INTRODUCTION

True professional education is socio-economic in nature and evolves continuously in response to the demands of the environment and the new challenges that emerge from time to time. Technology has always been a handmaiden of human beings in every phase of the evolution of the civilizations. Primitive men used technology for securing food and security. Level of sophistication of technology has always been the index of the advancement and economic prosperity of every society.\(^1\)

Modern and developed societies are technology based and the quality of life of people is directly related to the quality and level of technical education in vogue. Technology is a term which is used now a days in almost all walks of life from the making of a pin to the manufacture of an artificial satellite. In this fast changing world, technology is the pivot around which the human needs and services revolve. Level and quality of technology in turn depends upon the level of engineering education.

In India, initially technical education was based on the British model which laid emphasis on professional practice. After Independence, it has been constantly influenced by American educational system in its contents.\(^2\) The 20\(^{th}\) century witnessed tremendous progress in every walk of life. It also saw incredible developments taking place in the field of technical education.\(^3\)

Punjab, a predominantly an agriculture state in the North-West of India, has witnessed many invasions and agitation since ancient times. Apart from agriculture, no heavy industry could grew in such circumstances. Growth of education has accelerated since the emergence of computer, electronics and information technology. Ironically again though there is no IT industry/park in Punjab worth the name, the IT

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education has always been on the increase. The products easily get placement in India and abroad due to reputation of the colleges and level of education.

**Development of Technical Education In Punjab**

**Before 1947:**

The history of technical education in Punjab can be traced back in 1916 when India was under British-rule. The Government Institute of Textile Chemistry and Knitting Technology, Ludhiana is the oldest Technical Institute in Punjab. In the beginning, the Government Institute of Dyeing and Calico Printing was started under the name of Government Dyeing School in the year 1916 in Lahore. In 1923, a Calico Printing was added and the institute was renamed as Government Institute of Dyeing and Calico Printing Shadra, Lahore (Now in Pakistan). Since 1967, the institute is affiliated to the State Board of Technical Education, Punjab. Two Diploma Courses of three years duration in Textile Chemistry and Knitting Technology are being run with intake of 40 students in each class.

In the year 1920, the Punjab Government started a new institute of technology known as “The Punjab Institute of Textile Technology”. It provided diploma in Textile Technology with specialization in spinning and weaving in 1946-47. The duration of diploma was increased from two to three years plus six months of training in mills. Another technical institute in Punjab was Government Training Institute created in 1926 for imparting practical instructions to the tanner for improved method of tanning. The diploma course in Footwear Technology was added in 1964. Later in 1976, a certificate course in Footwears was also added.

**After Independence**

The growth of technical education at degree level began in real sense after the independence, when Guru Nanak Dev Engineering College was established at Gill Park Ludhiana in September 1956 with an initial intake of 45 students. Dr. Rajendra Prasad, the first President of independent India laid its foundation stone. Besides, regular full time post-graduate course in Production Engineering, the college covered

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2 http://www.dtepunjab.com (Accessed on 23.06.2009)
only three traditional areas of engineering studies in the beginning, namely, Civil, Electrical and Mechanical Engineering\(^1\).

Further advancement in technical education was made in Punjab with the establishment of Thapar Institute of Engineering and Technology in October 1956 at Patiala with the goal of providing undergraduate and postgraduate education in engineering and technology, a close interaction with industry and a strong emphasis on research. The Institute was opened with the joint efforts of Lala Karam Chand Thapar and Patiala Technical Education Trust. The foundation stone of the present building of the institute was laid by the first president of India Dr. Rajendra Prasad on April 9, 1956.

The Thapar Institute aimed at providing technical education at undergraduate and postgraduate level, besides promoting industrial and scientific research in the state. At present, the institute offers the courses in Chemical, Civil, Computer Science, Electrical, Electronics, Mechanical, Industrial and Instrumentation Engineering at degree level.

In December 1985, Thapar Institute of Engineering and Technology attained the status of a Deemed University and started new parallel courses like Master in Computer Applications (MCA). Now it is a full private university\(^2\).

On December 20, 1962, another advancement was made in the field of technical education with the establishment of Punjab Agriculture University at Ludhiana. In 1964, the College of Agriculture Engineering came into existence as one of the constituent colleges of Punjab Agriculture University. The college aimed at catering to the teaching, research and extension needs of the State of Punjab in the field of Agricultural Engineering. Considerable contribution has been made by the college through its six departments, namely,

- Farm Power and Machinery
- Soil and water Engineering
- Processing and Agricultural Structures
- Mechanical Engineering
- Civil Engineering and
- Computer Engineering

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\(^{1}\) Information Brochure 2004, Guru Nanak Dev Engineering College, Ludhiana.pp.3-4

\(^{2}\) Prospectus 1984-85, Thapar Institute of Engineering and Technology, Patiala. 1984.pp.3-6
Punjabi University Patiala came into existence in the year 1962 for promotion of Punjabi language and Culture. In 1987, the university opened a department of Computer Science and Engineering and introduced a four year B.Tech. course in the subject. Another course on Master of Computer Applications (MCA) was introduced in 1991 which is a three years postgraduate course.

Guru Nanak Dev University was established on November 24, 1969 at Amritsar. Shri V.V. Giri, the then President of India laid its foundation stone. The main objective of the university was to make provisions for imparting education and for promoting research in humanities, learned professions, sciences, especially of applied nature and technology and of course in Sikh religion. But it still lays emphasis on modern technical education keeping in view the demands of such education.

“Between” 1972 to 1996 i.e. 25 years, six departments emerged in Guru Nanak Dev University to provide technical education courses at degree, postgraduate and research level,

- Guru Ramdass School of Planning (1972)
- Department of Electronics Technology (1983)
- Department of Architecture (1986-87)
- Department of Computer Science and Engineering (1988)
- Department of Food Science and Technology (1994)
- Department of Applied Chemical Sciences and Technology (1996)

The first technical institution with full financial support of Punjab Government is the Giani Zail Singh College of Engineering and Technology, Bhatinda. It was established in the year 1989 with the aim to bridge the gap between the technical education in backward areas. For the rapid and steady development of the college, it has been granted administrative autonomy and put under the control of Board of Governors of which the Technical Education Minister of the State is the Chairperson. Presently, the college provides the degree level courses in the seven disciplines of engineering.

In 1987, Dr. B.R. Ambedkar Regional Engineering College was established at Jalandhar which was the seventeenth and the youngest of all Regional Engineering Colleges in India then. It was established as a joint enterprise of Government of India and Government of Punjab in 1987 and was officially inaugurated in October 1989 by

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Shree S.S. Ray, the then Governor of Punjab. The college is under the administrative control of its Board of Governors with Minister of Technical Education as the Chairperson. Now, it has been converted into National Institute of Technology (NIT).

Yet, another Technical Institute in Punjab is Sant Longowal Institute of Engineering and Technology (SLIET). The announcement to set up this institute at Longowal was made by the, then Finance Minister as a part of establishment of industries in Punjab as demanded by the ill fated Akali Morcha of 1982 to get some Punjabi demands accepted from the Central Government. Government of India announced its establishment in 1985 at the Bhog ceremony of Late Sh. Harchand Singh Longowal. The institute was formally inaugurated by Sh. Arjun Singh, the, then Minister of Human Resource Development on 20th December 1991. It is fully funded by the Government of India with the following objectives:

- To offer flexible, modular, credit based, multipoint programmes in identified areas.
- To promote self-employment
- To offer non-formal programmes
- To offer continuing education programmes for working technicians
- To conduct research in the inter-disciplinary areas to solving the problems of the industry and community.

The Degree programme has been introduced since the academic year 1994-95. It provides the degree level courses in the six disciplines of engineering.

In 1993, another engineering college namely Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib opened, and in 1995 two more Government Engineering Colleges namely Beant College of Engineering and Technology, Gurdaspur and Shaheed Bhagat Singh College of Engineering & Technology, Ferozepur were opened.

To bring uniformity in engineering education, a separate Technical University was sought to bring all such colleges under one university. In 20th December, 2001, the Governor of Punjab Lt. general (Retd.) J.F.R. Jacob laid the foundation stone of the Campus of Technical University at Jalandhar. The University was created by an Act of the State Legislature in 1952. Initially, it started functioning from Regional

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Engineering College, Jalandhar. Now, its multi faculty 100 acre campus has come up on Kapurthala Road near Science City in Jalandhar. The Punjab Technical University (PTU) aims at playing a constructive role in the modern society where technical education has greater role to play. So, far it is an affiliating and examining body.

A large number of Information Technology and Software Development Companies are coming up in the State. An Information Technology Park is also being set up in Mohali. Punjab is one of the five States in the country who have been provided Internet connectivity with Technology Bureau for International Partnerships in New Delhi and further to centres of advanced technologies across the global under United Nations Industrial Development Organization (UNIDO) Assisted Programmes.

