

# Education and training in pulp and paper technology

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As the maxim goes "Intelligence is like the edge of a sword which needs occasional sharpening", and this sharpening can be endeavoured to achieve through a medium known as education or institutional training as it may be termed. In the words of Madam E. Coleridge an eminent writer of her time on books: "There are books but are no books." Synonymously, there can be institutions or institutional trainings that are no institutions or no trainings. Institutions which can impart appropriate and pertinent education objectively are only entitled, so to say, to enlist themselves as institutions. Keeping abreast 'Education and Training in Pulp and Paper Technology', it is worth ruminating over the happenings around. In this era of Scientific developments when country goes to launch 'Agni' & 'ICBMs' and scientists going to measure Antarctica, it looks something ridiculous to sit to design education and training in Pulp and Paper Industry; instead it was to modernise, extramodernise or ultramodernise this education or training. Inadvertently, one is constrained to think 'Is that this subject sinking or it is at the verge of crying to mean help me to help you?' Taking it not to be its struggle for existence, let's venture to have a glimpse of the entire situation.

When we aspire to become more technologists or 'engineers than clerks, it is implied that we look for better placement in society and life after the institutional education. It would be nothing but nipping in the bud if these engineers and technologists are devoid of suitable opportunities. So before a professional course is framed, this underlying philosophy of their satisfactory placement is to be borne in mind. While introducing a new course this ethics has to hover all along that it has to have standard at its very inception, it has to maintain its standard if it cannot be better. Its value is to be protected rather than putting it to orphanage and allow it to die of its own. To be in closer proximity of the subject and without deviating much, it can be accepted that at its outset, the inception

of Pulp & Paper Technology course was the need of the time. Country had nothing in the name of Paper Technology institution exclusively. People did work in Paper & Pulp industries, but it was more a skill than science or defined technology. It was by dint of intuition that skills were being managed. With the advent of time, it emerged out to be an elaborate and discretely defined science which engulfs almost all disciplines of engineering and technology, may it be computer engineering or micro sciences or bio technology at some stage or other. We can't forget having paper thermometers to-day which China had developed-economically feasible and technically viable.

Conceptually, to keep pace with this race of to-day when every moment is more important than other, how can we not update our views on the subject; Besides, changing culture of the world as a whole, our own country, India has undergone tremendous changes. It had definite impact on its social, cultural and economic set up and consequently on industrial houses-Paper industries in particular. Demand for paper and hence for Technologists has increased, but supplies could not be adequate. To bridge this widening gulf between increasing demand and scanty supplies, it was essential to enhance production and hence to have more technologists and institutions. Nevertheless, there was advancement and self sufficiency in many facets, but when explicitly talked of Paper industry or else institutions, the approach was step-motherly. It passed through many adversities and is still not out of it. It continues. Reasons can't lie attributed to policies only. Prime reason was financial crisis, position of raw materials so on and so forth. What transpires from it or as it could be perceived this had affected the paper industry's growth, employment potential and hence the education in this discipline of Paper technology in

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particular. It is now required to assess, ascertain then formulate, design and review the total position at a glance in respect of the total requirement. job opportunities, future plans of modernisation and industrialization. This undoubtedly dictates the harmonization and then standardisation of the degrees which would be conferred-systematizing and restructuring the syllabi embodying needful training. Very many institutions in India are preparing people in some form or the other in the guise of education in Pulp and Paper Technology. As such, it can be summarily said that a comprehensive course of four years leading to B.Tech. (Pulp & Paper) and 3 years Diploma in Pulp & Paper along with elaborate and extensive practical training in specific industries should be the strature with good exposure to industrial environment in general. The minimum basic qualifications for admissions to be on the same pattern as for other branches of Engineering. The degree holder in Paper Technology to be at par with other Engineers. The course and the institution must find affiliation to Institution of Engineers and these people should be allowed to compete in Indian Administrative Services or State Services, besides being allowed for Indian Engineers Services on the basis of qualification. Furthermore, advanced studies e.g, M. Tech. and further research will automatically commence as on going course. There too, the quality and the standard is not to be sacrificed at any cost. Equally the merit of the one who supervises these course; has to be still superior and impregnated with distinction and dedication.

When the various courses already in existence are examined or scrutinized, it is observed that the Diploma course in Paper Technology as conducted by Roorkee University after B.Sc. degree in Science, is deficient in practical training. Those candidates who are sponsored by industries are with very poor background and response also is not very encouraging. Consequent upon this, the quality of the students coming out is substandard and the course is likely to be closed down. Again, the Laxminarayan Tech. Institute, Nagpur has no good equipments in cellulose technology

department as is understood. It is three years course after B.Sc. and hardly six to eight students turn up in this course Tours are not organised as a part of educational training, It has a bleak future. Likewise, other institutions conducting. Paper technology courses are also deficient in some aspect or other. The teachers do not prefer to go for industrial training even though there are UGC grants. It is therefore, imperative to think that the quality and standard of the teachers and the taught is going to be any better. The intention is not to offend anyone-if taken to be so, it may be forgiven.

Conclusively, we must have a well structured course in Pulp and Paper Technology conferring B. Tech (Pulp & Paper) degree at par with other Engineering degree courses. They must be trained by a group of learned and experienced teachers of their field with sound academic back-ground and industrial experience in well equipped institutions to produce meritorious products who later bring Laurels for themselves and to the country. Reality to prevail than being in be wilderness or darkness. Be it like this, this dirth of knowledge amongst technologists will fade away to bring it true that awareness is like the shadow of a tree that grows until the reality shatters the delusion.

This, in fine, is going long way to protect the dreams of our Archi'ect of modern India, Pandit Nehru who reckoned industries, dams, bridges etc. as the temples of our modern India-which is ultimately the produce of our versatile engineers and technologists. The responsibility of the Government and the institution is to have a centrally controlled Technical Board for Pulp & Paper and allied industries-education and training.

Hence let's design a curriculum to-day to design better engineers and technologists who could design and build a better India for to-morrow.

This should be the summum bonum of our this exercise of to-day.