CHAPTER - 2

DEVELOPMENT OF ENGINEERING EDUCATION IN ANDHRA PRADESH ALONG WITH A BRIEF ACCOUNT OF INTELL ENGINEERING COLLEGE AND ITS LIBRARY
DEVELOPMENT OF ENGINEERING EDUCATION

The most vexing and penalizing problems of India are illiterates and the ignorance and poverty arising out of lack of education and large families. Such people are falling easy prey to populist politicians sloganeering about equality, welfare and Government providing for everything like jobs, food, housing, marriages etc. All this has only led to parties promising more and more, arousing and increasing the expectations of the people but delivering less and less. The simple truth that wealth can be created only out of hard work and savings has never been told to the public by our leaders. It is a failure of leadership. Among the countries which had thrown off colonial yoke, in the middle of the last century, India stands out as one (Pakistan and Bangladesh also) which has least cared for illiteracy and education of its people. Countries like Malaysia, Korea and China which had been devastated by Civil wars and had been equally exploited by foreign powers had, since their independence, attained literacy rates of more than 85%. They gave lot of importance to education, especially to girl's education.

Emerson rightly says: "As plants convert the minerals into food for animals, so each man converts some raw material in nature to human use". In education that which enables people to convert nature's resources into goods and services is engineering and technology. We should therefore have a large number of scientists,
engineers and of-course, doctors to look after our health and management experts. A realization of this necessity has prompted our state to carry out an extensive exercise as to how we can pull our people and take to the road of prospecting and achievement. For everything the first step is education, quality education. Education must inculcate creative faculties i.e. science and engineering.

Naturally our state has given the highest importance to quickly produce the largest number of engineers, especially those in information and communication Technologies. In 1995, we had just 35 engineering colleges. In these ten years our engineering colleges have gone up from 35 to 230. Not all of these have been allowed to come in big cities. By deliberate design they had been dispersed throughout the state. The idea is that, in course of time, they will all become centres of excellence and will be enthusing the people around into enterprise. Our state will now be able to produce 65,000 engineering graduates per year. This is larger than the total number of graduates from the wealthiest country, United States. Of these about 25% to 30% are in electronics and communication and information technology which together from the basis for an information rich society and economy.

Since Information Technology and telecommunications are engines for rapid evolution of the Knowledge based economy and society, there is tremendous emphasis on the production of very large number of high quality ICT (Information Communication Telecommunications) professionals.
This explosive growth of colleges is not matched by availability of experienced, inspiring, and talented teachers. This is sought to be overcome by using telecommunications and information technologies. All the colleges are to be connected over broadband telecom media firstly through satellite and then by optical fiber which gives limitless bandwidth. All the engineering and other professional colleges can be inter-linked and lectures delivered at any place can be interactively listened to and seen in all other colleges. Society for networking (SONET) was founded for this purpose and every engineering college is required to be a member.

The old practice of Government founding universities is no longer right or financially practicable. We must have private universities just like private colleges. If an engineering college can not become autonomous within about seven years it must cease to exist. If it cannot become a University in 12 years, it must cease to exist. This means that every college must strive to grow intellectually and entreprenurly. Nobody need be surprised if we need so many universities. On the scale of Korea, Andhra Pradesh alone needs 200 universities, which means that every district can have 10 universities. Every important town must have a university of its own. It is around the engineering colleges that we must blind the new educational edifice of our country. What is supremely important is not merely economic aspect of education, that is creation of wealth. That cannot be the end in itself. Wealth is to give us a painless life, a comfortable life, a
seeking, inquiring dreaming exploring life. It is to give us good health so that the mind is as rich as we are money-wise rich. In other words, it is the empire of the mind that we have to build. (2)

**EXTENDING TECHNICAL EDUCATION**

Technical Education helps transform students into professionals capable of handling specialized jobs. In today’s world, technology applications pervade the day-to-day life of human beings. This has resulted in the constant rise in the demand for technically qualified professionals.

In order to develop the technical education system in the state, the Government of Andhra Pradesh decided to set up a separate department to bring about coordinated efforts for the development of the segment. The Department of Technical Education was established on June 5, 1957 by pooling three streams of technical education, namely, engineering colleges, polytechnic and technical examinations.

**FUNCTIONS OF THE DEPARTMENT OF TECHNICAL EDUCATION:**

1. Implementing the policies of the government relating to technical education.
2. Ensuring optimum utilisation of the infrastructure and technical education.
3. Regulating and facilitating the working of private, unaided engineering colleges and polytechnics in the state.
4. Liaising with the All India Council of Technical Education (AICTE), New Delhi, the State Government, the Andhra Pradesh State Council of Higher Education (APSCHE), the Board of Apprenticeship Training and other bodies connected with the technical education.
5. Inspecting the commercial and technical institutions imparting training in typewriting, shorthand, etc., and issuing recognition orders.

6. Coordinating with the State Board of Technical Education and Training (SBT&T), an autonomous body for review and revision of curriculum, syllabi and scheme of examinations for various diploma courses offered in polytechnics.

