled manpower. The Delhi Skills Mission will also ensure time-bound training to the targeted number of high-quality skilled personnel, across the strata of society and especially among the disadvantaged sections.

Mission:

- To provide skill development training to the following categories of persons:-
 1. Students passing out from schools
 2. Unemployed youth and school drop-outs
 3. Informal sector workers
- The Delhi Skills Mission (DSM) aims to improve the quality, quantity and reach of both long-term and short-term skill training.
- The Delhi Skills Mission (DSM) will also grant certification to skills acquired informally.
- The Mission will aim to generate demand for skill training, meet such enhanced demand through high quality skill training and to have the skilled trainees gainfully employed, either through self-employment or wage employment.
- Develop a State Vocational Qualification Framework (SVQF) in areas that are still emerging or are Delhi-specific.
- Develop self employment and entrepreneurial skills with bankable projects, as a vital core principle, besides developing Self-Help Groups for rendering skill-based services and earning reasonable income therefrom.

Core Elements:

In order to achieve its vision the Delhi Skills Mission will have the following core targets:

1. To enable 25% of the targeted population to become skilled in three years and to make 50 % of the targeted population skill-empowered in five years.
2. To ensure that about a fourth of the trainees are from slum-clusters and a fourth of the total number of trainees are women.
3. To ensure that 75% of the trainees are empowered to become wage-employed or self-employed.
4. To aim to make all the skill training programmes result in marketable skills.
5. To upgrade the existing Industrial Training Institutes and Industrial Training Centres into Centres of Excellence by suitably upgrading the infrastructure facilities, revamping obsolete programmes, and introducing new programmes of relevance and demand.
6. To extend the current Center of Excellence Concept, from a part of the ITI to the entire ITI – bringing the entire ITI under the management control of the Institute Management Committee.
7. To encourage establishment of new Industrial Training Institutes as fully autonomous entities - having administrative, financial and academic autonomy.
8. To encourage private participants to establish skill and vocational training centres, so as to train larger numbers of unskilled youth.
9. To develop skills training providers to conduct programmes under multiple modes like modular employable Skills programme, entrepreneurial skill programmes, etc.
10. To encourage all concerned entities to train the youth towards Self Employment and Entrepreneurship skills, with emphasis on bankable skills; and to encourage formation of Self-Help Groups /Multipurpose Job Clubs; to provide necessary subsidies to the trainees where there is a viability gap in the funding available to self-help groups of trainees.
11. To bring all the Government initiatives related to vocational/skill development training programmes and related activities under the common umbrella of the Skills Mission, like the initiatives of the Departments of Training and Technical Education, Social welfare, Industries, Labour, SC/ST/OBC/ Minority Welfare and other vocational training providers (Private Initiatives), so as to achieve a coordinated target within a specified timeframe and to support /supplement / subsidize such initiatives.
12. To establish linkages with evaluating/certifying agencies (Third party) like NCVT, SCVT, BTE and international certifying agencies like City & Guilds to ensure quality and uniformity in certification so as to make the certified candidates acceptable for wage employment nationally as well as globally.
13. To form expert groups to analyse the demand for skills in various spheres, with periodic estimation and forecasting of the requirement of skilled personnel in various vocational areas.

14. To develop baseline process manuals so as to give guidelines for functional autonomy to institutions, under the guidance of the institute management committees (IMCs). These Committees could further expand on the autonomy granted to the institutions, as per procedure laid down in the process manual. The underlying principle of the process manual would be to exercise autonomy with accountability.
15. To generate revenue through viable training programmes, registration fee, examination & certification fee, consultancy, and by providing institution based technical services - with a view to make skill training more practice-oriented.
16. To establish a state level autonomous institution to train trainers for quality improvement and upgradation of knowledge due to changing technologies.
17. To enhance opportunities for vertical mobility of students passing out from vocational training institutes - from the current limited level of lateral entry to double or triple the existing levels in institutions of higher learning, namely Diploma Level programmes of Polytechnics.
18. To generate demand for vocational training courses, through appropriate social marketing initiatives.
19. To address the needs of the disadvantaged sections of society and to support their training through scholarships, fee waivers, book grants, vouchers, etc.
20. To identify, develop and implement suitable skill training programmes for the unorganized sector workers.
21. To encourage and empower women to participate in skill development training.

