

# A success story of Industry- academia integration

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## Abstract:

The purpose of presenting this paper is to share our experiences regarding role of Industry academia integration. In this paper we are including our success story of Industry academia relation a living example of building skill India thought off by committed educationists and industrialists 40 years ago having 100% placement till today. The success story presented brings out the details of conceptualization, curriculum design and course delivery model for an interdisciplinary course on pulp and paper technology at the under graduate program in Applied science.

Bangurnagar Arts, Science and Commerce College, Dandeli sponsored by the Dandeli Education Society, is one of the premier educational institutions in North Karnataka. Born as an offshoot in 1974, with a sense of social obligation of West Coast Paper Mills Ltd., Dandeli one of the largest paper industry in India. With its high academic standards, excellent results and liberal facilities, the college figures prominently on the educational map of Karnataka State. The Bachelor of Applied Science (B A Sc) course of the college is one of the earliest attempt in India in Industry academia interaction for mutual benefits. The college runs a unique four years degree course of Bachelor of Applied Science with specialization in Pulp and Paper technology since 1978 and a four semester PG course M.Sc. (Tech) Pulp and Paper of Karnatak University, Dharwad with a tripartite MOU between KUD, WCPM and College since 1998. So far over 600 graduates and post graduates of this course have already made their mark in the paper industries around the globe. The structuring of syllabus has been done meticulously by adapting and absorbing the changes taking place in the industry with the kind help and guidance of the experts and senior alumni from the industry. The alumni of this course in particular have provided human resource required for the process development, marketing field in allied industries and research in paper and related fields in India and abroad and consequently helped the National development.

Key words – B A Sc, M Sc Tech, KUD, WCPM, BNDC, Pulp and paper.

## INTRODUCTION

Paper is one of the common commodities that we need in our day to day life. Modern papermaking had its birth in 16<sup>th</sup> century and since then, paper sector across the globe have grown by leaps and bounds. Globalisation, technology and literacy have made the paper sector one of the most important sources of revenues in our country. With increasing demand of 'readymade' manpower in the country, Bachelor of Applied Science (BASc) found its roots in the year 1978 under the sponsorship of WCPM and Dandeli Education Society(DES), Dandeli. Our course is a unique experiment in Academia Industry Interaction which is a standing example for Skill Development introduced 40 years ago in BNDC and running successfully till today as self-financed unaided course with the support and help of one of the largest paper industry in India ie West Coast Paper Mills(WCPM) Limited Dandeli. Ever since, the course has had the distinction of providing the paper industry with 'diamonds' that not lost their luster in the years gone by. Today the products of this course have the privilege of being well placed in the top management levels of leading paper and allied industries across the globe.

This paper brings out the success story of the Academia - industry interaction, aims not only to fill the spaces of supervisory levels in the paper industry, but to prepare trained graduates who can make a mark in the industry. Here we focus on the 4 year BAsC course offered to cater the above mentioned goal. The paper discusses about the involvement of West Coast Paper mills Ltd at different levels of course design and execution and also reflects on the outcomes of the activity. There is a high demand for qualified graduates in the pulp and paper industry and related fields. The desire for the students to obtain industry-based training at the undergraduate level and step up to the higher level of competency in this field is the eventual goal of this course. The involvement of not only WCPM but many more paper mills and allied industries and chemical suppliers to paper industry at different levels has enhanced the learning of the students along with developing industry specific skills so that they can confidently fit in to job offered by any of these. The PG course M.Sc. Tech (Pulp and Paper) in the year 1998 added one more feather in to our cap by opening opportunities in Research and Development (R & D) where many of our post graduates have established themselves successfully not only in India but also in many other countries. This course is a boon to students who cannot afford Engineering course cost and are interested to study some specialization at UG level so that they will get placements. Many meritorious students from other states are studying with us because of financial constraints and others mainly because of 100% placement.

The collaboration requires the industries to participate in designing of course syllabi, participate in Board of studies (BOS) and Board of Examiners (BOE) of the institute and University, provide technical training to the faculty, conduct expert lectures and workshops to students, provide internship to students, sponsor industry specific hardware, software and tools to institute. The institutes in turn provide the industries more qualified graduates with industry specific skills. The course also provides opportunities to students to conduct research specific to industrial projects in the college as well as during in plant training.