**Development of Polytechnic Education in Punjab:**

For the proper development of technical education, the Department of Technical Education and Industrial Training was created on June 10, 1977 in its present form after detaching the Technical Education Wing from the Department of Punjab, Public Works Department (P.W.D.) (B&R) and detaching the Industrial Training Wing out of the Department of Industries thereby bringing both the wings under one umbrella though each of these two wings are more than 50 years old.

The Department has two wings. The Technical Education Wing of the Department of Technical Education and Industrial Training Wing has been entrusted with the responsibility of managing Degree and Diploma level Polytechnic Institutions in the State of Punjab. The work in the Department is mostly governed by the norms, guidelines and regulations of All India Council for Technical Education (AICTE). The Department also looks after the work relating to Punjab Technical University, Jalandhar and Engineering Colleges fully or partially funded by the government as well as privately run Engineering Colleges.

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Objectives of The Technical Education Policy

The Department of Technical education, Punjab has formulated “Technical Education Policy” with the following objective

1. To develop a Technical Education System which is responsive to the new innovation in technologies, contemporary industrial culture, globally competitive market and liberalized economic environments. The output of such system must cater to the actual need, requirement and expectations of the local as well as global industry.

2. The Technical Education System should be demand driven market based self sustaining system.

3. Instead of creating new institutions, more attention needs to be paid on the consolidation of the existing infrastructure.

4. To develop mechanism for up-gradation of skills of existing technical and skilled industrial manpower at all levels through Continuing Education Programmes specially designed for industry.

5. To bring about improvements in Technical Education System by strengthening, reorganizing and re-orienting the existing administrative structure, and establishing facilities for internal maintenance of equipment, machinery and buildings.

6. To undertake Industry Institute Interaction Programmes and carry out Industry sponsored R&D projects.

7. To reduce subsidies in professional education in a phased manner during next five years through fee revision, while introducing an elaborate system of liberal merit scholarship and soft education loan schemes for financial weaker sections of society.

8. To make the Technical Education System self supporting and self financing to the maximum extent.

9. To encourage private sector participation in Technical Education on a self sustaining basis without government support.

10. To impart superior and improved skills to Punjab youth through practice based industry oriented teaching as per the present day
requirement of industry for better employment opportunities in the national and international job market.

11. To take steps for providing entrepreneurship and business oriented technical education for ensuring gainful self-employment in preference to the wage employment to the trainees.

12. To take steps for constant faculty development and upgrade their skill levels.

13. To provide vocational training through non-formal programmes to help persons having specific technical skills for better self employment and job employment opportunities and contributing to the overall development of the state particularly in the rural sector¹.

Achievements in Polytechnics

To meet the global competition, seats in polytechnic colleges are being increased in high demand areas like information technology and related courses. Similarly, the diploma courses in information technology is proposed to be introduced in 15 Polytechnic institutes. This course has already been started at Govt. Polytechnic Bathinda and Govt. Polytechnic, Lehragaga from 2001-02.

Special attention is being paid to the Punjab Technical University, Jalandhar, and it is proposed to make this University as a Centre of Excellence. Post Graduate and Post Doctoral Courses in emerging technology areas have been started there.

362 Memorandum of Understanding of Technical Education Side and MoU on Industrial Training Side have been signed with the industry to improve the quality of training for catering the changing need of the industry and to enable the human resources to these technical institutions acceptable to the industry².

It is felt that the involvement of the rural development will go a long way to supply the missing links which have shown initiative in promoting interaction with the rural community at large and have necessary capacity to undertake rural development work be selected to act as focal points to promote transfer of technology to the rural sector and made contributions to rural development. To achieve the goal of improving the life style of the rural masses, Community Development Centres have

been started in 26 Technical Institutions in the State of Punjab. Although, these centers are fully funded by Central Govt., yet such centres are set up with the recommendations of the Department of Technical Education & Industrial Training, Punjab. Facility of Internet connectivity is provided through AICTE ER Net Scheme. Under this, all engineering colleges and diploma level institutes are provided based line connections. E-commerce course has been introduced by Punjab Technical University in 4 technical institutions for employability to the youth of Punjab. Smart card system is introduced in all engineering colleges and diploma level institutes.

The Industrial Training Wing of the Department of Technical Education and Industrial Training has been entrusted with the responsibility of imparting training in engineering and non-engineering trades to cater the needs of the industry in respect of skilled workers. All the Industrial Training Institutes work under Craftsman Training Scheme of Government of India, Director-General Employment & Training under the directions of National Council of Vocational Training which is the apex body at Government of India level for coordinating development of Industrial Training in the country. Similar to the National Council for vocational Training at Central level, State Council for Vocational Training at the State level is responsible for coordinating an integrated development of Industrial Training.

Ten Institute Management Committees (I.M.Cs) have been set up for I.T.I.s to involve the concerned Industry in the day-to-day management of the Institutions. This also ensure acceptability of the final product by the industry.

Hi-Tech Institutes established under Vocational Training Project had started functioning. Training in four Hi-Tech courses of Auto CAD, PC Maintenance, Industrial Automation and Analogue and Digital Electronics is being provided to in service personnel from the industry¹.

Four polytechnics: namely, Thapar Polytechnic, Patiala, Mehar Chand Polytechnic, Jalandhar, Ramgarhia Polytechnic Phagwara and Guru Nanak Dev Polytechnic, Ludhiana were set up decades ago. These polytechnics were given grant in aid to the tune of Rs. 75% for Plan Schemes and 95% for Non-Plan Schemes.

The following Engineering Colleges are functioning in aided sector:-

(a) **100% Funded Engineering Colleges**

1) Dr. B.R. Ambedkar Regional Engineering College, Jalandhar. (50% Central Govt. & 50% State Govt. Funded)
2) Beant College of Engineering and Technology, Gurdaspur.
3) Saheed Bhagat Singh College of Engineering and Technology, Ferozepur.
4) Malout Institute of Management and Information Technology, Malout.
5) Giani Zail Singh College of Engineering and Technology, Bathinda.
6) Sant Longowal Institute of Engineering and Technology, Longowal. (100% Central Govt. Funded).

(b) **Aided Engineering Colleges : (95% for non-plan schemes and 75% for plan schemes)**

2) Thapar Institute of Engineering and Technology, Patiala

(c) So, that the grant becomes nil during the four years. Similarly, 1/3 cut be imposed in the case of aided polytechnics so as to make the grant nil during 3 years.

The aided Engineering Colleges and Polytechnics are facing lot of financial problems due to the decision conveyed vide F.D. No.2480 dated 19/3/2001.

The Department of Technical Education has proposed a draft of plan proposal to the tune of total outlay of Rs. 55173.16 Lacs and 9587.80 Lacs for the 11th five year plan 2007-12. Total budget of Non-Plan 2007-2008 is Rs. 46,82,76,000/-

In the budget proposals for 2010-11, Punjab Finance Minister Manpreet Badal has announced a substantial increase in the fund allocation for school, college/university, technical and vocational education. Realising the need to have an “educated and technically trained” workforce rather than a merely literate population, Punjab has increased its allocation by a substantial 25 percent over last year.

This year(2010), Punjab has reserved Rs. 546 crore for school education, Rs. 51 crore for higher education and over Rs. 145 crore for technical education.

In fact, the outlay for Punjab is around Rs. 43,000 crore – almost Rs. 10,000 crore more than that of neighbouring Haryana.
The existing Industrial Training Institutes will, hopefully, be turned into centres of excellence and new ones are to be set up. As many as 13 new model degree colleges have been proposed, mostly in the educationally backward districts.

Though small, efforts are being made to improve the education scene in Punjab. The policymakers, however, need to realize that the concept of job-oriented education should not be the most important aspect of learning.

This is something that most of the new age schools and colleges in the private sector have realized and are now implementing Socrates’ famous dictum: “TEACH THYSELF.”

The Department is looking after 41 Engineering Colleges, 20 B. Pharmacy colleges, 62 MBA, MCA private unaided Institutions and 55 Polytechnics & 37 Pharmacy Institutions and 180 Industrial Training Institutes including the ones in the private sector. Every year, a total of about 17640 Engineers, 14220 Diploma holders and about 20000 skilled manpower Industrial Training Institute level are trained.

A Technical Education System should not only be responsive to the new innovations in technologies, but it should also be in tune with the contemporary industrial culture and economic environments. To alleviate the feelings of the industry that the existing Technical Education System is not keeping pace with the technological advances in the related fields, the Government of Punjab has taken a number of steps for toning up the technical education vocational training systems at all levels.

The Department of Technical Education and Industrial Training is committed to bring about quality improvement, modernization and capacity expansion in the Technical Education Vocational Training System to fulfill the aspirations and expectations of the industry in today’s globally competitive new industrial and economic environments driven by the advanced and emerging technologies. This will also ensure better job opportunities and brighter future for the youngsters and at the same time help in achieving high productivity for the industry for facing the challenges of a new liberalized and globalized economy.

As a major step in this direction, a closer industry institute interaction is being ensured through the co-operation, support and involvement of industry in the

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technical training process. The syllabi of all trades in the Polytechnics and Industrial Training Institutes have been revised and courses being offered in the engineering colleges are being updated and modified in consultation with Confederation of Indian Industry (CII) and the experts from related industry to suit their present day needs. New courses in emerging technologies, like Plastics, Computers, Chemicals, Electronics, Fashion Design, Textiles, Garment Manufacturing & Para medical field etc., have been introduced to keep pace with the technological advancements so as to make available the suitably trained man power of high quality as also to improve the employability of the final product passing out of the technical institutions¹.

The organizational structure of the Technical Educational Wing, Staffing position in Government Polytechnic Wing and Industrial Training Wing are shown in the following table.

**Staffing Strength in Govt. Polytechnics**

**Table - 13 : Staff Strength of Technical Education Wing, Punjab**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of Posts</th>
<th>Government Polytechnics Sanctioned</th>
<th>Government Polytechnics Filled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Class I &amp; II</td>
<td>752</td>
<td>552 (73.40%) (Vacant-200)</td>
</tr>
<tr>
<td>2)</td>
<td>Class III Technical</td>
<td>675</td>
<td>179(26.52%) (Vacant-496)</td>
</tr>
<tr>
<td>3)</td>
<td>Class III Non-Technical</td>
<td>364</td>
<td>291(79.95%) (Vacant-73)</td>
</tr>
<tr>
<td>4)</td>
<td>Class IV</td>
<td>376</td>
<td>360(95.74%) (Vacant-16)</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>2167</td>
<td>1382(63.77%) (Vacant-785)</td>
</tr>
</tbody>
</table>

19 Class I, 3 Class-II, 75 Class III and 24 Class IV are in the Directorate.


**Table - 14 : Staff Strength of Industrial Training Wing, Punjab**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Level of Posts</th>
<th>Government Polytechnics Sanctioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>5)</td>
<td>Class I</td>
<td>55</td>
</tr>
<tr>
<td>6)</td>
<td>Class II</td>
<td>258</td>
</tr>
<tr>
<td>7)</td>
<td>Class III</td>
<td>2153</td>
</tr>
<tr>
<td>8)</td>
<td>Class IV</td>
<td>1092</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3558</td>
</tr>
</tbody>
</table>

22 Class I, 13 Class-II, 118 Class III and 34 Class IV are in the Directorate.

Source: [http://www.dtepunjab.gov.in/web/department/profile/dept.htm](http://www.dtepunjab.gov.in/web/department/profile/dept.htm)
(Accessed on 26-02-2010)
CHART - ORGANISATIONAL STRUCTURE OF DEPARTMENT
(Technical Education Wing), Punjab

PRINCIPAL SECRETARY

SPECIAL SECRETARY

DIRECTOR

ADDITIONAL DIRECTOR

DEPUTY DIRECTOR (PLANNING)

SUPDT. (Planning & Development)

OFFICE STAFF

ARCHITECT

SUPDT. (Planning & Development)

OFFICE STAFF

T.P.O

OFFICE STAFF

ASSISTANT DIRECTOR

OFFICE STAFF

DEPUTY DIRECTOR (LEGAL)

OFFICE STAFF

ASSTT. DIRECTOR

OFFICE STAFF

DEPUTY DIRECTOR (E.C.E)

OFFICE STAFF

ASSTT. DIRECTOR CUM REGISTRAR

SUPDT. (ADMN.)

OFFICE STAFF

S.O. (Accounts)

OFFICE STAFF

ASSISTANT CONTROLLER

S.O. (Audit)

OFFICE STAFF

ADDITIONAL DIRECTOR

DEPUTY DIRECTOR (PLANNING)

SUPDT. (Planning & Development)

OFFICE STAFF

ARCHITECT

SUPDT. (Planning & Development)

OFFICE STAFF

T.P.O

OFFICE STAFF

ASSISTANT DIRECTOR

OFFICE STAFF

DEPUTY DIRECTOR (LEGAL)

OFFICE STAFF

ASSTT. DIRECTOR

OFFICE STAFF

DEPUTY DIRECTOR (E.C.E)

OFFICE STAFF

ASSTT. DIRECTOR CUM REGISTRAR

SUPDT. (ADMN.)

OFFICE STAFF

S.O. (Accounts)

OFFICE STAFF

ASSISTANT CONTROLLER

S.O. (Audit)

OFFICE STAFF

Modernisation of Technical Education in Punjab

The Punjab Cabinet gave its approval on August 23, 2009 for establishing a society to modernize technical education and industrial training in the Punjab State.

The decision was taken at a meeting of the Cabinet Chaired by Chief Minister S. Parkash Singh Badal, Chief Minister’s media advisor Harcharan Singh Bains, said that the society would meet aspirations of the industry in competitive industrial and economic environment driven by advanced emerging technology.

