



GOVT. OF KARNATAKA

**Vocational
Survey Report
of
Bangalore Dist.**

DEPARTMENT OF
VOCATIONAL EDUCATION
KARNATAKA

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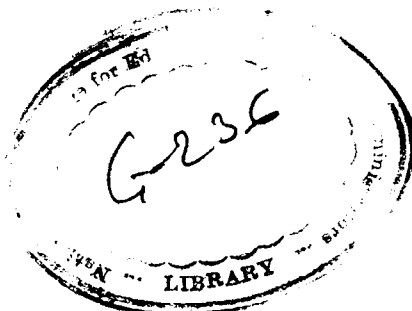
VOCATIONAL
SURVEY REPORT
OF
BANGALORE DIST.

DEPARTMENT OF VOCATIONAL
EDUCATION

KARNATAKA

1978





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MESSAGE

“Change the system of Education” .. is the talk of the day. But how?

Several attempts have been made in the past without much success. The Education commission (1964-66) has recommended greater diversification of vocational courses at the Higher Secondary level. They have pointed out that training should cover not only people who seek employment but also those who are or may be interested in self-employment. Experimentation was going on from 1973 onwards at the N. C. E. R. T., Delhi in the implementation of Vocationalisation of Education. The Pilot project on vocationalisation, was taken up in Karnataka during 1977-78 in some selected Institutions of Bangalore, Dakshina Kannada and Dharwad Districts, on an experimental basis. Dr. Malcolm S. Adiseshiah Committee set up by the Union Education Ministry to recommend a plan of Action for vocationalisation of education at the secondary and higher secondary stages, is in close agreement with the plan of action of the pilot project undertaken in Karnataka.

Whatever may be the plan or pattern, the education offered in the schools should enable the students-particularly of the lower strata, “to stand on their own legs.” For this, it should be based on the needs and requirements of our changing society and the infrastructural facilities available in the locality. The vocational Survey, presenting a broad overview of all the aspects of the District with a projection into the future and with suggestions about new courses based on the employment potential, can contribute a great deal for planning on realistic lines.

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Foreword

The growing problem of the educated unemployed has been examined by various commissions and Government of India and Karnataka at different times. It is only recently that the Govt. of India recommended a comprehensive scheme with financial support for tackling it. The scheme is based on one of the main recommendations of the Education Commission (1964-66) that about 50% of the enrolment beyond class X should be in part-time or full-time vocational courses affording opportunities of employment or self-employment in various vocations.

The Education Commission envisaged development of skills at the higher secondary stage to provide middle-level supervisory and technician man-power. The role of the technician and middle level supervisor is beginning to be understood in India only recently in respect of both their numbers and depth of skills to be built in each of them. It is therefore, felt that instead of general education alone, vocational education must be introduced in as many Institutions as possible for providing trained personnel, with the required skills in areas where employment potential exists or is likely to develop in the very near future. Also self-reliance should be inculcated wherever possible.

For this purpose, District Vocational Surveys have been undertaken to estimate the employment potential likely to develop in the District and to suggest new job-oriented courses for introduction in selected institutions to achieve the best possible result in an economical way. The Handbook on Vocational survey of Bangalore District, compiled by Sri N. S. Jathanna, Deputy Director of Vocational, Education, Bangalore presents the major areas of economic activity in the District supported by relevant statistical data. Also Employment potential has been indicated with a projection into the future wherever possible. New courses have therefore, been suggested based on the employment potential in the District. It is on this basis that the data contained in the handbook has been used in predicting new areas and implementing the 'Job-Oriented Diploma Courses' in Bangalore District to answer the felt needs of the society in its economic activity.

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INTRODUCTION

The Vocationalisation of higher secondary education is an essential feature of the new pattern of school education which aims to establish close links between education and employment.

The Education Commission, while recommending the adoption of the educational structure of 10 + 2 + 3, anticipated that at the end of the primary stage about 20 per cent would be stepping off the school system and enter working life, while about 20 per cent would be moving into different vocational courses at the lower secondary stage and the remaining 60% would be continuing their general education. At the end of the 10th year about 40% of these would be stepping off the school system and enter working life, about 30% would be entering vocational courses while the remaining 30% would be going into general education.

Vocational Education at the lower secondary level aims at training semi-skilled and skilled workers. At the Higher Secondary Stage, the Education Commission envisaged development of skills to provide middle level supervisory and technician level manpower. They felt that the role of the technician and middle level supervisors is not properly understood in our country and that their numbers need to be substantially increased.

The Education Commission has recommended greater diversification of vocational courses at the higher secondary level. At present it is mainly confined to technical training in Polytechnics and the existing courses which are now run at this level for the training of teachers, para-medical personnel. They have suggested that a great range of courses in commercial, scientific and industrial trades can be offered covering not only people who seek employment but also those who are may be interested, in self-employment.

The National Policy of Education Resolution in agreeing with the recommendations of the Education Commission of Vocational Education spelt out the need to increase facilities for technical and vocational education at secondary stage, conforming particularly to requirements of the developing economy and real employment opportunities to cover diversified fields such as agriculture, industry, trade and commerce, medicine and public health, home management, arts and crafts and secretarial practice. New courses should be started after taking into account the existing facilities to meet the needs of middle level persons in the concerned District / State.

Higher Secondary stage of Education is known as Pre-Degree or Pre-University course, implying that it is mainly university preparatory in character. This has resulted in enormous pressure on higher education and caused strain on the facilities for higher education. It has also contributed to the lowering of standards of higher education, particularly for the weaker sections of the community whose children comprise the bulk of the student body of the numerous subviable colleges which have sprung up. Apart from this, neither the eleven year nor the existing twelve year course has served any useful purpose as it is

not terminal in character. The youth who joined the course and did not, could and could not pursue university education merely served to increase the cost of public education without adding to the better trained or better qualified manpower or becoming employment worthy. It is estimated that at present out of about 2 million students who come out of secondary schools about 60% join the pre-degree stage out of which about 60% continue with higher education. From this it is clear that there is a large measure of unpurposeful education at this stage.

It is well known that because of their inability and delay in securing employment after matriculation, secondary school leavers decide to go in for higher education. As such no useful purpose is served by accommodating in higher education all those who come out of the secondary stage in university preparatory courses. In the absence of meaningful action to divert students from this stage the out-turn of graduates and post-graduates will go on increasing without any relevance to manpower needs.

Doubts have been expressed whether there will be adequate employment opportunities if vocational courses are introduced at the higher secondary stage. The reports on occupational and Educational Pattern in Public and private Sectors prepared by the Director General of Employment and Training reveal that the majority among the professional and technical personnel who include engineers, teachers, scientists, possess professional qualifications. But, on the other hand, many administrators, managers and those in charge of banks, insurance, transport and communication do not possess any professional qualifications. Most of them have completed only secondary education. In the case of craftsmen and skilled workers like textile designers, mechanics and electricians, very few possess general or

professional qualifications. This goes to show that adequate training courses at the middle level management are not in existence at present.

Jobs in organised industry and services may not increase fast enough to absorb any appreciable section of the educated working force. Experience of the past 25 years has shown that as a result of revolutionary changes in science and technology, training in narrow job specifications or in over specialised employment is likely to become obsolescent with the changing pattern of production relationship. Therefore terminal vocational courses are required to be designed in such a manner that, while they remain practical, they also seek to inculcate the capacity to utilise intellectual and theoretical training along with manual skills for socially productive labour.

Vocational education will also have significance for common citizens. A trained health assistant living in a village, even when he does not adopt a career, would be an asset to the rural community. So would be a person who has done a course in co-operatives even if he chooses to take to farming or teaching. Apart from the tangible benefits that will accrue to the individuals themselves, vocational courses will also create valuable community assets and an infrastructure upon which developmental programme necessary for the growth of the society can be built.

The aim of vocational education is therefore :

(a) to train persons for middle level jobs that can be anticipated in industry and in the services sector;

(b) to train people for self-employment in the agricultural sector (used in the broadest sense), small scale industrial sector (including handicrafts, cottage industries etc.)

or services related to and including co-operative marketing, servicing, repairs and maintenance of agricultural tools or special services needed by the rural community and for which the community may be in a position to pay; and

(c) to offer vocational courses which are neither too narrow, nor over specialised nor too rigid in the range of occupations since with a fast changing technology and an ever accelerating phase of socio-economic change vocational training of today may not remain relevant to the needs either of the individual or of the society even 5 to 10 years hence and require to be replaced by new ones having greater utility for the individual and the country.

The proposed scheme of study would be comprehensive with the duration varying from 1-3 years. The content would include some general education, broad theoretical education related to the vocation and practical training. Study of languages and the relevant aspects of general science, Mathematics, and other areas of general education required to support vocational subjects will be built into the course. The nature of training will be determined in consultation with the local industry and employing agencies. Adequate attention would also be paid therein to the social and economic aspects of the occupational fields and to organisational planning and marketing. Training will not be provided only in class-rooms; it will include work in workshops and fields. In developing instructional programmes services of practitioners of actual vocations will be utilised.



Aims & Objects of the District Economic & Vocational Survey

Vocational courses will have to be organised in consultation with employing agencies—Government Departments such as Agriculture, Health, Industries, Development etc. and Government and Private owned industries needing trained personnel. It is common knowledge that matriculates by and large stay and work in their home districts. The existing wage structure for skilled workers and middle level technicians also does not stimulate large scale migration. Hence those offering vocational courses will have to be prepared mostly for jobs within the district and its neighbouring areas. The number of students joining a particular vocational course will have to be determined in the light of the demand from employing establishments.

District surveys and systematic monitoring of emerging jobs and occupations to meet the needs for the employment market and local development programmes are therefore essential pre-requisites to the introduction of Vocational Education in each District.

Since a variety of hitherto unattended areas of employment would be open to those coming out of the vocational higher secondary institutions, careful selection will have to

be made from out of the existing higher secondary schools where these courses could be instituted. Further the location of an institution has a crucial role from the point of view of facilities for on-the-job training and expertise to impart skill and training.

The aims and objects of the survey, therefore are :

- (1) to identify the existing facilities, productive and commercial activities in the area, types of trades that are being pursued, agricultural products of the region, movement of commodities, marketing, storage facilities etc;
- (2) to identify the existing vocations in the region;
- (3) to make medium term projections, if possible, taking into account the rate of growth, process of development etc;
- (4) to identify the new vocations for the occupational categories which are currently in demand; and
- (5) to identify the existing institutions which can be utilised fruitfully for vocational education training.



Methodology

The Survey has been formulated to consist of studies of :

- (a) current non-farm establishments
- (b) prospective establishments
- (c) existing vocational training institutions
- (d) statistical data used as secondary sources
- (e) information from documentary sources
and discussion with knowledgeable persons and
agencies both under Central and State Governments
involved in execution of plan projects.

First of all lists of current non-farm establishments and prospective establishments were prepared by collecting the addresses from various sources such as Department of Industries and Commerce, Telephone Directory, Banks, etc. Studies of such establishments were made by issue of questionnaires and analysis of the filled-in questionnaires received from them. However, the response from these establishments were poor in spite of follow-up action through reminders.

The most important question in the questionnaire read :

“Are you able to meet your needs for trained personnel from existing training institutions ?

If not in what categories of craftsmen are the needs not satisfied fully ? Give approximate numbers in each category of trade.”

Only a microscopic minority of the establishments who had filled in the questionnaires furnished correct answers to this question. Even out of this negligible number the majority and replied the question in the affirmative.

This position was apparently due to the fact that, in general, establishments feel that filling in a questionnaire pertaining to a survey and furnishing statistical data is an imposition on their time. Further, the questionnaire has not been drawn up properly and contained questions which appeared to be not pertinent to the information required. Several establishments expressed their inability to understand the questionnaire and a large number were apprehensive of divulging particulars of their capital investment, strength of establishments, qualification of their staff, etc. Quite a few felt that answering the questionnaire would impose on them the responsibility of training persons in their establishments and or of absorbing persons trained under this scheme. Some of the establishments, especially the smaller ones, were interested to know whether answering the questionnaire would endow on them financial benefits and when told the purpose of the survey were not interested in answering the questionnaire.

As a result the survey through issue of questionnaires was not a success. Therefore, the end result could be achieved only by discussions with knowledgeable people and

agencies involved in executing plan projects and by the study of existing resources, infrastructural facilities, various development schemes that are running in the district and those contemplated to be introduced in the district, etc.

It was not possible in all cases to collect latest statistical data either because they are yet to be compiled or were not easily available.

A statement of the number of questionnaires issued and the statistical analysis of the response are given in Appendices. The statistical data of the district are also given in the Appendices.

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District Profile

Bangalore District is situated in the south-eastern portion of Karnataka State between 12° 14' and 13° 31' north latitude and between 77° 4' and 78° east longitude. It is bounded on the north-east by Kolar district and the south-west by Mandya district and the south-east by Tamil-Nadu. The district comprises of eleven talukas grouped into the following revenue sub-divisions :

- i) Bangalore sub-Division : Bangalore North and Bangalore South talukas.
- ii) Doddabalapur Sub-Division : Nelamangala, Doddabalapur : Devanhalli, Hoskote and Anekal talukas.
- iii) Ramanagaram Sub-Division : Magadi, Chaannapatna, Ramanagar and Kanakapura talukas.