Area	Dept.	Start Date/ Status	Finish Date	Budget
Vocational Education	Department of Training and Technical Education	1 st August 2009; The Delhi Skills Mission has been registered as a society.	31 st March, 2014	

III. OPEN AND DISTANCE EDUCATION

Planning Commission has granted approval for a hybrid model for distance education. The board of Technical Education is also being strengthened to enable it to award distance education degrees.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Distance Education		To start in 2008-09		20 lakhs

IV. SCHOOL EDUCATION

Reforms in school education are pivotal for creating an edifice on which a knowledge society can be structured. In Delhi, MCD, which caters to primary education, has more than 1800 schools where around 9 Lakh students are enrolled. Besides primary schools, NDMC runs 10 Middle, 9 Secondary and 6 Senior Secondary Schools in its area at present. Apart from this, some autonomous bodies and private organizations are also engaged in imparting education at the elementary and secondary level and they are monitored under the provisions of the Delhi School Education Act & Rules.

Several innovative initiatives of the Delhi Government are aimed to improve the education facilities quantitatively and qualitatively. The Department of Education focused on 5 areas namely (i) Upgradation of human resources (ii) Being a positive and responsible employer (iii) Improving the infrastructure (iv) Using e-governance (v) Ensuring that learning is joyful, interesting and meaningful, which have together led to an enormous improvement in the quality of learning and schools. The impact can be gauged by the fact that the CBSE results in Standard X and Standard XII have risen to 89% and 87% respectively, at par with private schools, dropout rates have fallen to almost zero and enrollment levels have increased substantially. While analyzing the impact of the reforms introduced over the past 3 years, it has been found that if the average annual increase in the pass percentage and the number of students passing over 7 years till 2005 had continued, it would have taken almost 16 years to reach the present pass percentage of 89%, and almost 26 years to reach the present level of number of students passing. That it actually took only 3 years to reach these levels proves the effectiveness of the reforms introduced over the past 3 years. The improvement has been so remarkable that these schools are now giving stiff competition to the private schools in the city. Current initiatives include:

(1) **Leadership Training Programmes:** Delhi Government has started **leadership training programmes** which include training for teachers in IIMs. The Directorate of Education is evolving an Action Plan for this. There is also a proposal to revive the practice of taking teachers on location for training. The Department also has an initiative called “Leaders of Tomorrow” under which 300 of the best and brightest Students, Teachers and Principals shall visit Singapore, another city-state, to learn how they can help to take Delhi to the level of a developed state.

(2) Vidyalaya Kalyan Samitis: These Samitis are a unique initiative of the Delhi Government. These are School Welfare Committees which provides a creative platform for community participation in the management of a Government school. The idea is to give a voice to parents, students and teachers in the governance of the school. The Government stipulates that there will be one VKS for every school building/campus comprising Teachers, students etc., of both schools in case of double shift schools, of all three and four schools wherever these exist in the same campus with a common boundary wall. The RPVVs (Rajkiya Pratibha Vikas Vidhyalayas) are not covered by these instructions. Each VKS consists of a Convener (the Head of School), Parent-Teachers' Association, Students' representatives, RWA representatives, Government nominees, NGO nominees and an Ex-Officio member (Joint Secretary responsible for the school either from PWD or DSIIDC). In the year 2007-08 the total funds for every VKS in Delhi have been increased to Rs. 4,00,000 per annum. From 2008, 4 school students, called "Bal Bhagidars" are now members of the VKS.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	School Education (2) Vidyalaya Kalyan Samitis	Directorate of Education	Ongoing		

(3) Building as Learning Aid (BaLA): The BaLA initiative proposed by the Government is about maximizing the learning value of the school space. A range of learning situations and materials can be actively used as a learning resource by innovatively treating school spaces (classroom, circulation spaces, outdoors, natural environment) and their constituent built elements (floor, wall, ceiling, door, windows, furniture etc.). This resource can complement the teaching process and supplement textbook information. Dimensions, textures, shapes, angles and movement can be use ato communicate some basic concepts of language, science, mathematics and environment. For example, a window grill can help children practice pre-writing skills or understand fractions. The BaLA ideas were developed by a huge team of architects, teachers, pedagogues, child development professionals, mathematicians, environmentalist, toy designers, social workers and others.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	School Education (3) BaLa	Directorate of Education	Ongoing		

(4) ICT Applications: Use of ICT in schools is crucial to make future citizens e-enabled. ICT applications in schools are doing well, but content delivery needs to be developed.

