EMPLOYABILITY THROUGH IT

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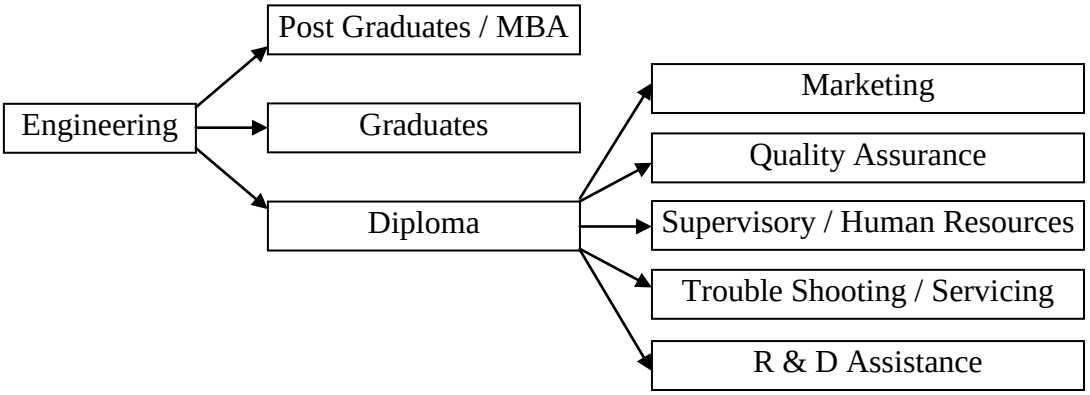
Preface



The paper is proposed to highlight on various employment avenues for engineering diploma holders who propose to continue their learning after joining industries.

The Engineering education today has become quite expensive and slowly getting beyond the reach of parents to complete their ward's education up to graduation or post graduation level.

With the job security at one establishment reducing the engineers have to try to the best of their abilities to remain marketable in future. The effect of globalisation, reduced technology lifecycle and automation at many levels are reducing the opportunities for routine skills and are increasing the demand for multiple or specialized skills.

One of the biggest challenges for the institutes offering technical education to get prepared for future changes.

The institutes are adapting to such changing needs and preparing their students to make them suitable, according to industry expectations. The training and placement facilities at the department level ensure that the regular visits to industries are held to expose the students to the current industrial scenario. The department also ensures the right placement to needy students. The department level library provides access to data handbooks, journals and magazines, which assist the students in doing application, based projects.

Most important of the above is the computational and Internet facility at the department, which is an extremely useful educational aid. This not only assists in the learning process but also helps in fast and effective communication through email and websites.

IT avenues for Diploma holders:
Present Scenario

Engineering diploma holders can be a happy lot today as there are extensive career opportunities in every field. The institutes in the urban area are receiving good response from industries for skilled manpower for their ever-changing needs. The career options in various sections are challenging and demand good communication and intellectual skills and expertise. Probably this will be the trend of future.

The Internet has been a boon to all the professionals as the textual communication has become so user friendly and one can use them more extensively to develop self-learning purposes. The normal transit procedures, which were expensive and time consuming, have become redundant today, at least for opportunity seekers.

Irrespective of the field of specialization the engineering diploma holders must make sure that they acquire necessary skills to do their activities through computers. Computers have become efficiency enhancing accessories and without adequate expertise engineers will not be able to complete their assignments.

Every diploma holder should acquire skills beyond the laboratory training. There are service industries, which have already developed certain specialized training programmes. Some of the skills programmewise are listed below.

Sr. No.	Diploma Programme	Skills through training
1	Industrial Electronics	Industrial Drives, PLCs, Microcontroller based systems
2	Instrumentation	PLC, SCADA, PC based instrumentation
3	Computer Engineering	PC assembly, troubleshooting, Software installation, Network management etc.
4	Civil Engineering	Computer aided design and drafting, Graphic simulation modeling

The trend

Today's industries readily accept diploma engineers as they are trained in the latest developments in technology. It is possible for the students to know through e-learning and other resources. Short courses related to specialized topics further make them directly fit into the industrial needs.

The concept of technicians (ITI certificate holders), Supervisors (Diploma holders) and Managers (Engineers) is gradually changing roles. Due to the advanced technology and reduced manpower at shop floor level, the skill expectations from engineers have increased. The entry level awareness of latest in the field is essential to make oneself fit into the job. Unless ITI level skills are redefined, their job may turn into unskilled category. The diploma level education perfectly fits in the today's needs as they are bound to acquire exposure to technical details along with necessary communication skills.

With the diploma engineering qualification they become eligible to enroll for many advanced (post) diploma programmes to bridge the gap in job profile. The post graduate programmes are focused towards specialization. The advantages of these courses are that they can be completed while on the job. The diploma holders should identify their choice of specialization and completing the higher education will brighten their future prospectus.