The City of Bangalore which is the capital of the State and is administered by a City Corporation.

The length of the district from north to south is 136 km. and from east to west is 96 km. The district has an area

of 8,003 sq. km. and a population of 33,65,515 (1971 census). It consists of 2,470 inhabited villages (which are grouped into 609 village panchayats) and 22 towns.

Topography : The central, northern and eastern portions of the district are open. Towards the west the terrain is broken and rugged, being composed of a succession of hills and valleys intersected by rocks and streams. In the south the hills are close together and are surrounded by thick jungle. There are some conspicuous hills and peaks, the highest being Sivaganga in Nelamangala taluka with an elevation of 1490 meters above sea level. The main portion of the district consists of the valley of Arkavathi which is a tributary to the Cauvery. Parallel with the watershed is a broken chain of rocky hills extending west of Nelamangala taluka through Magadi, Ramanagaram, Channapatna and Kanakapura talukas and occasionally rising in to high peaks such as Sivaganga and Savandurga.

Rivers : Arkavathi (rising in Nandi hills) is a tributary to Cauvery which borders the district for a short length in Kanakapura taluka. The eastern portion includes the upper basin of the South Pinakini or Pennar river. In the eastern part a small portion of Shimsha borders the southern boundary of Kanakapura taluka where the stream Kanva joins the former.

Climate : The district in general has a very celubrious climate, the temperature varying from 17° C. to 29° C. The year may be broadly divided into 3 seasons :

- (1) Cold Weather season from about the middle of November to the end of February.
- (2) Hot Weather season from March to may and
- (3) Rainy season from June to November.

Rainfall : Bangalore district receives majority of its rainfall from north-east monsoon which usually sets in by the end of September and continues till about the end of November. The cold season is generally free from rains. From June to August it also receives rain from the south-west monsoon. The rainfall in the district varies from one region to another with Bangalore North and Bangalore South talukas having the heaviest rainfall of 888.9 mm. and Hoskote taluka with the lowest rainfall of 725.5 mm. The normal average rainfall for the whole district is 793.6 mm. A sizeable portion of Bangalore district has been considered as scarcity stricken area.

Forests : The district contains 8,498 hectares of forest area with Kanakapura taluka having more than 50% of the entire forest area of the district. The forest consist of shrub jungles and plantation of firewood, bamboo, small timber and sandalwood.

Soil : The prevailing soil in this district is red loam. It is found to vary colour from light to dark brown and deep chocolate. There are also a few isolated tracts of black soil but not of sufficient extent to include the cultivation of the crops usually grown on black soil. The soil of western and southern talukas are more fertile than those of the eastern and northern talukas.

Area and Population : The total area of the district is 8,003 sq. km. The district excluding the city area of Bangalore is divided into eleven talukas which vary considerably in their areas and population. With respect to area, Kanakapura taluka is the largest with an area of 1,594.1 sq. km. and Bangalore North taluka is the smallest with an area of 342.7 sq. km. The Bangalore City Corporation has an area of 174.7 sq. km.

With respect to population, Kanakapura, Bangalore South and Channapatna talukas take the first three places. The population of Bangalore City in 1971 was 16,53,779 and the density per sq. km. 9,466. The total population of Bangalore district in 1971 was 33,65,515. The density of population in the district with 421 persons per sq. km. and is the highest among all the districts in Karnataka State. Talukawise, Bangalore North taluka stands first with 379 persons per sq. km. and Kanakapura taluka stands last with 138 persons per sq. km.

As per 1971 census, 10,62,757 was the total number of workers in the district. Out of these workers, about 2,00,000 were agricultural workers. The average percentage of literacy for the entire district during 1971 was 42.72 per cent with Bangalore city having the highest percentage of 56.78 and Kanakapura taluka having the lowest percentage of literacy of 18.22.

Area and Utilisation: Out of a total area of 791,546 hectares, only 3,96,351 hectares is under cultivation and 44,185 hectares of land is accounted by fallow land. The area not available for cultivation is 1,06,113 hectares which includes forest, barren, uncultivable land, etc.

Irrigation facilities: The agricultural economy of the district is based on irrigation as well as dry farming. The major source of irrigation in the district are tanks. The important major tanks are the one across the Kanva river and the other across the South Pinakini near Hoskote town. The two reservoirs across Arkavati are at Hessaraghatta and Thiipagondanahalli both of which provide drinking water to Bangalore City and its suburbs. Out of 69,317 hectares of irrigated area in the district, 37,542 hectares are irrigated by tanks. The next important source of irrigation is wells which cover 25,678 hectares. The important feature of this district is that a number of wells and tanks are fitted with pump sets. During 1976-77 there were 31,318 pump sets working in the district.

Infrastructural Facilities

Infrastructural is the carrier of development impulses for the development of any region and in particular for the development of industries in rural areas infrastructural facilities are quite essential.

Transport & Communication : Bangalore district has the unique privilege of being the hub of communication network of the southern part of the country. Bangalore City is connected to all the surrounding states by a network of National Highways and State Highways and also by railway. It is also connected by air to New Delhi, Bombay, Hyderabad, Goa, Calcutta, Madras, Combatore, Cochin and Mangalore. Most of the taluka headquarters are covered by State Highways and Major District Roads. Bangalore city is connected by rail towards north and south by meter gauge lines and to the east by broadgauge line. The opening of the Hassan-Mangalore railway line for traffic would open the western gateway of New Mangalore Port for the export of commodities from Bangalore district and the malnad area.

There are 546 post offices in the district out of which 141 are located in Bangalore City. Every taluka headquarters has a telephone exchange besides some talukas having more than one. The total number of telephone

exchanges in the district are 27 out of which 8 are located in Bangalore City. The total number of telephones in use in the district is about 54,000 out of which about 53,000 are installed in Bangalore City. Bangalore City is connected by Subscriber Trunk Dialling facility to a large number of cities in the country and the State.

Financial Institutions : There are 509 branches of State Banks, Nationalised Banks and other Commercial Banks in the district. Out of these 394 are located in Bangalore City. Every taluka headquarters has a primary land development bank. There is a Town Co-operative Bank in Anekal, branches of the Bangalore District Co-operative Central Bank in Devanahalli, Doddaballapur, Hoskote, Kanakapura, Magadi, Nelamangala and Ramnagar with its head office in Bangalore City. There is a Central Co-operative Bank in Channapatna. Besides, Bangalore city has a Bangalore District Industrial Co-operative Bank and a City Co-operative Bank.

There are 393 agricultural credit societies in the district situated outside Bangalore city.

Co-operative Structure : There are 1443 primary agricultural co-operative societies and 808 other types of co-operative societies excluding credit societies. The total membership of all these societies is 5,59,932 during 1976-77 and the amount of Short-term loans advanced through these co-operative societies is Rs. 270.49 lakhs.