Computer education is implemented as an elective subject at the +2 stage in 750 Government schools and 155 Government aided schools. Computer Aided Learning Initiatives (CAL) is trying to assist in providing education that can engage every child. In this scheme it is proposed that every school should have two multimedia rooms with a computer, projector/TV and broad band facilities as well as a studio for preparation of CAL material. Applications such as Caltoonz are there but more innovative services are required.

(5) Chalta Firta Schools: This is an initiative of the Department of Education (DoE) under the Sarva Shiksha Abhiyan (SSA). The “school” is a yellow bus with facilities like a revolving plasma television, a laptop, toys, games like Scrabble, crossword, chess and, of course, books too. The Schools are working on a PPP model with DoE having allocated the responsibility of running the schools to two non-government organizations – Butterflies and Salaam Balak Trust. From instructions in basic hygiene to lessons through animated movies, the school imbibes a novel approach. The objective of this project is to provide educational facilities to drop-out school children and those living in red-light areas, construction sites, railway stations etc. Another initiative which could be looked at is the use of **mobile labs** for promoting Science education. Such a concept has been developed by the Agastya Foundation where mobile labs reach rural communities to encourage interest in Science through experiments and a more practical hands-on approach.

(6) Access: To enable more girls to avail of school education, the Government has unveiled the ‘Ladli’ Scheme. Under the scheme the Government would deposit a fixed amount at different stages of a girl child’s life and eventually this would be accumulated up to Rs one lakh, that would be paid to the girl on attaining the age of 18 years and passing out of Class X. Hence, the Delhi Government would contribute about Rs 10,000 on the birth of the girl child and also contribute Rs 5,000 each time on her admission to Class I, Class VI, Class IX, Class X and Class XII.

7. YUVA School Life Skills Programme: This is an initiative to help students become happy, productive, responsible and healthy citizens. It emphasizes the need of inculcating a strong civic sense in students and builds upon the huge success of the Eco-Club scheme. It covers areas such as doing the right things, values, principles, academic and career, joyful learning and nutrition. It also codifies and documents the successful training methodologies followed by the Department and which have led to the turn around of the schools.

8. Local and Outstation tours: It was realized that the children in Delhi Government schools come from the most vulnerable backgrounds and most had not even left their villages in their entire life or even crossed the highway near their homes. Such children study about the Red Fort, Parliament, etc. but have never seen them. They are also expected to protect the nation’s culture and heritage but they have never seen an example of one. Therefore, from 2007 all students from Standard 1 to 12 now go on one local tour

every year which should ideally combine a visit to a museum etc, to a cultural heritage site, and a park.

In addition, 40 students from every school of standard 11 go on an outstation tour to places of relevance such as Agra, Jaipur, Wagha border, etc. These initiatives are enormously popular. The Department hopes to be able to send all students in Standard 12 on an excursion tour from 2009.

9. Focus on Personality Development: Activities that focus on personality development are stressed such as debates, extempores, quizzes, singing, dancing, theatre etc. It is proposed to have school level, zonal level, district level and state level competitions for each area from 2009. In addition, there is an emphasis on reading activities and on story writing, sports and games.

V. Translation

In a multi-lingual society, translation should play a critical role in making knowledge available to different linguistic groups. The Department of Languages of the Government is taking the following steps towards improving translation activities in the state to improve access to knowledge:

- Committees in the Departments of Technical and Higher Education have been set up to identify texts to be translated into Hindi and other local languages.
- Translation has potential to develop into a major industry. The growth of this sector can be envisaged on two fronts –
 - i) The compilation of a list containing competent persons capable of doing translation of technical books from English language to all vernacular languages. Efforts are being made to launch a web-site containing names of such resource persons.
 - ii) Creation of a pool of manpower which can take up translation jobs from overseas, on a outsourced model.

The second sector can provide huge income opportunities to the students having knowledge of foreign languages. Delhi Government is working in this direction.

VI. Libraries

Libraries play a pivotal role in dissemination of knowledge and are extremely important in building a knowledge economy. To this end it is important to introduce reforms for revitalizing the entire library and information services (LIC) sector in the state. These steps would include a comprehensive census of libraries, an initiative to modernize libraries and would involve greater community participation. The Delhi Government is implementing at the state level the library Charter proposed by the National Knowledge Commission which seeks to revamp the library and information services in the country and provide a holistic approach to library development.

