A BRIEF REPORT ON
TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME
(TEQIP Phase-I)

1. HISTORY OF THE TEQIP SCHEME:

Technical Education Quality Improvement Project (TEQIP) in India aims to improve the quality of Technical Education and Engineering Education to produce high quality technical professionals in order to raise productivity and competitiveness of the Indian economy. This project phase-I is at a cost of Rs.1,550 Crore with World Bank sharing Rs.1,250 Crore and Government of India/State Governments share Rs.300 Crore .Later on due to tsunami, the total project cost revised to Rs 1339 Crore.

TEQIP assists to improve the quality of Technical Education in competitively selected engineering institution from the participating States by providing inputs like modernization of laboratories/workshops, library, faculty and staff development, networking between institutions, curricula development, research and improve interaction with Industries , service to community and economy and tribal development plan etc.

The Project Agreement with World Bank was signed on February 04, 2003 for First cycle of First phase and on April 12, 2004 for second cycle of First phase. : The project agreement between the State government and World Bank under TEQIP was signed by the Secretary to Government, Higher Education Department at New Delhi on **12.4.2004. The Project ended on 31.3.2009.**In this centrally coordinated state-sector project,13 States are participating and supports 18 centrally-sponsored (NIT) and 109 state –sponsored institutions (State government and self financing).

In the First cycle of First phase, the six states (1) Haryana (2) Himachal Pradesh (3) Kerala (4) Madhya Pradesh (5) Maharashra and (6)Uttar Pradesh were included.

Tamilnadu has been selected in the Second cycle of First phase among the seven states (1)Andhra Pradesh (2) Gujarat (3) Jharkhand (4) Karnataka (5)Tamilnadu (6)Uttaranchal (7) West Bengal to participate in the programme.

2. THE BROAD OBJECTIVES OF THE PROGRAMME

- To create an environment in which Engineering Education selected under the programme can achieve their own set targets for excellence and sustain the same with autonomy and accountability

- To support development plans including synergistic networking and services to community and economy of competitively selected institutions for achieving higher standards.
- To improve efficiency and effectiveness of the Technical Education Management System in the States and institutions selected under the programme.

3. INSTITUTIONS SELECTED IN TAMIL NADU WITH FUND DETAIL :

The following institutions have been selected as lead and network institutions for Technical Education Quality improvement programme.

Sl.No	Lead Institutions	Network institutions
1	Government College of Technology, Coimbatore	1. Government College of Engineering , Salem 2. Thanthai Periyar Government Institute of Technology, Vellore 3. Central Polytechnic College, Chennai 4. Dr.Dharmambal Government Polytechnic College for women, Chennai
2	Alagappa Chettiar College of Engineering and Technology, Karaikudi	1. Government College of Engineering, Tirunelveli 2. Tamilnadu Polytechnic College, Madurai
3	College of Engineering, Guindy	1. A C College of Technology, Chennai 2. Madras Institute of Technology, Chennai

The allocation of funds among the 11 Project Institutions and SPFU is indicated below.

Sl. No	Institutions	Allocation (Rs. in Millions)	Amount Spent (Rs in Millions) as on June,2009
1	Government College of Technology, Coimbatore	139.635	139.246
2	Alagappa Chettiar College of Engineering and Technology, Karaikudi	157.055	156.255
3	Government College of Engineering, Salem	110.495	109.870
4	Government College of Engineering, Tirunelveli	101.665	101.276
5	Thanthai Periyar Government Institute of Technology, Vellore	105.895	105.590
6	Tamilnadu Polytechnic College, Madurai	12.545	12.092
7	Central Polytechnic College, Chennai	16.615	16.113
8	Dr.Dharmambal Government Polytechnic College for women, Chennai	19.015	18.489
9	College of Engineering, Guindy	130.570	130.273
10	Madras Institute of Technology, Chennai	99.880	99.131
11	A C College of Technology, Chennai	53.210	52.936
12	SPFU, DOTE, Chennai	15.050	13..409
	TOTAL	**961.630**	**954.680**

Note: Unspent approximately Rs 6.95 Millions.