### **BAsC COURSE AND CURRICULUM**

This industry- academic venture was prepared jointly by interaction between academic luminaries of the college, University, experts and senior people of the industry in particular WCPM. The course curriculum was evolved jointly by them is interdisciplinary syllabi comprising components of pure science, applied engineering and technology language and management. Project work and industrial training are integrated in the course syllabi which prepare graduates to handle day to day work confidently. This course has all the ingredients to fulfill the needs of a good papermaker. There has been continual improvement in the course content and teaching methodology to meet the growing needs and demands of the paper industry.

### **UNIQUE FEATURES OF THE COURSE AND ROLE OF INDUSTRY**

Well-timed and well-deliberated exposure to the industry provides a much-needed experience to the students. Internships or part-time projects that students can work on provide practical insights about how the industry operates and expose students to the current realities of the workplace. While there is no guarantee that these internships will fetch permanent jobs, it will equip the students to adjust to the needs of the business once they actually join the industry. Such opportunities boost student's confidence as they learn a lot by being present in the workplace for three months in third and fourth year during the course which also reduces burden of training them for the industry providing job.

The college was first accredited by NAAC with 4 star and reaccredited in the year 2007 by B++ and third cycle in 2014 with B Grade with rating of 2.79 CGPA. Department's contribution is appreciable in achieving this high ranking.

- ❖ Unique inter disciplinary 4 year degree non semester course in South East Asia.

- ❖ Students scoring 50% marks in PCM at PUC or equivalent examinations are admitted through entrance test conducted by college.
- ❖ Chemical Engineering based industry relevant curriculum to take care of current technologies and innovative ideas.
- ❖ Highly rationalized fees structure draws students from all over the country.
- ❖ Competency of the faculty and students upgraded by skill enhancement
- ❖ Well qualified and dedicated staff.
- ❖ Internship to students provided by regular mill visits, project work, 45 days inplant training in large and small mills throughout India and industrial tours.
- ❖ Skilled ready man power supplied to paper and allied industry through campus recruitments.
- ❖ Rich library facilities at college and Research Centre of WCPM, and access to the specialized testing equipment available in Research Centre, Quality control and central laboratory of WCPM.
- ❖ Hostel, mess, Internet, gymnasium, outdoor and indoor games facilities provided.
- ❖ Regular seminars, discussions, lectures and interactions with experts and alumni to encourage students and to benefit staff.
- ❖ Close collaboration with mills throughout India and other research and educational institutes related to paper field.
- ❖ Industry specific research conducted through collaboration and small consultancy projects at institute and mills enhancing research orientation.
- ❖ Scholarships of 1,20,000 rupees and silver medal from Apcotex Co.Ltd., Mumbai, A D Choudhary (Former Director of WCPM) Memorial Gold Medal dispersed every year.

### **KARNATAK UNIVERSITY'S POST GRADUATE CENTRE**

A post-graduate program leading to M.Sc. (Tech) Pulp & Paper of Karnatak University, Dharwad has been started in 1998 in pursuance of a tripartite Memorandum of Understanding among the college, the University and West Coast Paper Mills Ltd., Dandeli. Along with B.A.Sc, BE and PG diploma, B.Sc. graduates with chemistry as one of the subject and 3 year's industrial experience in any paper mill or allied field are also eligible to take admission to PG course. Our post graduates are also well placed around the globe and few have made a mark in applied research. This specialized PG course is also the first of its kind in South East Asia fulfilling the long felt need of paper industry in India for advanced studies in Pulp and Paper Science technology. Many of our graduates had to go abroad for their higher studies earlier which was not affordable to all graduates. In addition to the infrastructure and staff available in the college they are trained by experts in the mill and get opportunity to utilize R&D facilities like ultramodern laboratories, sophisticated equipment, pilot plant facilities for advanced studies in Pulp and Paper Science Technology and technical library with access to national and international publications.

### **RESEARCH AND DEVELOPMENT UNIT AND CONSULTANCY WORK:**

It is the R&D function that provides a platform for creativity and innovation to flourish in an organization. Innovative breakthroughs have happened only because of painstaking efforts of the R&D function. Perseverant efforts are needed when one is in pursuit of research. Research helps people nurture their potential and achieve

goals through various opportunities. These can be in the form of securing employment, scholarships, training grants, project funding, business collaboration, and budget traveling among others.

- Research & Development activities encouraged through R & D foundation and PPA.
- Twenty three consultancy projects completed and eleven research papers and a chapter in the book are published.
- One major research project and two minor research projects funded by UGC successfully completed.
- Unconventional raw materials like cotton stalk and coconut fiber, areca leaf sheath and banana stem tested for use in papermaking by UG and PG students
- Earn while you learn to help needy UG and PG students involved in research.
- Collaborative research work done with Food and Nutrition department of University of Agricultural Science, Dharwad on jute and rag pulp blending and study of strength properties.