Role of Engineers is gradually switching into the following areas,

- Smart Supervision
- Network Management
- Quality Assurance and Management
- Software Management
- Hardware Management
- Process Management
- Maintenance Management
- Safety of Manpower
- Safety of Plant
- Reliability of output
- Improved Productivity Techniques
- Continuous development for adopting new technology
- Training manpower etc.

Institutional Changes

The Engineering curriculum all over the country is geared up to face these challenges. The AICTE has established the norms, which are quite conducive to adopt and to modify infrastructure as per new innovations. The institute faculties are retrained to bridge the gap. Regular refresher programmes equip them to teach latest topics. The AICTE staff norms ensure well-qualified and competent staff being appointed at institutes to provide quality training. AICTE pay scales over the years have improved and are quite attractive at present to attract the best of the talent from universities.

The need for accreditation has been emphasized at various levels and the managements have started accepting this as one of the priorities. Majority of the engineering institutes have either acquired accreditation or are in the process. This has resulted in the upgrading of existing facilities with proper vision and mission. The long-term strategies and planning introduced during the accreditation preparation has resulted in change of attitude and commitment among staff and students. This is a foundation exercise, which prepares the institutes to provide appropriate training to aspiring engineers.

The institutes should now prepare to face the global competition failing which their existence will be under threat. Higher education will now be treated similar to industry with accountability all levels. With the rigorous performance appraisal

system, the quality training will be ascertained as well there will be progressive development in line with the vision, mission and objectives of the institutes.

The institutes may have to tie up with other similar agencies for joint tie-up programmes for increasing their facility utilization, effective use of manpower and to increase revenue generation. To be very precise institutes should make efforts to become centers of excellence by developing role-model facilities in professional way.

IT Facilities

Today there is a healthy competition among institutes to provide best IT infrastructure. With the learning becoming more stimulating the major share of recurring and non-recurring budget is earmarked for this purpose. As IT has made inroads in every field of engineering it has become an inevitable section of all departments. The extensive use of IT for technology learning and practicing purposes will yield best results.

The Library, which was a bookstore earlier, has become an e-learning center or information centre. Libraries have gone digital and have access to information round the world. The essential data for scholars is available at the fingertips. All these factors have resulted in quick and quality learning process.

The IT infrastructure availability can reduce the stress on the teaching faculty. The e-learning concept where use of teaching aids in the form of PowerPoint presentations, topic related CDs can make teaching and learning a pleasant experience. Within the short period maximum input can be provided to students. By providing curriculum and courseware through websites can further ease the task. The students who find it difficult to interact with the teachers can do so through email and Internet.

In all the class rooms will be converted into smart training centers and at times teaching may be made through virtual class rooms. All these may help in reducing stress on students and if properly used can provide excellent results.

Industry Institute Interaction

With the IT literate engineers, industries are benefited to the maximum. Industries are showing keen interest in educational system in advising for curriculum changes, Laboratory developments, permitting students for industrial visits and allowing vacational and Inplant training. This enables the industries to understand the training process at institution and suggest necessary modification. The fresh engineers are available to industries better equipped with technical and IT skills.

The introduction of subjects such as

- Communication Skills
- Generic Skills
- Project Management
- Seminars and Presentations

have proved to be very useful in development of personality of individual engineers.

Industrial experts are invited at the institutes to interact with the students, to deliver guest lectures, to provide training in specialized areas etc. This enriches the training process and benefits students as well as the industry.

As the future trend is towards joint programmes it is mutually beneficial if industries tie up with institutes. The students at the institutes may be useful to industries even when they are undergoing their programmes. Some of the needy students may work in the nearby industries on part time basis during the programme period and on full time basis during vacations. This will provide some financial benefit to students to take care of educational expenditure and industry can gain through their services.

Employability

All the above-discussed topics elaborate how the education system has undergone changes in the past couple of decades. The training and employability will go hand in hand in the present situation. It is the high time now that the engineers will acquire all necessary skills and look for opportunities, which are available globally.

Last decade witnessed large growth in demand for technically skilled smart personnel. With the students reaching their prospective employers through Internet and email, the placement scenario has become bright. Many organization conduct teleinterviews or conferencing through Internet. Engineers are saving their valuable time, money and energy, which they would have otherwise spent for traveling.

The industries provide ample training on new technology and hence it helps in the development of individual as well as the organization.

New technology is aiming towards following trends

- Productivity
- Quality
- Cost Effectiveness
- User friendliness
- Safety
- Reliability etc.

These developments will enable the engineers to upgrade themselves on regular basis to make them suitable for present as well as future.

Conclusion

To conclude with I would mention that today's technology scenario and industrial atmosphere provides employment security to the skilled engineers who are prepared to adapt changing trends from time to time.