There are ten taluka Agricultural produce Marketing Co-operative Societies in addition to the Apex Marketing Society engaged in the wholesale distribution of fertilizers.

Industrial Estates : There are five Industrial Estates in the district located at the following places :

1. Rajajinagar, Bangalore City
2. Peenya, Bangalore North Taluka
3. Byrasandra, Bangalore City
4. H. A. L., Bangalore City
5. Ramnagaram

The Industrial Estate at Rajajinagar is one of the oldest and consists of :

- (a) 19 A-type sheds
- (b) 26 B-type sheds
- (c) 25 C-type sheds
- (d) 22 D-type sheds
- (e) 16 F-type sheds
- (f) 30 M-type sheds

The industries located in this estate is highly diversified and comprise of manufacture of products out of metals, plastic, wood, cellulose, chemicals, cement, nylon, rubber, glass, ceramics, etc.

The Industrial Estate in Peenya is the largest in the State and consists of 365 sheds and has industries covering electrical, mechanical, chemical, electronics, ceramics, rubber, plastic, paper industries and fabrication works.

In the Industrial Estate at Byrasandra there are 42 B-Type sheds. The industries located in this Industrial Estate are ancillary industries engaged in manufacturing components for Indian Telephone Industries.

In the Industrial Estate at H. A. L. there are ten B-Type sheds in which mostly machining and tool room work are carried out.

The Industrial Estate at Ramnagarm consists of 17 E-Type sheds out of which one is vacant. The industries set up in this estate are, manufacture of spools, dobbins, drums, pharmaceutical and chemical preparations, wood screws, phenol resins, moulding powder, agricultural implement, buckets, water cans and other services like general engineering fabrication work, textile printing, etc.

Hospitals & Public Health Care Institutions : There are 48 major hospitals in the district out of which 46 are located in Bangalore City, one in Channapatna and one in Ramnagaram. Bangalore city can boast of some national institutes of health services like the National Institute of Mental Health and Neuro Sciences, National Institute of Occupational Health (Regional Centre), National Tuberculosis Institute, Kidwai Memorial Cancer Institute, etc. There are several major hospitals in the city run by charitable and religious organisations. There are 137 Government dispensaries in the district out of which 72 are located in Bangalore City. The total bed strength in these hospitals and dispensaries put together is 7822.

In every taluka there are primary health centres and family planning clinics totalling 28 and 57 respectively.

Family planning programmes are carried out in all general hospitals and dispensaries also.

Educational, Technical & Vocational Institutions : In view of it being the district of the State in which the State capital is located and with the consequent large population and industrial structure, a large number of institutions covering general, technical and vocational fields are situated in the district.

There are in all 71 Higher Secondary Schools/Junior Colleges/Composite Colleges in the district in which instruction is given at the + 2 stage of education. In addition there are 15 Evening Colleges.

In the technical field, there are four Engineering Colleges and nine Polytechnics (Diploma level institutions) in the district.

In the vocational field, there are fiftyfive institutions in the district covering training in engineering, para-medical, agricultural, co-operation, commercial, fine arts, trades, etc.

A statement of these institutions is given in the Appendices.



Existing Resources

The district, with the location of the State Capital with its salubrious climate and topographical feature is not only having vast industrial but also agricultural resources. Most of the resources have been or are being fully exploited under various development schemes and through the enterprising habits of the people because of the proximity of the metropolitan city of Bangalore.

1. Agriculture and Cropping Pattern : Ever though a large number of industries are located in the district, the main stay of the people of the district is agriculture. This is because the industries are concentrated within Bangalore city and its suburbs. The cultivable area per agricultural worker ranges from about 2 to 5 acres. The principal irrigated crops are paddy, sugar cane, ragi, mulberry and grapes. Besides these crops, varieties of millets, vegetables and fruits are also raised in the district.

The cropping patterns adopted under different systems of irrigation are as follows :

- (a) **Crops cultivated under tanks :** Paddy, ragi, groundnut, bananas, sugarcane, muberry.

- b) **Crops cultivated under well irrigation :** Hybrid maize, hybrid jowar, high-yielding variety ragi, wheat, VFC tobacco.
- c) **Crops cultivated under rainfed conditions :** Hybrid ragi, hybrid jowar, hybrid maize, horgegram, pulses, groundnuts.

2, **Horticulture:** In view of the existence of Bangalore City in the district, vegetables and fruits are grown extensively in Bangalore North, Bangalore South, Hoskote and Devanahalli talukas. The main fruits grown are grapes, banana, mango, sapota, guava, citrus, papaya, pomegranate. Progress has been achieved in growing vegetable crops in the district especially in the talukas surrounding Bangalore City.

3. **Forest:** The major forest products of the district are sandalwood, edible oils, essential oils, tans, dyes, lac and other items like tamarind, fruit, cashew, etc. There are huge areas in the district which are barren and partially eroded which can be afforested after employing suitable techniques of soil conservation.

4. **Sericulture:** Sericulture has gained considerable importance in the district because of the high price of raw silk and export potential. Considerable areas are under mulberry cultivation in the talukas of Kanakapura, Channapatna, Ramnagaram, Devanahalli, Hoskote and Magadi. Large number of families are directly engaged in the silk industry from production of silk cocoons to silk weaving.

5, **Animal Husbandry:** There is vast scope for developing the milch cows and buffaloes and animal husbandry in general as an industry. Cross bred cows are being developed both in the city of Bangalore and rural district.

The Red Dane Project in Hesaragatta has played a significant role in the development of milch cattle. There is heavy demand for Jersey, Holstein and Red Danes. The centre of rural economy of Bangalore district is cattle wealth. As the land holdings in the district are small, the only sustaining subsidiary occupation is dairying not only in the rural parts but also within the city. The Bangalore Dairy collects milk not only from all parts of the district but also from the neighbouring districts. In spite of this the milk flow is inadequate specially during the dry months of the year. As much there is an ever growing demand for augmenting milk production.

Several private poultry farms have been established in the district. Of late egg production has been taken up on a vast scale both in the urban and rural areas of the district to meet the requirements of the consumers within the district and of the steadily growing population of Bangalore City as a result of which the import of eggs from Kerala has stopped. Side by side the production of table birds has also multiplied.

There is great scope for the development of piggery as the climate of Bangalore district is ideal for rapid breeding.

Bangalore district is also famous for the Bannur type of sheep which are reared in the hilly tracts of the district comprising of Kanakapura, Ramnagaram, Channapatna and Magadi talukas.

6. Industry: Bangalore district is the most industrialised district in the State, claiming more than 30 percent of the total number of factories located in the State. However, the industries are concentrated in the urban areas of the district especially in and around Bangalore city.