## ALUMNI AND PLACEMENT

Alumni are great role models for current students and are often well placed to offer practical support to students as they start their careers. Alumni are often in the position to engage the expertise of the institution in their professional lives. Alumni are the brand-ambassadors of the institution they graduated from. Institutions have realized how a strong and a positive relationship with their alumni can benefit them socially, academically and professionally. Likewise even the alumni community have realized that it's not just a mere nostalgia that they associate their alma-mater with, but it's much beyond that. Department keeps touch with all alumni members. With support and help of alumni, four booklets on papermaking formulae are released by the department through PPA. Alumni and staff working in the department have collectively worked to prepare practical procedure manuals which are very useful to students. Addresses and contact numbers of all alumni compiled and released during silver jubilee celebration of the course. Department has hosted two alumni meets on large scale. We are grateful to all Alumni who have contributed generously for medical needs of present and past students, scholarships to rank holders and financial support to poor and needy students. Many alumni have donated pulp and paper related books to our library.

100% placement even after 40 long years justifies every claim made about the excellence and relevance of this job oriented course. Nearly 600 graduates and 80 post graduates completing the course occupy responsible positions in more than 50 big and small paper mills across the country and abroad. Many of the pass outs have also joined allied industries such as chemical sales and marketing, technical services, machine tools etc., and drawing lucrative salaries on par with engineering graduates. A few have even set up their own industrial enterprises, related to paper production, converting, plastic appliances needed by paper industry, starch and guar gum and other additives manufacturing, consultancy, printing etc. A few are successfully working in the teaching field. Many of our alumni are working in mills abroad like USA, Egypt, China, Canada, Malaysia, UAE, Abhudabi South Africa, Thailand, Swaziland, and Dubai etc. in Paper and Allied Industries. Alumni list supports our claim.

**PLACEMENT POSITIONS :**

<b><u>Particulars</u></b>	<b><u>UG</u></b>	<b><u>PG</u></b>
Working in Indian Mills	398	53
Working in Mills abroad	32	13
Other allied fields	88	11
Pursuing Higher studies	3	-
Own Industry	5	1
Teaching field	5	1
Other than paper field	34	-
Private Business	34	-
<b>Total :</b>	<b>599</b>	<b>79</b>

**FUTURE PLANS OF THE DEPARTMENT**

The course has been marching ahead since 1978 only to become better with each and every step. 100% placement, increasing campus interviews, encouraging response from the industry reveal the story that the products of this course have established that they are the best in the industry. Further study provided by the introduction of the M Sc Tech course is instrumental in enhancing the skills of graduates to a great extent. But still the department and staff are collectively working hard to make the future best by following plans.

- ❖ Building up relations with similar institutions like IIT-ROORKE SAHARANPUR campus, CPPRI, LIT Nagpur, FRI – Dehradun & Diploma Institutes at Amritsar & Trichi.
- ❖ Conducting Short term courses for students and staff and employees of mills
- ❖ Arranging international level & national level Seminars and Alumni meets regularly.
- ❖ Mutual education and research exchange programs in collaboration with some of the foreign universities through alumni.
- ❖ Departmental Publications to help and improve writing skills of the students.
- ❖ Strengthening the PG course with interstate collaborations
- ❖ Enhance alumni participation in various developmental activities.
- ❖ Setting up a Paper museum depicting past, present and future of paper

**CONCLUSION**

At present both industry and institutes are working in highly competitive environment .It is important for academia and industries to get together to identify the types of skills that students need to work in real life. There should be synergy between institutes and industries. In this regard BNDC Dandeli and WCPM Ltd are working collaboratively to minimize the gap between industry and academia. The efforts have resulted in enhancing the quality of education and enriching the skills and knowledge of students specific to pulp and paper domain. The industry has also benefitted by this collaboration as they get industry ready employees. It would be great to see employers coming forward and working exclusively with the academicians to create and develop a shared model for jobs and curriculum to address their specific industry requirements. The successful model will ensure many benefits for everyone -the graduating students will find their transition into industry roles smoother, employers will

be able to hire people who are skilled and job-ready and academic institutes will take great pride in seeing their students getting placed with good firms. .

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**We conclude by stating that the past was good, the present is better and the future shall be the best.**

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