Delhi has a number of libraries run by various institutions ranging from Government organizations to NGOs. The strengths and weaknesses of these categories of libraries are unique, and need to be studied separately. It is proposed that a sample of two libraries from each sector will be studied in the first phase. The corrective measures will be applied in these libraries which could become models for the libraries of this genre. The next important work is modernization of the libraries in terms of networking and digitization. As some of the big libraries already have software for collection and retrieval system of books, it would not be feasible to have a new universal software for all the libraries. The existing softwares would be studied and as far as possible the new software for all the libraries, which do not have networking system, will be designed in such a manner that it is easy to dovetail the new software with the existing ones. The whole exercise will take one and half years.

VII. KNOWLEDGE NETWORK

On the recommendation of the National Knowledge Commission, it is proposed to connect all the institutions in Delhi. This would enable sharing of the resources of all the institutes and learning from their experiences, and meeting the acute shortage of technical manpower across the state and the country as a whole. Institutes such as IITs, JNU, Delhi University, Jamia Hamdard University, GGSIP University, DCE, NSIT and all institutes under DTTE will be connected through a lease line or VPN. This network will be set up across the institutes to have access to the library, journals, main projects, other learning material etc. so that working across these leading institutes becomes facile. It is also proposed to set up a central monitoring cell to coordinate all the activities and meet all the desired objectives. Currently, the Government is in the process of providing one-time assistance for upgrading LANs in DCE, GGSIP University and the Netaji Subhash Institute of Technology.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	Knowledge Network	Information Technology Department	To be launched in 2009-10		

VIII. HEALTH INFORMATION NETWORK AND TRADITIONAL HEALTH SYSTEMS

Health Information Management Systems for hospitals of Government of Delhi for computerization of work processes is under development. Software is likely to be available for testing soon and simultaneous steps are being taken to procure hardware and other necessities. Apart from improving the efficiency of hospitals it will help to put in place better management information systems for monitoring and policy making.

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	HIN	Department of Health			

IX. E-GOVERNANCE

Use of ICT in governance and for use by the public is important to leverage the advantages provided by new communications. In e-governance the Government has focused on reforms in processes and standards, infrastructure and organization. The following are the key initiatives:

- Cabinet approval has been granted for setting up a Society for implementation of e-governance solutions in various departments.
- IT Department is providing Government to Citizen services through process improvement and internet interface under the 'Jeevan' project. This project provides a single-window facility for various services pertaining to different departments and ministries in the city and has been built on a PPP model. This would involve setting up small kiosks all over Delhi to provide services. In the initial phase 110 out of 500 such kiosks have been set up. Also, ten out of twenty showcase centres have been started, where all e-governance services are being provided in a single window space.
- The Revenue department has launched an e-stamping facility in collaboration with the Stock Holding Corporation of India Limited (SHCIL).

S. No	Area	Dept.	Start Date/Status	Finish Date	Budget
1	E-Governance	Information Technology Department	2008-09	Ongoing	
	(a) 'Jeevan'		2008-09	2009-10	
	(b) E-stamping	Revenue Department	Started in 2008	Ongoing	

X. ENTREPRENEURSHIP

(1) Eco System for Entrepreneurship

The draft Industrial Policy envisages the setting up of a Single Window Clearance System (SWCS) to create an Ecosystem for entrepreneurship. All application forms for obtaining NOCs/Approvals/Licences etc. and the related instructions / guidelines are proposed to be made available to the industrial entrepreneurs, through a Single Window Clearance Cell in the form of a booklet.

The entrepreneurs shall be relieved from the difficulties of running to various departments for seeking clearances etc. It will also ensure growth of industries in the desired direction and in accordance with the provisions of Master Plan for Delhi – 2021. The budget start date and finish date are given below:-

Sl.No.	Area	Department	Start Date/ Status	Finish Date	Budget
1	Eco System for entrepreneur-ship	Industries	To commence in 2009-10	On going	Rs.2.5 lakhs per annum

(2) Continuing Development for Entrepreneurship and inter facing with industries

(a) Continuing Educational Programme

The curriculum of the existing courses need to be up-dated depending upon the need of industry. Similarly, new courses can be designed to meet the requirement of the industries of Delhi.

In order to achieve the above objectives, a workshop would be organized by the Department of Training & Technical Education, Government of NCT of Delhi where representatives from industry and other departments of Delhi Government engaged in imparting technical education would be invited.