The Board of Governors (BoG) of the society will comprise (Chief Minister as Chief Patron, Industrialist/Educationist as Patron; Technical Education Minister as Chairman and Principal Secretary, Technical Education and Industrial Training as Vice-Chairman,

The Director, Technical Education and Industrial Training, and Principal of the Institution concern will be the Secretary-General and Member Secretary, respectively.

The Executive-cum Finance Committee will have the Principal Secretary/Secretary, Technical Education and Industrial Training, a Charted Accountant to be nominated by the Chairman of the Committee as a member. The Cabinet also approved to transfer 501 Acres, 3 Kanals and 19 Marlas of land at Birla Form in the name of “Indian Institute of Technology, Punjab” Ropar for an IIT\(^1\).

The Punjab Government has permitted the Engineering Colleges and Polytechnics, especially in rural areas, to set up junior science colleges on the campus for classes XI and XII in science (non-medical) and has decided to accord affiliation to the engineering (Junior Science Colleges) and assured to provide the infrastructure facilities to engineering colleges.

Under the scheme, the Punjab School Education Board (PSEB) has granted affiliation to 12 Engineering Institutes for opening Junior Science Colleges and Doaba Group of Institutes, Chhokeran, near Rahon, in the district is one of them.

It is finalized by a Committee comprising Dr. Buta Singh Sidhu, Dean (Academic) Punjab Technical University (PTU), Mohan Bir Singh Sodhi, Additional Director, Technical Education, Punjab and Manjit Singh, Vice Chairman of Punjab

Unaided Technical Institutions Association (PUTIA) and Executive Director of Doaba Group of Institutes¹.

**Education Satellite (EDUSAT) Programme**

The Education Satellite (EDUSAT) programme was launched by the Chief Minister Punjab S. Parkash Singh Badal at the headquarter of Punjab School Education Board (PSEB) on January 2, 2008. It is being implemented under the supervision of Punjab EDUSAT Society headed by Chief Secretary.

Punjab has become the first state in the country to start education through Satellite Interactive Terminals (SITs) with the launch of a Rs. 12-crore for Educational Satellite Network (EDUSAT).

**Implementation of EDUSAT Project In The State**

EDUSAT has been installed under the first phase of the programme, providing the facility of two-way audio-video interaction with 300 institutions governed by the department of school education, higher education, technical education, medical education and research across the state. The institutions are connected online with the teaching and co-existing classroom ending at the EDUSAT Hub.

EDUSAT scheme was inducted during the year 2005-06 with the aim to provide quality education and latest ideas to remotest locations of rural and urban Punjab. Badal said, this unique ultra modern project would prove to be a milestone in the advanced education, as it would enable students to interact with the best teachers to meet their educational requirements and fulfil the government’s commitment to provide quality education to them.

Interacting with students and the teachers of District in Service Elementary Training (DIET) Centres of Bathinda, Muktsar, Block Primary Education Office, Lambi and Government Girls Senior Secondary School, Ramgarh in Ludhiana district through satellite, Badal emphasized the need to revolutionise the educational scenario in the Punjab state.

It also provides training to the entire teaching community directly through the experts. This is technically very advanced and economically for transmitting the two

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way audio video signals. This is the first exclusive satellite for serving the education sector, especially configured to meet the growing demand for an Interactive Satellite Based Distance Education System.

Badal said that conventional education would not help the youth alone in searching better job prospects, because vocationalisation of the education is the need of the hour. The government has embarked upon an ambitious programme to open skill development centres across the Punjab State to impart technical training to improve the chances of employment.

Therefore, EDUSAT facility will be introduced in all the Government schools and selected Technical Institutes and Polytechnics all over the state in a phased manner. Thus, the EDUSAT will cover 2900 institutes in the state by the end of 2011-2012.

In addition, it assured that Punjab Government would extend full support and cooperation to the EDUSAT programme and for its expansion in coalition with Indian Space Research Organisation (ISRO) which supports the EDUSAT programme through a nodal agency - Punjab EDUSAT society for execution of EDUSAT utilization programme in Punjab.

14,000 new teachers, including 1000 exclusively for English, would be recruited to ensure congenial academic atmosphere for rural students.

British Council had agreed a joint programme with the government for improving the teaching skill of English language teachers in the Punjab State.

**On-Going Schemes**

**Outlay – Rs. 385.00 Lac**

The State Government accords high priority to the Technical Education Sector. To make the Technical Education System (TES) responsive to the needs and requirement of Industry, action has been initiated on many fronts. Conscious efforts have been made to make the technical education system self supporting and self financing through fee revision and other means of internal resource generation and for continuous up-gradation and expansion of human resource development facilities.