7. Arranging for staff development and refreshers/re-orientation training programmes.

8. Conducting common entrance examination for polytechnics.

9. Identifying areas in the industry, where a student of the various branches of engineering and non-engineering diploma courses can be placed under the apprentice training programme.

The Commissioner of Technical Education has been nominated as the nodal agency for monitoring the approval of new institutions offering Engineering/Master of Computer Applications (MCA) Master of Business Administration (MBA)/Bachelor of Pharmacy Course, etc., by the state and AICTE.

Presently, the department has 104 Polytechnic Colleges, including private unaided polytechnics under its purview. The examinations for the diploma courses are conducted by the SBT & T. The total intake of the polytechnic college is 19,410 students.

There are 227 engineering colleges with an intake of 64,510 students, 263 MCA colleges with an intake of 12,795 students and 160 MBA/PGDBA colleges with an intake of 9,030 students.
MANAGING TECHNICAL EDUCATION IN THE NEW MILLENNIUM CHALLENGES AND OPPORTUNITIES

The dawn of Y2K marks both of a new century and that of a new millennium. All the hype about its imminent arrival has to do with man’s pre-occupation with symbolism and rituals. He needs a break from the routine, and the mundane, in order to set new goals and directions for the future whether short-term or long-term.

THE NEED TO RE-ENGINEER HIGHER EDUCATION:

Universities generate content every day through their courses and seminars. Then they throw it away. While there is a certain charge with this approval, it is not cost effective. It is rather frustrating that the features delivered by famous and great teachers are not available to successive generations of students. Re-using the content generated would be so effective, qualitatively and in an economic sense. Universities are involved in three functions as content provides, Production, Programming and distribution. They generate content, package it in course, and present it to student.

THE CHALLENGES:

The Universities are facing a crisis today in two areas: Financial and Structural. Most universities world-wide are dependent on public funds which are drying up because of tight government budgets and other concerns. The economic value of academic research is also under scrutiny. With the end of the cold war, military research is waning, the
globalization processes have thrust research efforts also into the competitive arena, and the corporate sector not only demands quality, but also timelines.

The University professors represent a breed of career academics who are quite isolated and insulated from the changes in the real world around them, distance learning is considered second best, even though Universities are hard pressed to explain the superiority of the traditional classroom processes in effecting knowledge transfer.

**THE FUTURE:**

There are new emerging challenges for higher education: Increasing number of students aspire for higher education; rapidly changing job content and employment profiles require life long learning opportunities, while professors do not mind lecturing to large classes (with audio visual supplements), marking exams for these large numbers is abhorred as a chore, the work schedules of employed learners require courses to be deliveries to them at their work places at times convenient for them, the wide spectrum of preparation and competence profiles of learners demand customization of learning packages and individual and paced instruction.

There are two revolutions which offer new opportunities to enable the new challenges to be met these are the ET and IT Revolutions. The ET revolution addresses both the issues of Technology in education, and technology of education. As far as the IT revolution is concerned, the Internet allows virtual classrooms; digital libraries
provide knowledge repositories, the web offers up-to-date material for seminar discussions, computer simulation offers an alternative to labs. Thus, Technology is not simply an add-on service as computers or audio-visuals were before, it impinges on the very soul of the University – Knowledge transfer and knowledge creation. (3)

There is a Lost challenges and opportunities starting at us in every sector, and Higher Education, in general Technical Education. In particular is no expunction. There is no doubt that conventional thinking and mind-sets will be of little value in tackling the challenges and opportunities of the future. We must incorporate flexibility, adaptability and responsiveness into our plans and actions.

HISTORY AND DEVELOPMENT OF INTELL ENGINEERING COLLEGE: ANANTAPUR

The Intell Degree College, Anantapur, affiliated to Sri Krishnadevaraya University, Anantapur vide SKU/B9/93 dated 22-07-1993 is a degree college of its kind, committed to high and quality education. It is privately supported and admits men and women students. The primary objectives are “to provide for and otherwise promote education and research in the fields of Technology, Science Industry and business and to collate and disseminate in such fields effective ideas, methods techniques and information as are likely to promote the material and industrial welfare of India” and “to train young men and women able to eager to create and put into action such ideas, methods, techniques and information”. Its aim is
"Preparation for tomorrow"

The institution is the dream come true of its inceptor Sri A.V. Prathapa Reddy and Sri N. Premnath products of India's premier institute "BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE (BITS) Pilani (Rajasthan)". The degree college began its activities in the year 1993 from the spacious building located at 2/200, III Road, Anantapur. Now, the operations are shifted to INTEL CAMPUS, Akkampalli Cross, Kalyandurg Road, Anantapur, just 5 KM away from Anantapur town.