(b) Entrepreneur Development Programme

The Ministry of MSME, is conducting Entrepreneur Development Programmes for the new generation entrepreneurs and the existing entrepreneurs. The Department of Industries would also start Entrepreneur Development Programme in collaboration with the Ministry of MSME from the year 2009-10.

This would be a continuing programme and a budget of Rs.,5.0 lakhs per annum would be provided.

XI. INTELLECTUAL PROPERTY RIGHTS

To preserve and develop intellectual capital in the state, the Delhi Government aims to bring out a policy paper on IPR.

XII. CONCLUSION

The above mentioned initiatives of the Delhi Government aim to kick start the process of transforming Delhi into a knowledge driven economy. With this blueprint the Delhi Government aims to consolidate its place as the Knowledge Capital of the country and provide a roadmap for emulation, to other cities/states for transformation into knowledge based economies.

ANNEXURE I

A Model for Re-engineering Employment Exchanges

A key objective of the proposed Skill Development Mission is to reposition employment exchanges as outreach points for **storing and providing information** on employment and skill development and enable them to function as career counselling centres. A similar proposal has also been included in the National e-governance Plan. This paper attempts to prepare the broad contours for taking this idea forward.

Key stakeholders are:

1. Employment seekers
 - formally trained
 - informally trained
 - untrained
2. Employers
 - household
 - informal sector
 - organizations : large, medium, micro
3. Trainers
 - public/private,
 - long term/medium term,
 - prepare/repair
4. Government
 - Local,
 - State,
 - Central
5. Financial institutions/ banks – for loans etc.
6. NGOs
7. Professional career counsellors
8. Labour research

Data bases

1. Applicant database:
 - at entry
 - after entry gate assessment
 - after employment exposure
2. Trainer data base
 - district/state/national level,
 - manufacturing/ services/ construction/ agriculture sectors,
 - prepare/ repair,
 - short/medium/long terms

3. Employment opportunities database –
 - organized/ unorganized,
 - district/ state/ national/global levels

Employment exchange activities

1. Census of existing training facilities
2. Compilation of employment opportunities data base
3. Acceptance of employment seeker applications : education, aspirations, training, work experience, socio economic back ground (for financial support)
4. Entry gate assessment
5. Individual solution : advice on training type and institution, possible employment with estimated value add in monetary terms, help in admission and sourcing of financing, assistance in employment at the end of the training
6. Post employment exposure : If rejected then assess deficiency and repair
7. Information on establishing new training facilities

PPP spaces

1. Entry gate assessment
2. Career counselling
3. Census of training facilities
4. Establishing new training facilities
5. Managing kiosks for access to the web portal
6. Managing the data base and portal

RE-ORGANIZATION OF TECHNICAL EDUCATION DEPARTMENT

Most institutions under the Department of Training and Technical Education are on the path to excellence, despite procedural hurdles imposed by functionaries at the Headquarter and those in other departments – when clearances of other departments are needed. In order to ensure that these institutions continue to travel on the path of excellence it is proposed to give them a degree of administrative and academic autonomy. In line with this approach it is proposed to grant greater degree of autonomy in the following manner:-

- 1) ITIs – through creation of the Delhi Skills Mission Society.
- 2) Polytechnics – through the Delhi Knowledge Development Foundation.
- 3) Autonomy to selected Degree Level institutions like DCE which have achieved required degree of administrative and academic excellence. It is proposed to restructure these selected institutions on the lines of the Netaji Subash Institute of Technology (NSIT) with a Governing Body and with a greater degree of autonomy to the Director. An Administrative Manual prepared for NSIT can serve as a template for ensuring that these institutions function not only autonomously but also accountably.

Suitable administrative arrangements would be worked out for ensuring that all the above mentioned institutions function accountably, while exercising autonomy granted to them.

REVIEW OF IMPLEMENTATION OF INITIATIVES BASED ON KNOWLEDGE COMMISSION RECOMMENDATIONS

Initiatives for implementing the Knowledge Commission recommendations would be rolled out in a time bound manner. It is, therefore, proposed that the progress on implementation of the knowledge commission recommendations would be reviewed at the following levels:-

- 1) Quarterly reviews, during the first year – at the level of Chief Secretary.
- 2) Half yearly reviews during the first year – at the level of Hon’ble Chief Minister / Hon’ble Minister for Higher Education.
- 3) Half yearly reviews from the second year – at the level of Chief Secretary.
- 4) Annual reviews from the second year – at the level of Hon’ble Chief Minister / Hon’ble Minister for Higher Education.