

Title of the Project : Possible Interaction between academic institutions and industries in Kerala.
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Implementing Agency : State Committee on Science, Technology and Environment, Govt. of Kerala.
Year of Completion : 1995

Objectives :

The major objectives of the present project were :

1. To assess the present status of interaction between educational institutions and industries in Kerala
2. To consider specific measures to increase the interaction between educational institutions and industries
3. To consider the need for modifying existing curricula to meet the current and emerging needs of industry in Kerala
4. To consider the organisation of courses linked with better utilisation of the abundant natural resources of the State and
5. To consider the need for new courses, and the role of industry in the organisation and operation of new courses.

Recommendations :

I Stocking Taking :

1. A Directory of Specialists in Industry, and on Academic Institutions interested in interacting with each other be prepared and circulated
2. A Directory of facilities available in each Department in terms of expertise, equipment, facilities, and related work done/in progress indicating in brief, project profiles on the possible use of their expertise for industrial units in Kerala, be prepared and circulated.
3. A Directory of testing and experimental facilities in Industries, in Academic Institutions, and in other Establishments be prepared and circulated.
4. All research studies and project reports related to Industrial problems, be fully documented for use by interested persons.
5. Each industry be requested to identify the various problems in production, marketing management, waste disposal, etc. and contribute to be preparation of an "Inventory of Industrial Problems" which may be referred to suitable Academic and Research Institutions for possible solution.

II General :

1. Industrial problems of a technical nature be continuously monitored by an appropriate governmental agency with resources to sponsor requisite studies, investigations, and research expeditiously.
2. A total energy audit of all major industries in Kerala be carried out with the appropriate association of expertise from the Engineering College.
3. The generation and supply of electricity be treated as a production and not as a service-industry and its economics studied in depth with appropriate association of all the Engineering Colleges.
4. Studies on the budgetting of energy in case of shortages, as at present, are necessary to ensure adequate stress on the productive sector, and to prevent serious injury to the small scale sector which leans heavily on bank loans.
5. Strategies have to be evolved by which the high efficiency, high

productivity and higher creativity, of the workers in Kerala can be utilised appropriately even if the labour costs are high.

III Sponsored Research and Consultancy :

1. The Sponsored Research and Consultancy Bureau of Cochin University, which has been able to arrange consultancy relations with a large number of industries, be strengthened to enable greater stress on sponsored research projects with support from Industry.
2. Every University and Engineering College be enabled to have a Sponsored Research and Consultancy Bureau for enabling appropriate linkages with Industry.
3. Research and Development projects/problems of possible interest to industry may be referred to industries in the connected areas for their response, to increase industrial relevance and expeditious utilisation of results obtained.

IV Academic Institutions :

1. technical and Managerial specialists from industries be given suitable representation in the Syndicates and Academic Councils of the Universities, and the Advisory Committees of the various Departments and Colleges.
2. Suitable manpower studies be conducted by Universities in consultation with industries, to assess the type and quantum of possible requirements of specialised personnel, especially in areas of increasing importance, like Biotechnology, Ocean Engineering, Petrochemicals, Non-ferrous Metals, Ceramics, Composites etc.
3. Studies on the employment potential of energising Small Scale Industries in Kerala need to be carried out by academic institutions.
4. Specialists from Industry be invited to present individually the technical problems faced by them before selected academicians, who may be provided facilities for visiting the factory, and later invited for a group discussion, to consider the various suggestions. This may become a regular programme for increasing Industry-Academic Interaction.
5. University Departments should organise group discussions with representatives from concerned Industries, on topics of mutual interest.
6. Academic Departments and Industries may organise Open House Days periodically for visits and discussions.
7. Suitable experts in Industry be associated with the organisation and conduct of research on industrial problems for advanced degrees at the University, or in Industry where appropriate facilities exists.
8. Research and Development Projects/Problems of possible interest to industry may be referred to industries in the connected areas for their response, to increase industrial relevance and expeditious utilisation of results obtained.
9. Project work on utilisation of industrial waste material be encouraged and suggested by industry.
10. Financial support be provided by industries for carrying out Project work, Research and Development, on problems of special interest to them.
11. Any study brought out on the basis of data furnished by industry should acknowledge the fact, copies of such reports should be made available to the industry, and be jointly discussed to derive maximum possible benefit.
12. Suitable specialists from industry be invited to spend time in academic institutions for a duration from a few weeks up to an year, to initiate new programmes, provide instruction in specialised areas, and for conducting research and development on problems of industrial

significance, and that such specialists be provided necessary facilities and status to enable them to function effectively.

13. All research studies and project reports related to industrial problems, be fully documented for use by interested persons.
- 14 The Practice School concept of associating teachers with students trainees in industrial placement be promoted to ensure mutually satisfactory results. Continuing education programmes like B E (Part-Time) must have contact sessions in locations as close as possible to industry intensive areas.