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Participation of private sector is also being encouraged. An outlay of Rs.6688.00 lac was provided in the 10th Five Year Plan (2002-07) for this sector against which an expenditure of Rs. 1400.82 lac had been incurred. An outlay of Rs.12025.00 lac for the 11th Five Year Plan and Rs. 2655.00 lac for Annual Plan 2007-08 has been provided for the Sub-head, “Technical Education” for implementation of various schemes. An outlay of Rs.385.00 lac has been provided for this sector in the Annual Plan 2008-09.

The Punjab State has 5 Government promoted Engineering Colleges, 37 self-financed Engineering Colleges, 18 Government Polytechnic Colleges and 5 Government aided polytechnic colleges. Besides, there are 60 self financed polytechnic and pharmacy colleges in the Punjab State.

**Centrally Sponsored Schemes. Creation of Infrastructural Facilities for Running Diploma Courses For Food Processing.**

**Outlay - Rs. 125.00Lac**

Punjab is mainly an agriculture based economy; however no attention has been paid to the food processing industry in spite of availability of agricultural raw materials. Due to this reason, the industry in Punjab State could not compete in the international market.

The State Government intends to introduce a three years diploma course in Food Technology in ten Government polytechnics in the first phase as per guidelines of the Ministry of Food Processing Technical Trained Manpower. The ten Government polytechnics in which the Government wants to introduce three year’s diploma course in Food Technology in the first phase as per guidelines of the Ministry of the Food Processing and producing Technical Trained Manpower are Government Polytechnic for Women – Ropar, Patiala, Ludhiana and Jalandhar. J.R. Government Polytechnic Hoshiarpur; Government polytechnic-Amritsar, Bathinda, Khunimajra, Lehragaga. and Bhikkiwind. It will generate employment opportunities for transporters, cold storages and processing industry. The scheme will be extended on 75:25 basis between Government of India and Government of Punjab. An outlay of Rs.-625.00 lac
for 11th Five year Plans and 125.00 lac for Annual plan 2007-08 has been provided as state share under this scheme. An expenditure of 125.00 lac is likely to be incurred against the State share during 2007-08. State share of Rs. 125.00 lac has been provided in the Annual plan 2008-09 for this scheme against which Rs. 375.00 lac will be availed from GoI.

**State Funded Schemes : Payment Of Enhanced Compensation Of Land For Government Technical Institutions In The State.**

**Outlay—Rs. 100.00 lac.**

Eight schemes of the 10th Five Year plane TE.1.6(ii) Government polytechnic for women, Patiala; TE1.6(iv) New Institutes of Emerging Technologies; TE 1.28 purchase of land for Government polytechnic for Women, Raipur and Government Polytechnic for Women Amritsar; TE 1.11 Engineering College at Bathinda; TE 1.12 Setting up of Malout Institute of Management and Information Technology Malout (GIA); TE 1.13 Longowal Institute of Engineering and Technology; TE 1.15(i) Engineering College Gurdaspur, (ii) Engineering College Ferozepur have been merged to form scheme. The land for the institution covered under these schemes had been purchased by the Punjab Government, therefore Government is liable to pay enhanced compensation of land as ordered by Hon’ble Courts from time to time. However, the scheme envisages to cover any enhanced compensation of land which has been purchased by the Punjab Government for technical institutions. No salary component is involved in this scheme. The grant in aid to the technical institution has been stopped by Government of Punjab for the year 2003-04 onwards. The combined outlay for these schemes for the 10th plan period was Rs. 1441.00 lac against which an expenditure of Rs.902.88 has been incurred. An out lay of Rs.500.00 lac for the 11th Five Years Plan and Rs. 80.00 lac for Annual plan 2007-08 has been provided for this scheme. An expenditure of Rs.80.00 lac has been provided in the Annual plan 2008-09 for this scheme to meet the expenditure an account of payment of any pending compensation of land.
Establishment Of Engineering Institute In The Campus Of Government Polytechnic, Lehragaga- District Sangrur.

Outlay - Rs. 50-00 lac

This scheme was included in the Annual plan 2005-06 to start the Engineering College in the campus of Government polytechnic Lehragaga. An amount of Rs. 200.00 lac was released for the purchase of Land/construction of building of this institute during 2005-06 and 2006-07. An expenditure of Rs.200.00 lac has been incurred up to March 2007. An outlay of Rs.750.00 lac for the 11th Five Years plan and Rs.100.00 lac for Annual plan 2008 has been provided for expansion/completion of the remaining construction work in the workshop, lab and hostels for boys and girls to make this college fully functional. An outlay of Rs.50.00 lac has been provided in the Annual plan 2008-09 to complete the remaining construction work of this institute.