Considerable encouragement and incentives given by the State Government, the geographical situation of Bangalore with reference to the country, the salubrious climate, the availability of comparatively cheap land and labour, the facilities of road, rail and air transport, the tourist attraction of the State have been the factors which have promoted phenomenal growth of industry in the district during the last quarter of a century. One other factor which had promoted this growth was the availability of cheap electricity from the several hydro-electric projects; but it has always been a mirage - the supply always being unable to catch up with the demand.

Several important and prestigious public sector undertakings of the country are located in Bangalore city.

This report cannot be a dissertation on the industrial resources of the district. As such it would be sufficient to mention that a large number of large-scale industries and almost every type of medium and small scale and cottage industry, both in the manufacturing as well as service sectors can be found in the district except marine industry.

One of the most important cottage industries of the district is the manufacture of agarbathies with an annual production estimated at Rs. 4.00 crores and earning valuable foreign exchange.

7. Tourism : Bangalore City is the gateway to the South of India which can boast of a large number of places of tourist attraction. Karnataka State occupies a prominent place in the tourists itinerary. The tourist floating population of Bangalore City runs into several tens of thousands as a result of which thousands of people in Bangalore City and its suburbs are engaged in the tourist

trade and services connected with tourism such as travel agency, transportation, sight-seeking, hotel accommodation, catering, etc.

8. Trade and Commerce : There are only two regulated in the district – one in Yeshwantpur, Bangalore North taluka and one in Channapatna. Enormous commercial transactions mostly of agricultural commodities take place in the Yeswantpur regulated market. Channapatna town is a very important business centre as many of the agro-based industries such as oil mills and rice mills are located in and around this town. Large quantities of agricultural produce from Kanakapura taluka are also marketed in Channapatna. It is also an important mulberry marketing centre. The silk coccon regulated market of Ramnagaram is linked up with Channapatna.



Resource Analysis

While Bangalore City and its immediate suburbs lend themselves for development of industries, in the rural parts of the district there is considerable scope for intensification of agriculture, animal husbandry and services required to meet the needs of the metropolitan city and the district through improved technology.

In Bangalore North taluka there is vast scope for intensive and scientific cultivation of potatoes, grapes, vegetables and other orchard crops. Every day milk is supplied to the city from this area, but the quantity is not commensurate with the area which indicates potentiality for development of dairy in this area especially around Rajanakunte.

Devanahalli taluka is an important agricultural centre, the main crops being potato, onion, vegetables besides hybrid maize and mulberry. Under the A. R. C. scheme land development and coconut development have been implemented. Sheep rearing and dairy and subsidiary industries besides silk twisting, powerloom and handloom. There is immense possibility for organising silk cocoon growing, dairy and poultry farms. There is a need for providing services for repairs of tractor, power tillers and agricultural implements in the area.

Anekal taluka has mostly dry land. Ragi is the major rainfed crop. The farmers have taken up to use of fertilisers. cultivation of grapes, vegetables, fruits, potatoes and other cash crops have been on the increase in the area followed by sericulture. Chandapur in Anekal taluka is famous for its weekly shandy of cattle and sheep. There is good scope for development of dairy industry in the taluka. There are some small industries around Bannerhatta and Jigani.

Hoskote taluka enjoys the advantage of being located between Bangalore and Kolar. It has rich potentials for supporting the big urban area of Bangalore through supplies of vegetables, fruits, milk, eggs, etc. and accommodating ancilliary industries for the major industries located on the outskirts of Bangalore City and in Kolar. Mulberry, Potato, vegetables and high yielding crops like hybrid maize are the principal cash crops. In Nandagudi which is the hobli headquarters with about 11 panchayats around it there is vast scope for converting dry land into rich garden lands through wells, pumpsets and use of fertilisers. There is scope for improving the sericulture industry in the area by using advanced technology and proper marketing facility. Tavarekere village has rich potential for modernisation of agriculture practice through mechanised cultivation and additional inputs of fertilisers. Sulibele is suited for development of dairy and an agro-service centre.

Doddaballapur taluka is famous for its cotton and silk weaving industry. In Doddaballapur town itself there are over 2000 weavers owning powerlooms the products of which are marketed all over the country. In and around Doddaballapur town there is vast scope for intensifying production of milk, eggs silk cocoons. Melkote is an important shandy centre where sheep, goats and pigs are marketed weekly. Dairying and poultry farming could very well be supplementary economic activities in this area.

Magadi taluka has a predominantly hilly terrain in which silk industry is very prominent. There is a silk spinning and reeling centre located between Magadi and Ramnagaram. The area is famous for garden crops, betelnut, betel leaves, vegetables and fruits. There is considerable scope for development of dairy farming and sheep rearing.

Ramnagaram is an important coccon marketing centre for all sericulturists from Ramnagaram, Magadi and Kanakapura talukas. Situated on the Bangalore-Mysore State Highway, Ramnagaram has brisk retail trading activities as well as wholesale trade in its regulated market which is linked with Channapatna. Besides, Ramnagaram can boast of an industrial estate. The main crops of the district are ragi, paddy, mulberry and to some extent sugar cane.

Channapatna taluka has large areas under coconut, mulberry and paddy cultivation. Groundnut, sesamum and castor are important oil seed crops. Channapatna town has many agro-based industries such as oil mills and rice mills. Besides, it is an important toy making centre. There is also a silk filature factory in the town. There is good scope for development of dairy and sheep rearing in the taluka.

Kanakapura taluka is one of the important centres of sericulture in the Karnataka State. The important agriculture crops are mulberry, ragi paddy and sugar cane. There is considerable scope for developing dry lands and converting them into garden lands. Kodihall in the taluka has vast areas under groundnut cultivation and has scope for development of agro-based industries. Sheep rearing is an important economic activity in this area.

Nelamangala is a backward taluka with rugged terrain and rock out-croppings. There is scope for development of dairying and poultry farming as also improvement in the agricultural practices in this area.

The resources of Bangalore City are mostly in the development of services required to meet the needs of its population of 16.5 lakhs and a floating population of over a lakh, the commercial activities of the metropolitan city and activities connected with the seat of the Government;



Identification of Courses & Institutions

Bangalore district was one of the three districts in Karnataka State which was chosen for the introduction of Vocational Courses on a pilot scheme basis from the 1977-78 academic year.

Accordingly Vocational Courses have been introduced in the following colleges in the district :

No.	Name of the College	Courses introduced
1.	M.E.S. College of Arts, Science & Commerce, Malleswaram, Bangalore	1. Banking 2. Material Management 3. Multipurpose Basic Health Worker (Male) 4. Laboratory Technician
2.	Sri Renukacharya College of Arts, Science, & Commerce, Race Course Road, Bangalore	1. Building Construction Technology 2. Electrical Wiring & Servicing of Electrical Appliances 3. Accountancy & Auditing 4. Accountancy & Costing
3.	N.M.K.R.V. Junior College for Women, Jayanagar, Bangalore	1. Photography 2. Clock & Watch Repair Technology 3. Rehabilitation Therapy Assistant 4. Psychiatric Nursing Aide
4.	Rural College, Kanakapura, Bangalore District	1. Photography 2. Building Construction Technology 3. Servicing Technology (Office Equipment) 4. Sericulture

The survey report of Bangalore district would therefore, have to identify other vocations in which employment opportunities are available in the district and for which at present there are no training programmes.

With the strategic position the district occupies as a result of the state capital being located therein and the consequent need for services and supplies in all fields of activity there is scope for organising programmes in several vocations. Added to this is the question of providing training personnel for manning positions in establishments both in the public and private sectors, which are at present held by persons who have had no formal vocational training for discharging their functions scientifically. These persons have picked up the nuances of their functional operations on their own or through in-service training, etc. It is necessary that at least the future generation of these functionaries are scientifically trained to enable them to discharge their duties efficiently bringing about an all-round prosperity and upliftment of economic conditions. Finally there are so many enterprising persons who have launched on vocations without having undergone any basic training. They have stumbled along the path picking up certain skills which are not only not bringing them good returns but also rendering only sub-standard service to the public. If in such vocations training programmes are organised, it would bring better returns to the worker and better service to the public.

Even though the response to the questionnaires issued to the non-farm establishments has unfortunately been negligible, the fortyfive establishments who have expressed the need for trained personnel have given an indication of the vocations in which there is a short supply of skilled persons or in which the present training is inadequate and the vocations in which trained persons are required.

The following are the vocations in which there is a shortage of skilled persons or in which according to the employers the skills imparted are not upto the standard required by them :

1. Turner
2. Miller Mill-wright Mechanic
3. Maintenance Mechanic
4. Sheetmetal Worker
5. Fitter
6. Grinder, Gear Grinder
7. Metrologist
8. Moulder
9. Pattern Maker
10. Melter (Cupola/Furnace Operator)
11. Welder
12. Gas Cutter
13. Die Maker
14. Die Casting Machine Operator
15. Carpenter
16. English Stenographer
17. Nurse
18. Laboratory Technician
19. Coil Winder for Motors
20. Centreless Grinding Setter/Operator
21. Maintenance Electrician
22. Draughtsman (Mechanical)
23. Accountant
24. Pump Mechnic

The following are the vocations of the second type i.e., those in which trained persons are required as assessed from the filled in questionnaires:

1. Composer
2. Printing Machine Operator
3. Book Binder
4. Salesman/Salesgirl
5. Spray Painter
6. Laboratory Assistant (Oil Technology)
7. Architectural Assistant/Designer
8. Hosiery Knitter
9. Process Operator for Off-set printing capable of colour separation of ink.
10. Monocaster
11. Plate-Maker-cum-Darkroom Operator
12. X-ray Technician
13. Radiographer
14. Junior Town Planner
15. Travel Agency & Tourism-International Ticketing, Hotel Reservation, Transport, Tourist Guide.

An analysis of the resources and potentials of the district and of the discussions held with knowledgeable people reveals that besides the need for starting vocational courses in the above fifteen vocations, there is scope for organising courses in the following vocations in the district:

1. Dairying and Dairy Products
2. Poultry Farming
3. Fruit and Vegetable Growing
4. Farm Animal Technology
5. Animal Feed Production and Marketing Technology

6. Office Management and Secretarial Practice
7. Personal Secretary-cum-Receptionist
8. Marketing and Salesmanship
9. Sales Representative
10. Medical Representative
11. Advertising and Publicity Service
12. International Trade
13. Travel Agency
14. Tourism (Tourist Guide)
15. Furniture Design and Manufacturing
16. Metal Coating and Painting
17. Plastic Moulding
18. Leather Goods Manufacture
19. Interior Decoration and Design
20. Dental Mechanic and Hygienist
21. Medical Record Technician
22. Data Key Punching Processes
23. Computer Programming
24. Legal Assistant
25. Industrial Instrument Servicing and Maintenance
26. Laboratory Instrument Servicing and Maintenance
27. Beautician

There are several Government Departments and private institutions which are running pre-service as well as in-service training programme in some of the above vocations. Their course content, duration, level of teaching vary from one institution to another creating confusion for the potential employer in the matter of selection of the products of these institutions.

It is necessary to rationalise the courses to be organised by the Government so that the prospective employer is sure of getting the right type of skilled persons to carry out the specific functions required of him. It is therefore

essential to consult prospective employers in depth every stage of organisation of these courses as well as during actual training.

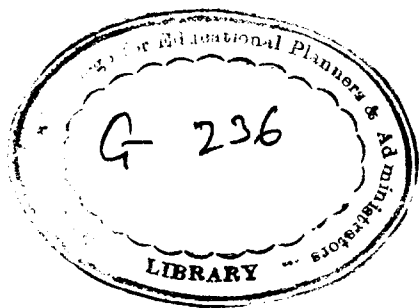
Most of the Colleges in Bangalore City and the district have come forward to organise vocational courses. While enthusiasm on the part of an organiser is an important aspect in making any scheme a success, the selection of Colleges in which these courses are to be introduced will have to be done with great care and with due weightage for the infrastructural facilities in and around the College and its capacity to organise the training programme in an effective and meaningful manner so that the training will not be academic oriented but functional and skill oriented. For this it is necessary that instruction is given by persons with experience in the concerned practical field and not by academicians and the practical training is given in actual establishments and in situations in which these students will have to work after completion of their training.

As regards organisation of courses in technical and engineering vocations, it would be advisable to entrust it to the Industrial Training Institutes and Polytechnics so that their existing facilities could be made use of. Besides, such a course of action would prevent duplication of training programmes with its consequent hazards.

For some of the courses suggested herein there would be employment potentials though in lesser degree, in other districts of the state also. However there may not be facilities in other districts for organising such courses. As such in the matter of admission to these courses representation should be given as far as possible to candidates coming from all districts of the state so that there would be dispersal of these trained hands preventing concentration in Bangalore district and consequent saturation of trained personnel in these vocations.



APPENDICES



I. Growth of Population

Year	Urban	Rural	Total	Rate of Growth
1951	—	—	2127061	46.79
1961	1357444	1147018	2504462	17.74
1971	1865754	1499761	3365515	34.38

Source : Statistical outline of Karnataka—1975.