INTEL JUNIOR COLLEGE, came into existence in the year 1996-97 and is affiliated to the Board of Intermediate Education, Hyderabad vide No.1001/E43/96-97. It is proposed to conduct Intermediate Education with residential facility from 1999. The orientation and training for EAMCET would be given by INTELL ENGINEERING COLLEGE. (4)

New courses offered by Intell Engineering College are listed below.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the course</th>
<th>Code</th>
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<tbody>
<tr>
<td>1.</td>
<td>Computer Science Engineering</td>
<td>CSE</td>
</tr>
<tr>
<td>2.</td>
<td>Electrical &amp; Electronics Engineering</td>
<td>EEE</td>
</tr>
<tr>
<td>3.</td>
<td>Electronics &amp; Communication Engineering</td>
<td>ECE</td>
</tr>
<tr>
<td>4.</td>
<td>Mechanical Engineering</td>
<td>MECH</td>
</tr>
<tr>
<td>5.</td>
<td>Civil Engineering</td>
<td>CE</td>
</tr>
<tr>
<td>6.</td>
<td>Master of Computer Applications</td>
<td>MCA</td>
</tr>
</tbody>
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Table 2.1
Fully qualified staff are working in this Institution. Laboratories are well equipped. The college has a fully-fledged modern computer laboratory with more than 200 computers under LAN, WINDOWS, NT and UNIX network system for students to work with the first of its kind in the perview of S.K. University area. This is the first college to have INTERNET facilities in Anantapur district.

ABOUT LIBRARY:

The college library is existing since its inception. (i.e. from December 1998). From 1999 the library is computerised. At present there are 12,640 plus books on all subjects.

The library is under the supervision of the Assistant Professor in Library and Information Science appointed by the JNTU Committee.

There are 7 departmental libraries in the college attached to the central library to serve the students. The seven departmental libraries are

| 1. | Departmental Library for EEE |
| 2. | Departmental Library for MECHANICAL |
| 3. | Departmental Library for ECE |
| 4. | Departmental Library for CSE |
| 5. | Departmental Library for CIVIL |
| 6. | Departmental Library for MCA |
| 7. | Departmental Library for Humanities. |

Table 2.2

These seven departmental libraries looked after by concerned heads of the departments.
The library functions on all working days from 9.00 a.m to 4.00 p.m. Three books will be issued to the students and seven books to the staff members. The borrowed books should return within one week from the date of issue. Library schedule should follow the students.

### Library Schedule

<table>
<thead>
<tr>
<th>Day</th>
<th>Class</th>
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<tbody>
<tr>
<td>Monday</td>
<td>EEE-IV</td>
</tr>
<tr>
<td>Tuesday</td>
<td>MECH-IV</td>
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<tr>
<td>Wednesday</td>
<td>ECE-IV</td>
</tr>
<tr>
<td>Thursday</td>
<td>CSE-IV</td>
</tr>
<tr>
<td>Friday</td>
<td>MECH-III</td>
</tr>
</tbody>
</table>

*Table 2.3*

If Monday falls on a holiday, the next Monday will be considered as the due date. Students should return the books on or before the last examination.

The students failing to return the books within the stipulated date will be fined Rs. 10.00 of default per book. Further, they will not be issued books until the books are returned and fines due thereon paid.

Books borrowed from the library should be used carefully and they are responsible for the damage or loss of the books taken by them and shall have to replace.

Rare books, reference books, and books not in good condition shall not be issued. They have been consulted within the library premises.
The college library is subscribing 21 types of magazines, 6 types of National/International Journals. The library have E-Journals also. These journals are from DELNET (Developing Library Network). There are 925 CDs. The library have subject CDs which are useful for B.Tech Students. These are all from SONET. The library has Television with DVD player which is used by the students. One xerox machine also maintained under the library.

A reference cell is also maintained with 2000 volumes, magazines, old records old project reports, old question papers etc.,

A 50 seated capable reading room also there in the library.

The books are arranged according to subject. The books are classified by the Dewey Decimal classification, 21 edition.

Computer is used for circulate the books to the users. Bar code system is following in circulation process. Each and every book and user has one bar code. Accession number itself is the bar code for book, and id number itself is bar code for user. Bar code reader is helpful for this process.

There are no catalogue cards, but the cataloging is done through computer.

More details of all house-keeping operations through computer, explained coming chapters in detail.
The emblem of Intel institutions, resembles an atom, the smallest basic unit of all elements in nature, may be it is not visible to a naked eye but it is at the core of all the entities. We have used it to symbolise intelligence, wheel is invisible and also to visualise our theme slogan. “Intelligence is power Supreme”. It is the Intelligence that has contributed for the scientific, technical, social, cultural, economical, industrial, material and non-material advancement of mankind. Efforts are on now to put artificial intelligence into computers, without which the computer can not be a complete machine.

To summarise, we feel that intelligence is at the nucleus (code) of every atom of knowledge. We should sharpen our skills to utilise is power and harness all the good for mankind. Our institutions show how to go about it. Let us join our hands to succeed in life and life after life.
Graphical Representation of Library Collection of IEC, Anantapur, From 1998 to 2005 March

COLLECTION OF BOOKS

YEARS

1998 1999 2000 2001 2002 2003 2004 2005

2240 3950 5706 6735 8537 9217 12200 12536
REFERENCES:


