GUJARAT TECHNOLOGICAL UNIVERSITY

Minutes of meeting on
DESIGNING ORGANIZATIONAL STRUCTURE OF
TECHNOLOGICAL UNIVERSITIES (DSTU)
29th September 2012
Gujarat Technological University, Gandhinagar Campus,
E-4, Sector – 26, GIDC, Gandhinagar, Gujarat

More than 20 Directors/Principal of Management and Engineering Colleges affiliated to GTU, officials of the University and invited speakers, Guests and core DSTU committee members participated in this meeting. The basic aim of this meeting was to identify organization's components and relevant activities of Technological universities and integrate system of Governance for four disciplines of Management, Pharmacy, Engineering and Computer application right from the level of Diploma to PG and research.

Session: 1 Inaugural Session

On behalf of the core committee of DSTU of the Gujarat Technological University , Dr. P. G. K. Murhy, the Master of Ceremony welcomed **Dr. A. P. Singh**, Dean – R&D and Innovation, Punjab Technological University, Dr. Akshai Aggarwal, Honorable Vice Chancellor of Gujarat Technological University, Dr. Gitesh Joshi, Registrar of Gujarat Technological University, Principals and other invited guests and core committee members - Dr. Satendrakumar, Professor of CKSVIM, Baroda, Dr. Ajit Singh Rana, Former Registrar of Sauratstra University and Assistant Professor, R. B. Sagar College of Pharmacy, Dr. T. D. Tiwari, Director General of PEC Campus, Bakrol and Prof. Dr. K. N. Sheth, Director of Engineering and Management, Shree Saraswati Education Sansthan, Rajpur, Kadi.

Dr. Rajesh Khajuria, Director of CKSVIM, Baroda and Dr. Trupti Almaula, Director of Narmada College of Management, Bharuch could not attend the meeting on account of brief illness.

The welcoming was followed by Lamp lighting and felicitation with flowers.

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All the persons present at the DSTU meeting congratulated Dr. Akshai Aggarwal for conducting the meeting in the own building of GTU of Gandhinagar campus.

This was followed by a welcome address by Dr. Gitesh Joshi, Registrar, GTU who had thrown light on the present status of Gujarat Technological University and he also briefed the all the meetings convened by GTU on DSTU project – right from constituting the core committee till the last meeting held on 18th August, 2012.

The inaugural address was by Dr. Akshai Aggarwal, Honorable Vice Chancellor, Gujarat Technological University.

At the outset Dr. Akshai Aggarwal stated that Technological education in India started when East India Company (EIC) set up a factory to produce guns at Guindy. Near the factory EIC set up a School for training technicians. When EIC constructed the Ganga canal to facilitate the movement of army from Calcutta towards Delhi, an institute to train civil engineers was set up at Roorkee. For the gun factory at Guindy, for Ganga canal and for setting up Railways, the designs came from England. Even today if Sardar Patel's statue is proposed to be constructed at Narmada, we have to depend upon the Americans for the designs. He said that research and design were not dealt with in our technical institutes. After independence, Indian Institutes of Technology were set up with the help of countries, which had advanced engineering capabilities.Thus IIT Madras got the help from West Germany, IIT Delhi was set up with British support while IIT Kanpur received assistance from USA.

Dr. Aggarwal said that these institutions were the best in Asia, when these were set up. But while China and other countries of Asia continued to surge forward, our institutions did not keep pace with their progress. Today the rankings of the best universities of Japan, Taiwan, South Korea and Singapore continue to be ahead of the best University of India. Similarly, he added, that Universities of Malayasia (Universiti Malaya (UM)'s rank: 156) and Thailand (Chulalongkorn University's rank: 201) are also ahead of the best University of India. India's best Universities are IIT- Delhi (rank: 212), IIT Bombay (rank: 227) and IIT-Kanpur (rank: 278) while China has five Universities among the first 50 and a few others with a rank better than 212.

Dr. Akshai Aggarwal said that a University is a higher education institution designed to convey knowledge from one generation to the next. A university while conveying the knowledge must critically examines it for its relevance and truth and it must contribute to generation of new knowledge.

He showed interesting data from a report on research output of China and India by Thomson Reuters. He said that India is supposed to be very good in the area of computers. In the area of Computers, India's share of world research output in 2010 was only 2% while that of China is 17 %.

To improve the situation what is required is "to learn to work together". He described GTU's ALVCOM (Active Learning Video lecture Communication) – a telecast program started with technical support from BISAG. Similarly ALCE is designed to develop excellent courseware through joint efforts. Similarly under Networking of Colleges for joint research, he threw light on GTU's joint research project on Kotler's Incubator on Ayurvedic Medicines which involves 45 faculty members and students at GTU from 45 Colleges and is mentored by the Kellogg Business School. He further said that on 16th August 2012, GTU has joined two research projects, for which the Chief Investigators are Professors Dr. Friedrich Augenstein and Dr. Ramesh Shah from DHBW. The two projects developed in Germany are of equal interest to India. Soon researchers from GTU will start working on the projects.

For promoting the joint research, the GTU Board for Mobile Computing and Wireless Technologies has issued a Request for Collaborative Research Proposals (RCRP) in the area of Mobile Computing, Networking and Applications (MNA).

GTU asked for proposals which provided a summary of the research proposal, with technical description with the expected challenges and other details in 4 pages along with

− The Collaboration Plan within the Team, drawn from at least three Colleges

− The outreach plans with government laboratories or large industries, having interests in the field

− The Plans to be relevant to Businesses and Industries (BIs) and other entities of the Society.

He said that what we need is to design the inbuilt structures which promote networking. We need Matrix structures, which permit joint/ multiple ways of working as needed. For Example: College Development Council may have Networking Personnel, seconded to

(i) Research & Development,
(ii) Faculties,
(iii) Schools, Post-graduate Centers etc.

Subsequent to the address made by Dr. Akshai Aggarwal, the core committee members were invited to give the presentations on DSTU project.

- **Dr. Satendrakumar** Professor of CKSVIM explained how the project of DSTU made progress from 12th May, 2012. He said that there are basically three phases of this project.

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- One is studying the current organizational structure of Gujarat Technological University.

- The second stage is studying and preparing documents on Organizational Structure prevailing other technological institutes in India and abroad

- 3rd step: Designing the organization structure for the future. Dr. Satendrakumar apprised that all these three phases are at the verge of completion and Gujarat Technological University has started interacting with other Technological Universities to get their valuable suggestions and incorporate into the proposed Organizational Structure.

He then stated that his colleague Dr. Rana will present the suggested Organizational Structure of Gujarat Technological University as finalized by the core committee members.

Dr. Ajitsingh Rana presented the suggestive model prepared by core committee members after several successive meetings. He presented 4 different components of the Organizational Structure.

First Component: Head Office Structure

1. Academic Councils,

2. Directors and Deans of Engineering, Management, Pharmacy and Computer Applications will report to Vice Chancellor on the matters related to academic matters.

3. Registrar will report to Vice Chancellor for all non-academic activities including Legal, Accounts, RTI, Information System, Library, Medicine, etc.

4. Finance committee chairman will report to Vice Chancellor on all the matters of accounts, purchase, transport, stores, etc.

5. Controller of Examination will report to Vice Chancellor and he will be assisted by Dy. Registrar and so on.

Second Component: Regional Office Structure

There will be 5 zones and each Regional Director will report to Vice Chancellor. Regional Director will be supported by Professors for academic work and Dy. Registrar for non-academic work.

Third Component: Structure for PG Research Centres

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The suggested structure also included schools for PG/Research Centres and will be headed by Director who will in turn report to Vice Chancellor directly.

Fourth Component: Gujarat Technological University Schools

The University will set up five Schools of Engineering (two), Pharmacy, Business Studies and Computer Applications. Each of the Schools will be headed by a director.

Fifth Component: Gujarat Technological University Wings

Dr. Rana stated that wings are proposed to be setup viz. legal, sports, grievance, anti-ragging, Woman Development cell, Youth and Culture, NCC/NSS, Alumni and global study. These wings are proposed to be headed by Registrar through the respective wing coordinators.

Dr. T. D. Tiwari, a core committee member had explained how the work of this mega project was divided into various activities. He briefly stated DSTU research was undertaken under 5 groups:
1. Study of Ancient universities of India - Dr. Rajesh Khajuria, Director, CKSVIM, Baroda.

2. Technological Universities/Technological Institutes – Dr. Rajesh Khajuria
3. IIT Kanpur – Prof. Dr. K. N. Sheth, Director, Faculty of Management and Faculty of Engineering, Shree Saraswati Education Sansthan
4. Global Universities – Dr. Trupti Almaula, Director, Narmada College of Management, Bharuch
5. Asian Universities – Dr. P. G. K. Murthy, Director, Parul Institute of Management.

Prof. Dr. K. N. Sheth, Director, Faculty of Management and Faculty of Engineering, Shree Saraswati Education Sansthan meticulously presented the historical research. Dr. Sheth had examined the facts of IIT Kanpur and presented the dynamic accounts of both academic and non-academic components with evaluation of 6 key elements of Organizational Structure:
1. Work Specialization

2. Departmentalization

3. Chain of Command

4. Centralization

5. Formalization

6. Span of Control

Dr. Sheth said that Director of IIT is a Principal Academic & Executive officer appointed by the Council with the approval of President of India. He is supported by Registrar assisting on all matters pertaining to administration of the institute, Dy. Director assisting Director in Academic, Administration work including maintaining liaison with other institutions of higher Learning Research, Industries, etc. Director is also supported by Heads of various department, Dean Student affairs, Faculty affairs, R & D, Academic affairs and Resource Planning and generation.

He also discussed the functions of Deans, Heads of the department, Dy. Director and Registrar.
He concluded that the structure of IIT Kanpur is multi-functional structure (centralized functionally departmentalized structure) with clear lines of authority and accountability, the structure is heavily centralized.
Further, horizontal differentiation exists as the institute is divided into specialisations. However, there exists vertical integration with standardization as rules and standards for operational procedures exist.

Session 2:

The 2nd session started after the Lunch break. **Dr. Anirudh Pratap Singh**, Dean – Research and Consultancy and Director – Punjab Technological University Campus, Kapurthala made very systematic presentation on the following aspects

• Brief Introduction of PTU
• Regular Academic and Distance Education Programs
• Examination system of PTU,
• Constituent college system and,
• Finance system in particular.

Dr. Singh briefly introduced PTU as the largest Technical University of India. He said that PTU was set up on Jan. 16th, 1997 in a Transit Campus. PTU then was Shifted to its own 78.16 acres Campus in 2008. PTU Started its journey with 09 Engineering & 05 management colleges affiliated to it. And today University has the strength of more than 400 colleges, 4,00,000 students and more than 20 Campuses.

Dr. A. P. Singh proudly stated following are the outstanding achievements of the University:

• ICT Enabled University.

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• Recipient of eINDIA-2010 Award.

• Paperless Communication with Colleges & Learning Centers.

• Strong EDP, 24 X 7 Call Center.

• Bipartite agreement with Institutions of Nepal and Bangladesh.

• Offering Industrial Training in USA.

Dr. A. P. Singh stated briefly the recent initiatives taken by the University viz.
• Online Counseling Process.

• AIEEE instead of CET for admissions to Engineering.

• Teaching in English, Punjabi and Hindi to cater to the Rural students of 1st and 2nd year students

• Introduction of compulsory subject of Communication Skills, Personality Development and Human Values in each stream.

• A Scholarship fund of Rs. 3.2 Crore

• Fee waiver scheme for economically weak students.

Dr. A. P. Singh stated that PTU is a Self financed University and is not receiving any grants from the Government or UGC. The corpus fund for the year 2011-12 of the university is Rs. 800 Crore. The investments in the Self financed universities are both from Public as well as Private sectors which are more than Rs. 5000 crore in PTU affiliated colleges and Learning Centres. The academic programs are classified into two:

1. Regular Mode
2. Distance Education Mode

The academic programs in Regular Mode include AICTE courses, Non-AICTE Courses, M. Tech Program, M. Phil, Ph. D programs. He said that PTU has affiliated

• more than 100 engineering Colleges

• 139 Colleges having Management and Computer Application courses,

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• 37 institutions imparting Pharmacy Courses,

• 11 colleges imparting Hotel Management education,

• 06 Colleges providing Architecture Education and

• 21 Regional Centre for M. Tech and Ph. D in different branches of Engineering and Management and

• 01 Regional Centre for M. Pharmacy.

• More than 2000 Learning Centres of PTU are providing professional education through Distance Learning all over the Country and abroad.

Dr. A. P. Singh also critically put up the details on Examination system of PTU. The examination system is Semester wise for the Regular program the weightage of University Exam is 60% and Sessional is 40% (class tests, assignments, quizzes) whereas DEP examination system includes weightage of University exam 75% and Sessional 25% (assignment, etc).

Dr. A. P. Singh gave the details of the university related fees for all the courses.

PTU Fees to be charged from the Colleges Heads	AICTE (in INR)	Non-AICTE (inINR)
Application Processing Fees	30000	30000
Inspection Fee per unit for each program	15000	15000
Provisional Affiliation Fee per unit	75000	100000
Continuation Fee per unit per year	37500	50000
Sports Fee per year	7500	7500
Youth Festival fee per year	7500	7500

University related fees are charged from students by the colleges and reimbursed to the PTU.

Heads	New admission	Readmission
University Continuation fee	50	50
Youth welfare fee	100	100
Cultural and allied activities fee	100	100
University sports facilities development fee	100	100
University Sports fee	100	100
Magazine fee	100	100
University Registration Fee	400	
University Enrollment fee	200	

total   1150   550

The members were highly interested to understand popular Distance Education Programs of PTU.

Dr. Singh highlighted following important aspects of DEP:

• DEP is unique public-private-partnership (PPP) model and the University has established 42 Regional Centers (RCs) in this private model across the country to facilitate the program.
• Under each RC many Learning Centers (LC) exists
• The University has retained the control of all its essential functions including academics, course material, testing, evaluation, certification and governance whereas the private parties are allocated allied functions such as database management, management information system, training, call centre, promotions, logistics and assistance to University wherever they desire etc.
• These regional centers report to the Directorate of Distance Education at the University.

Dr. A. P. Singh said that it is very interesting to note that PTU offers Multi-Entry-Multi-Exit facility wherein the students undergo two semesters of a graduate program and quit with diploma and again after a brief industry exposure they can re-join the remaining graduation period at their convenience of time and economy. The university also has lateral entry system.

As regards admissions, Dr. A. P. Singh informed the members that the Admissions are made twice a year in March and September outside Punjab and in September only in the state of Punjab. The University works on semester system and examinations are conduced twice a year in March and September. The counseling is held at the learning centres and the candidates contact the Learning centre. The admissions are done subject to availability of seats / course at Learning Centre.

He gave following details as regards LC and RC:

• Total Learning Centres **2158**
• Total Zone (Through out country) **23**
• Total Regional Centres (Through out country) **42**
• Courses in Distance Education (IT, non-IT & others like Management) **57**

• For each & every course, the fee structure in Distance Education is below 10,000/- (per semester)

• PTU has special fee waivers for economically weaker section of the community which are categorized in different manner i.e Parent less students, Father less students, Low income Group students.

• The University has established more than 450 examination centers across the country, so that the students can appear in the exam in the native places.

He further added that presently the PTU examination system handles more than 25 Lac answer books per annum and declares result much prior to commencement of the next examination. The detailed mark cards of past students are issued simultaneously.

All question papers are made available in soft copy through the web based software to the examination centre 30 minutes before the commencement of exam. Therefore, there is no risk of any paper leakage and there is no need to handle the security of question papers through banks or superintendents where human dependence is inevitable. No human intelligence is required to print these papers.

• University has established various nodal centres for collection of answer sheet. Here they are tracked, segregated and sent to various evaluation centres.

• The Regional centres can track and monitor the movement of answer sheet through a web based system and constantly update the University for Default, if any.

• The University provides pre-printed cut list with photographs, attendance sheet cum secrecy memo so as to achieve zero errors in documentation and database management.

• The University has established an in-house OMR scanning solution for faster and accurate tabulation of result.

While concluding Dr. A. P. Singh gave the information as regards Breaking of Language Barrier wherein all developed countries use native language in higher education. Second important interesting matter that Dr. A. P. Singh stated was as regards "PIT" i.e. Punjab Institute of Technology which is similar to IIT. The University has plans to establish PIT at Kapurthala (only PG Program) and three other PITs for Under Graduate program at Mansa, Nandgarh and Rajpura.

The members found the presentation by Dr. A. P. Singh very interesting. Detailed discussions were held throughout the session.

Dr. Kamal Taori, Formar IAS and Ms. Irma Marla, from Germany, made presentations. Dr. Taori was of the opinion that the rural area of Gujarat needs Technology leader. He raised a question, "Can we make rural area a business hub?", where it may be possible to invest in development of rural areas through PPP model.

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Ms. Irmal Marla suggested that university should take care of Environmental Protection because they are challenging fields of the present era. Dr. K. N. Sheth responded to the fact that GTU has already developed Centre for Green Technology wherein the Environmental Protection and Climate Change, etc. can be included.

At the end, Prof. Dr. K. N. Sheth, Director, Faculty of Management and Faculty of Engineering, Shree Saraswati Education Sansthan gave poetic Vote of Thanks to all the Dignitaries and other members present in the meeting.

The meeting started at 10.30 am and ended at 5.00 pm.