Development of Special Trade Institutions: Government Institute Of Textile Chemistry And Knitting Technology; Ludhiana.

Outlay-Rs. 10.00 lac

Five special trade institutions mainly (i) Government Institute of Government Technology, Amritsar, (ii) Punjab Institute of Textile Technology, Amritsar, (iii) Government Institute of Textile Chemistry and Knitting Technology, Ludhiana, (iv) Government Training Institute, Jalandhar and (v) the Government Polytechnic (W), Jalandhar are functioning in the state. Under this scheme, funds were provided for the replacement of dilapidated building, construction of new building and modernization of machinery and equipment in these institutions. It was decided to shift the Government Institute of Textile Chemistry and Knitting Technology, Ludhiana from existing unsafe building to Government Polytechnic for Women Ludhiana campus. The construction work of new building is under progress. An amount of Rs. 100.00 lacs was provided in the 10th Five Year Plan on capital side for clearing liability regarding construction of new building for this institute. An outlay of Rs. 150.00 las has been provided for the 11th Five Year Plan and Annual Plan 2007-08 to complete
the remaining construction work of the building. An outlay of Rs. 10.00 lac has been provided in the Annual Plan 2008-09 for this scheme.

**To Promote 18 Government Polytechnic Colleges in A Uniform Pattern Like (B. Pharmacy And D. Pharmacy And Opening of ITIs Polytechnics, Engineering Colleges And 10+2 Science Schools) Within the Same Premises.**

**Outlay – Rs. 100.00 Lac**

All the Engineering and polytechnic Colleges in the State of Punjab have huge infrastructure in terms of land, building, machinery and equipment. In order to utilise the resources up to the optimum capacity, a model has been conceived having multi-type of courses and educational facilities under one roof. The courses and the type of education proposed to be offered in the campus will include school level education up to 10+2 (Science Group), Pharmacy, Architecture courses along with engineers and vocational courses for the benefit of rural youth. Apart from this, these campuses will be assigned cluster of villages around them and those will adopt the said villages for their complete requirements and manpower development.

It is proposed to promote four Govt. polytechnic Colleges at Amritsar, Batala, Hoshiarpur, Mohali (Khunni Majra) and Govt. Work Centre, Rajpura as Multipurpose Academies in the 1st phase. It is also planned to accord internal administrative and financial autonomy to these institutions. Outlay of Rs. 10000.00 lac was provided for 11th plan. An amount of 1000.00 lac was provided as one time ACA during 2007-08. An expenditure of Rs. 10.00 Cr. is likely to be incurred under this scheme during 2007-08. An outlay of 100.00 lac has been provided for this scheme in the Annual Plan 2008-09.

Presently, the State of Punjab is acting not as the provider but depriver of the technical education. This lacunac in the fee structure must be set right at the earliest so that the needy but brilliant students at least can pursue these courses in the State institutes. State should act as the guardian of the poor people not that of the commercial enters. Parents of students aspiring to get admission to self financing technical educational institutes may have to loosed the purse string as hike in fees of

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several such institutes is in the offing. There should be State Fees Committee (SFC) for the fixation the fees system. T. A. Pai Judgment of Supreme Court to the political leadership has nothing to do with the equating of the fee charges of the private and public institute. If the State of Punjab really wants to spread technical education to every nook and corner of the State at an affordable price, then these two factors of mushrooming of the Engg. Colleges and polytechnics and unfair fee structure must be given fresh look from the perspective of at least those students belonging to weaker sections who are brilliant, meritorious but are helpless in the face of huge amount of fee being charged by private institute only in the past but by now State Government institutions and private together.

Recently, four Government Aided Polytechnics, at the Punjab State expressed resentment over the decision of Punjab Technical Education Directorate to discontinue ninety five (95%) grant from next year onwards.

The four Government Aided polytechnics in the state which have got a written communication in this regard include Mehar Chand Polytechnic, Jalandhar, Guru Nanak Dev Polytechnic, Ludhiana, Ramgharia Polytechnic, Phagwara and Thapar Polytechnic, Patiala. These polytechnics resented that under such circumstances, the 50 year old polytechnics would either have to shut down or increase by four times the fees levied from students. This would put an undue financial pressure on the students. These polytechnic demanded that the directorate should withdraw its decision, or else the polytechnic staff and students would have to start an agitation.