4. BUDGET ALLOTMENT AND EXPENDITURE DURING 2004-05, 2005-06 , 2006-07, 2007-08 and 2008-09

Sl.No	Head of account	Amount Allotted		Expenditure incurred (Rs. in Millions) **as on 30.6.2009**
		Year	Amount (Rs. in Millions)	
1	2203. 00 Technical Education – 112 Engineering /Technical Colleges and Institutions – II. State plan – PA. Technical Education - TEQIP	2004-05	53.838	53.838
		2005-06	451.961	201.885
		2006-07	381.914	387.559
		2007-08	53.917	293.838
		2008-09	20.000 March,09	5.166
		2009-10	nil	11.298
2	**Total**		**961.630**	**954.680**

5. TEQIP FUND-HEAD WISE EXPENDITURE DETAIL

Sl.No	Head/Component	Total Allocation Rs in Millions	**Actual Expenditure as on 30.06.2009 Rs in Millions**
1	Civil Works	82.319	82.319
2	Equipments	602.911	602.911
3	Furniture	30.578	30.578
4	Books & Learning Resources	97.267	97.267
5	Consultants service and research Studies	1.861	1.648
6	Training/Study Tours/Fellowships	54.190	49.004
7	Consumables	19.001	18.981
8	Operation and Maintenance	25.353	25..203
9	Networking of Institutions	23.691	22.904
10	Service to Community and Economy	24.459	23.865
	TOTAL	**961.630**	**954.680**

6. PAST PERFORMANCE :

(i) Academic excellence - academic autonomy was given to 3 constituent colleges of Anna University, Chennai, Government college of Technology, Coimbatore, Dr.Dharmambal Government Polytechnic College for women, Chennai, Tamilnadu Polytechnic College, Madurai only and other colleges are affiliated with university and State board of Technical Education. Better laboratory, library and research facilities to do Ph.D were available only in the 3 constituent colleges of Anna University, Chennai and, Government college of Technology, Coimbatore only. Hence students in these colleges got good quality of technical education and got better placement .The number of papers published and Ph.D produced are less. There is no knowledge about patent right. The programmes in the 3 constituent colleges of Anna university, Chennai only got accreditation and the programmes in other colleges are not accredited.

No campus Networking and Networking with other Colleges.
(ii) Technology Innovations and Best practices: Only in 3 Constituent Colleges of Anna University Chennai had the facility and encouragement. In other Colleges they did not have these facility and encouragement.

(iii) Service to community and economy- No involvement of faculty and students to do service to community surrounding their institutions and help them to improve their economy.

(iv) Faculty and Staff development programme – There is only a little chance to attend the training programme conducted in and outside the country

7 . REFORMS IMPLEMENTED AFTER TEQIP :

(a). AUTONOMY :

AUTONOMY	FULL	PARTIAL
ACADEMIC	9	2
ADMINISTRATIVE	11	----
MANAGERIAL	11	----
FINANCIAL	11	---

The Nine Project Institutions are having Full Academic Autonomy

1 Government College of Technology, Coimbatore
2.Dr. Dharmambal Government Polytechnic College for Women, Chennai
3.Tamil Nadu Polytechnic College, Madurai
4.College of Engineering, Guindy, Chennai
5.A. C. College of Technology, Guindy, Chennai
6.Madras Institute of Technology, Chennai
7.Alagappa Chettiar College of Engineering & Technology, Karaikudi
8.Central Polytechnic College, Chennai
9.Government College of Engineering, Salem

The remaining two Institutions yet to get Academic Autonomy are:

1. Government college of Engineering, Tirunelveli (State Government has given NOC but Anna University, Tirunelveli is not given its approval)
2. Thanthai Periyar Government Institute of Technology, Vellore (Not eligible as per norms of Anna University, Chennai).

(b) BLOCK GRANT TO INSTITUTION:

Before TEQIP, Block Grant is given to all the 3 constituent Colleges of Anna University, Chennai and for the remaining 8 Government Institutions it is implemented in the year 2008-2009 with a **condition that the Internal revenue Generated such as Tuition fee, consultancy fee etc should be reduced or deducted from the Block Grant allotted by State Government.**

(c). RETENTION OF INTERNAL REVENUE GENERATION (IRG) :

All the 11 TEQIP implemented Institutions are permitted by State Government to retain all the Internal Revenue Generated such as Tuition fee, Consultancy fee etc.

(d). FOUR FUNDS:

Corpus fund, Staff Development fund, Depreciation fund, and Maintenance fund are created in each Institution and steps are taken to increase it.

(e). ACCREDITATION:

As per NBA board result released on 9.3.2009, modified accreditation status is :

Total Accredited programmes	-	58 / 70 UG and 18 /64 P.G
NBA team visited and Result awaited	-	4 U.G and 7 P.G
Applied and NBA team Visit awaited	--	8 U.G and 39 P.G

8. CIVIL WORKS:

The amount allotted for Civil works is Rs 82.319millions. The total number of 101 works taken up and completed.77 works were renovations and Refurbishments of laboratories , classrooms, workshops and administrative buildings were taken up in all the project institutions apart from construction of Multimedia centre & Library at TPGIT, Vellore.24 works were electrical works such as upgrading of transformers, wiring etc.

9. PROCUREMENT ACTIVITIES:

Purchase of Goods involves Equipments, Furniture, Books and Learning resources. The expenditure under this component is Rs.730.756 Millions There were 3131 equipments, 11,381 Furniture, 23031 Volumes of Books and 306 Learning Resources were purchased. As on date sophisticated instruments such as X - ray Diffractometer, Scanning Electron Microscope (SEM), Universal Testing Machine (UTM) were purchased under NCB. These equipments and instruments helped the students to do project work and Ph.D research work in the Institutions and also for the faculty members to do research work, consultancy works and increase internal revenue generation. This made the following changes in academic.

10. ACADEMIC ACHIEVEMENTS

Sl..No	INDICATORS	LEVEL	BEFORE TEQIP i.e. 2004	AFTER TEQIP i.e. 2008
1	Total no.of Students on roll		16457	20824
2	Total no.of Students graduated	U.G	3261	4432
		P.G	957	1304
3	Total no. of students placed through campus interviews	U.G	1302,(40 %)	3301 74%)
		P.G	385 (40%)	735 (56%)
4	No.of Ph.D s produced		95	669
5	No.of patents obtained		nil	14 and 32 applied
6	No.of papers published	National	1266	7736
		International	575	3103
7	No.of Programmes accredited	U.G	12 out of 62	58out of 70
		P.G	11 out of 48	18out of 64
8	No of programmes applied for accreditation	U.G	2	17
		P.G	0	39

11. TRAINING

Description of the Training programme	Number of Training Area	Beneficiaries
Faculty Development Training Programme , Workshop , Conferences attended by the Faculty in TEQIP Institutions	634	2439
Staff Development Training Programme attended by the Technical staff in TEQIP Institutions	300	547
Faculty undergone Foreign Training Programme	61	128
Programmes under Service to Community & Economy	721	78208
Programmes under Networking of Institutions	692	49026
Programmes under Tribal Development Plan	202	16151

12. NETWORKING OF INSTITUTIONS:

Training Programmes are conducted under Networking of Institutions which involves sharing of resources among the TEQIP Institutions by the students, staff and faculty .Networks Lab and optical Fiber Measurement, Earth quake disaster management, Modern construction methods, Modern methods in project management, Job opportunities for diploma Student and open source tools, Introduction of PLCs in Automation, Micro controller and its applications, Principles of Instrumentation, Training Program on Communication skills, Nano Technology, Automobile Exhaust Emission control, Training on CNC machines were some of the programmes that were conducted.

13. SERVICE TO COMMUNITY & ECONOMY:

Training Programmes are conducted to the local villages around the TEQIP Institutions. Because of this training programmes to the community, the beneficiaries of the respective villages & the community can start their own enterprise and generate money. House wiring, Rewinding of induction motor, Training the construction workers in bar bending ,Web page designing, Servicing of Mobile Phones, Machinist practice, Electrical wiring & Safety aspects, Training on Air Conditioning & Refrigeration, Testing of Pipes and Plumbing works, Plastic wire knitting or furniture and Two wheeler Mechanism are some of the programmes that were taken up.

14. Learning Resources :

Many softwares are purchased in all the Departments of TEQIP Institutions with multi-user facility under Network systems . These softwares are helpful for the research work of the faculty and also for the PG students and UG students to do their project work in the college premises.

15. Campus wide Networking:

A total of Rs.10.812 Crores has been allotted for Campus Wide Networking in ten Institutions through which the resources in one institution may be utilized by another institution among the project institutions and also within the institutions.

16. Good Academic Practices

1. Through campus network (intranet), Sessional marks, Circulars are sent. A paperless office is emerging.

2. To improve the teaching learning process, almost all the Faculty members are using Multimedia Projector for teaching.

3. "Language & Communication laboratory" established in all the TEQIP Institutions to develop the Language & Communication skill to the students. This practice is Commercialized. The lab is completely made operational and is used as educational aid for all the students.

4. As part of the Main Project, mini projects are given in VII semester of ECE branch for 2 credits in Madras Institute of Technology – Chennai. This enables the students to devote more time for their project and develops hands on experience.

5. Foundation Course on STADD Pro (for Structural Engineering) in ACCET - Karaikudi, useful for Continuing Education Programme. This practice is commercialized.

6. Techno – Management festival of the students is conducted every year in College of Engineering – Guindy, Chennai with the participation of nearly 10,000 students from all over the world both onsite and online, which has got recognition of UNESCO, a very rare opportunity for any educational Institution.

7. Wi-Fi facility available for faculty and students inside the campus in few Institutions.

17. Innovative Administrative Practices

- All data pertaining to human resources and physical resources are stored in digital form for easy retrieval and access to all stakeholders.

- Digital library for accessing e-journals and e-books has been established.

- Admission to the direct II Year B.E. Course (Lateral Entry) is done in Alagappa Chettiar College of Engineering & Technology, Karaikudi is done for all the 270 Engineering colleges in Tamil Nadu Statewith the help of the indigenously developed Software.

- Through out the week, various activities such as Team Building, Synergy, Carrier guidance and counselling of students are conducted in all the departments for preparing the students to the industry's expectations.

- Online feedback facility for all UG and PG students have been introduced based on which high scoring faculty are appreciated and low scorers are personally advised by the HODs in College of Engineering, Guindy, Chennai.

- In Madras Institute of Technology – Chennai, all class rooms are provided internet access with wired and wireless network through campus wide networks which enable to utilize it as resources for online teaching.

18. SOME OF THE MOU SIGNED

1. COGNIZANT TECHNOLOGY for Training and Education Research.
2. MICROSOFT CORPORATION for Distribution of Software.
3. ISRO for use of Space Technology for Education.
4. HINDUSTAN AERONAUTICS LTD. for Training Young Engineers recruited by HAL.
5. BBC for sharing content related to Science and Technology and rebroadcast on Anna FM.
6. FLEXTRONICS to create awareness and knowledge on the Hi Tech Manufacturing Industry.
7. SRI RAMACHANDRA UNIVERSITY for joint research projects in the areas of medical electronics, environmental health engineering, Bio – Technology and Bio – Medical Nano Technology.
8. VERGENIA TECH UNIVERSITY DEPT. OF CSC for Coloration in the areas of VLSI Technology.
9. CADD CENTRE Coimbatore for Training in CAD Softwares.
10. SURYA GEARS for the Training in the design of Gears.
11. SOUTHERN IRON & STEEL CO. Salem for Training in Metallurgy.