2. Population

WORKERS						
Sl. No.	Name of Taluka	Culti- vators	Agricultural labourers	Live-stock Forestry, Fishing, Hunting and Plan- tations, Orchards and allied activities	Mining and Qua- rrying	Manu- facturing Processing and Repairs
1	2	3	4	5	6	7
1.	Anekal	22,160	10,070	737	10	4,110
2.	Bangalore North	16,945	9,904	4,653	537	173,461
3.	Bangalore South	21,981	13,858	3,020	3	21,331
4.	Channapatna	29,900	14,672	1,124	....	5,756
5.	Devanahalli	24,917	13,487	1,253	....	2,790
6.	Doddaballapur	29,082	8,633	386	5	7,832
7.	Hoskote	28,620	12,360	1,574	52	3,522
8.	Kanakapura	46,304	12,652	3,689	10	4,086
9.	Magadi	41,941	7,662	1,067	3	2,842
0.	Nelamangala	27,483	7,523	340	37	2,752
1.	Ramanagaram	23,593	10,167	2,887	102	2,722
TOTAL		312,926	120,988	20,730	759	231,204

*Non-Workers detail

Source : PART II-A General Population Tables, 1971 Census ; Mysore

Industrial Activity 1971

*NON-WORKERS

Construction	Trade and Commerce	Transport, Storage and Communications	Other Services	Total	Students	House workers	Others	Total
8	9	10	11	12	13	14	15	16
280	1,478	1,140	2,773	42,758	....	....	....	....
22,979	90,424	59,806	135,067	513,771	....	....	....	....
2,970	3,349	2,349	6,152	74,833	....	....	....	....
698	2,997	1,225	3,758	60,130	....	....	....	....
310	1,581	593	1,896	46,827	....	....	....	....
431	2,114	730	2,428	51,641	....	....	....	....
546	1,513	406	2,003	50,596	....	....	....	....
671	2,581	631	3,929	74,553	....	....	....	....
348	1,733	426	3,553	58,575	....	....	....	....
415	1,432	599	2,898	45,479	....	....	....	....
308	2,127	1,136	2,552	45,954	....	....	....	....
9,776	111,329	69,941	166,004	1,063,117	....	....	....	....

Not available

Courtesy : Director of Census Operation, Bangalore)

3. Land Utilisation

Item	1970-71		1975-76		%age change
	Area (Hectares)	%	Area (Hects.)	%	
1. Total geographical area	7,79,799	100.0	8,00,693	100.00	2.7
2. Area under forests	77,528	9.9	89,645	11.0	15.6
3. Uncultivable land	40,983	5.3	48,496	6.0	18.3
4. Land put to non-agricultural use	62,286	8.0	57,617	7.0	- 7.5
5. Cultivable Waste	15,874	2.0	15,912	2.0	0.2
6. Permanent pastures	1,07,378	13.8	1,32,617	17.0	23.5
7. Land under Misc. tree crops	14,552	1.9	15,870	2.0	9.1
8. Current Fallow	42,468	5.4	26,110	3.0	- 38.5
9. Other fallow	2,116	0.3	18,075	2.0	—
10. Net area sown	3,95,339	50.7	3,96,351	50.0	0.3
11. Area sown more than once	16,928	—	14,358	—	- 15.2
12. Gross cropped area	4,12,267	—	4,10,709	—	- 0.4

4. Land Holding

Size of Holdings	No. of Holdings				Total areas (Hectares)			
	1970-71		1976-77		1970-71		1976-77	
	No.	%	No.	%	Area	%	Area	%
1. Below — 0.5	49,950	20.8	N	12,979	2.9	N		
2. 0.5— 1.00	57,041	23.7	O	42,673	9.5	O		
3. 1.00 — 2.00	64,479	26.8	T	92,545	20.6	T		
4. 2.00 — 3.00	30,636	12.7	A	73,455	16.4	A		
5. 3.00 — 4.00	14,394	6.0	V	49,140	11.0	V		
6. 4.00 — 5.00	8,403	3.5	A	36,954	8.2	A		
7. 5.00 — 10.00	12,113	5.0	I	80,648	18.0	I		
8. 10.00 — 20.00	3,014	1.3	L	39,351	8.8	L		
9. 20.00 — 30.00	453	0.2	A	10,750	2.4	A		
10. 30.00 — 40.00	133	0.1	B	4,502	1.0	B		
11. 40.00 — 50.00	47	Neg	L	2,057	0.5	L		
12. 50.00 & above	45	Neg	E	3,625	0.8	E		

Note : Figures are based on census of Agriculture land holdings for 1970-71.

5. Area and Production of Different Crops

Crops	Area*		%	Production*		%
	1970-71 Hectares	1976-77 Hectares		1970-71 M. Tonnes	1976-77 M. Tonnes	
1. Rice	43,481	17,353	- 60	63,652	14,707	- 77
2. Jowar	612	246	- 60	1,990	374	- 81
3. Ragi	2,31,296	2,17,717	- 6	1,75,565	1,75,693	Neg
4. Maize	12,070	8,472	- 30	45,513	23,067	- 49
5. Bajra	5	-	0	2	-	0
6. Wheat	109	411	277	230	282	23
7. M. Millets	14,492	11,536	- 20	4,699	6,526	39
8. T. Cereals	3,02,065	2,55,735	- 15	2,91,652	2,20,649	- 24
9. Total pulses	49,501	34,999	- 29	17,915	9,332	- 48
10. Total Food	3,51,566	2,90,734	- 17	3,09,567	2,29,981	- 26
11. G. Nut	11,184	8,780	- 21	7,604	3,238	- 57
12. Other Oil Seeds	14,004	6,994	- 50	2,590	2 144	- 17
13. Total Oil Seeds	25,188	15,774	- 37	10,194	5,382	- 47
14. Cotton	11	-	0	5	-	0
15. Sugar Cane	3,922	4.651	19	3,24,162	2,78,362	- 14
16. Tobacco	152	94	- 38	78	21	- 73

Note : 1970-71 ASCR 1976-77 F.F.(Draught year)

6. Area Under Intensive Cultivation

Sl. No.	Talukas	Ground Nut	Caster	Sun Flower	Cowpea	Avare	Tur	Black Gram	Green Gram	Total
1.	Anekal	246	182	137	314	60	60	200	1000	2199
2.	Bangalore North	125	141	19	340	628	172	14	523	1962
3.	Bangalore South	94	36	2	76	—	2	18	—	228
4.	Channapatna	1270	156	35	21	70	35	105	160	1852
5.	Devanahalli	36	12	2	691	—	—	117	1134	1992
6.	Doddaballapura	774	119	54	293	1200	255	249	710	3624
7.	Hoskote	221	119	57	180	782	177	74	1503	3113
8.	Kanakapura	3500	480	69	130	1600	1050	28	2425	9282
9.	Magadi	1125	355	135	107	785	480	46	2350	5583
10.	Nelamangala	182	6	4	59	400	130	93	557	1431
11.	Ramnagaram	1044	486	19	24	260	954	—	1869	4656
TOTAL :		8617	2092	533	2235	5985	3285	944	12231	35922

7. Area Under High-Yielding Varieties

No.	Talukas	Rice	Jowar	Maize	Ragi	Wheat	Total
1.	Anekal	685	30	479	12,719	50	13,963
2.	Bangalore North	398	4	778	4,399	66	5,644
3.	Bangalore South	1,093	30	937	4,065	97	6,222
4.	Channapatna	145	17	103	8,792	11	9,068
5.	Devanahalli	341	83	1,033	14,731	32	16,221
6.	Doddaballapura	255	13	2,117	8,041	54	10,480
7.	Hoskote	1,064	19	1,308	12,116	62	14,569
8.	Kanakapura	528	10	432	14,327	3	15,300
9.	Magadi	668	5	1,500	10,611	29	12,813
10.	Nelamangala	308	75	627	16,710	11	17,731
11.	Ramnagaram	447	13	904	8,906	38	10,308
TOTAL .		5,932	299	10,218	1,15,417	453	1,32,319

8. Irrigation - Area Irrigated By Sources

Sl. No.	Sources	1970-71		1975-76		Changes
1.	Government canals	G	4,410	G	6,307	G 1,897
		N	3,760	N	3,832	N 72
2.	Private Canals	G	—	G	—	G —
		N	—	N	—	N —
3.	Tanks	G	45,071	G	42,506	G - 2,567
		N	38,434	N	37,542	N - 892
4.	Wells	G	52,306	G	31,556	G -23,750
		N	47,535	N	25,677	N - 21,858
5.	Lift Irrigation		—		—	—
6.	Other sources Net Area irrigated % of gross area irrigated to gross cropped area	G	1,770	G	2,265	G 495
		N	1,509	N	2,265	N 756
7.	Net area irrigated	G	1,03,557	G	82,635	G -20,922
8.	Gross irrigated	N	91,238	N	69,317	N - 21,921
9.	Gross cropped area		4,12,267		4,10,709	- 1,558
10.	% of Gross area irrigated to Gross cropped area		25.1%		20.1%	

G : Gross N : Net

9. Number of Agriculture Implements

Sl. No.	Implement	1972
1.	Ploughs - i) Wooden	1,31,844
	ii) Iron	57,030
2.	Carts	33,117
3.	Sugar Cane Crushers	
	i) By power	522
	ii) By bullocks	422
4.	Oil Engine pumps	843
5.	Electric pumps	20,938
6.	Persian Wheels	2,917
7.	Tractors ; Government) Private)	246
8.	Ghanis	227

Source : Final figure of XI quinquennial Livestock census - 1972 Karnataka State.

Courtesy : Karnataka Agriculture Department.

10. No. of Irrigation Pump Sets

Taluka	1970-71		1975-76		Change	
	Irriga- tion wells	Irriga- tion P. Sets	Irriga- tion Wells	Irriga- tion P. Sets	Wells	Pump- sets
1. Anekal	2,635	1,085	2,782	1,165	147	80
2. Bangalore North	1,883	1,459	1,984	1,165	101	- 295
3. Bangalore South	2,938	2,559	2,975	1,530	37	-1,029
4. Channapatna	1,079	1,144	1,237	825	158	- 319
5. Devanahalli	6,509	4,902	6,575	4,230	66	- 672
6. Doddaballapura	2,676	1,422	2,791	1,439	155	18
7. Hoskote	6,673	3,100	6,954	2,865	281	- 235
8. Kanakapura	2,225	1,517	2,354	1,333	129	- 184
9. Magadi	1,925	598	2,011	499	86	- 99
10. Nelamangala	2,415	876	2,475	657	60	- 219
11. Ramnagaram	1,408	1,276	1,526	1,016	118	- 260
TOTAL	32,366	19,928	33,664	16,723	1,298	- 3,205

II. Census of Livestock

Sl. No.	Livestock	1961	1966	1972
1.	Milch Animals :			
	i) Cows :	— 212734	239925	288756
	ii) Buffaloes :	— 85928	88887	97811
2.	Draught Animals :			
	i) Cows	— 93922	80392	65115
	Bulls	— 126623	16454	117438
	ii) Buffaloes	— 1389	1158	1596
	Bulls	— 2393	1427	4598
3.	Sheep	— 405755	391878	365426
	Goats	— 204463	204414	244059
	Pigs	— 23110	9033	1142
	Poultry Birds	— 931970	306744	1066734

Courtesy : Department of Animal Husbandry and Veterinary Science

12. Census of Forest Production

Sl. No.	Forest produce	Unit	1970-71	1976-77	Change
1.	Sandalwood (Rough)	Tonnes	411	29	- 382
2.	Halewood	-do-	148	Nil	- 148
3.	Firewood	-do-	26 288	3,426	- 22,862
4.	Eucalyptus wood	-do-	3,233	25,345	+ 22,112
5.	Bamboos	-do-	450	Nil	450
6.	Minor Forest produce such as Tamarind, Tupra, Cashew, Than- gadi and Kakka barks, etc.		The produces are leased out to the Contractors. The quantities removed by them are not furnished.		

13. Road Communications

				Kms.
No.	Item	1969-70	1976-77	Change
1.	National Highways	160	197	+ 37
2.	State Highways	217	271	+ 54
3.	Major District Roads	751	667	— 84
4.	Other District Roads	406	419	+ 13
5.	Village Roads	689	1,571	+ 882
6.	Roads in charge of TDB (Village Road)	1,446	2,561	+ 1,116
7.	Roads in charge of Forest Department	5	—	5
TOTAL		3,673	5,686	

Note : The roads are classified as per Nagpur Plan into N.H., S.H., MDRS, ODRS and VRS. Generally roads upto village roads are all weather roads and village roads in some cases are fair weather roads.

Courtesy : Karnataka Public Works Department

14. Increase in the Number of Villages Electrified

Sl. No.	Taluka	Upto 1971	As on 31-3-77 Village Electri- fied	Total inhabi- ted Villages (Exist- ing)	Percen- tage of electri- fied Villages
11.	Anekal	84	163	200	81.50
2.	Bangalore North	67	88	162	54.32
3.	Bangalore South	41	173	208	83.17
4.	Channapatna	52	73	133	54.88
5.	Devanahalli	177	198	239	82.84
6.	Doddaballapur	94	142	250	54.82
7.	Hoskote	145	253	304	83.22
8.	Kanakapura	69	107	235	45.53
9.	Magadi	58	154	306	50.33
10.	Nelamangala	57	181	295	61.36
11.	Ramnagaram	49	74	129	57.36
TOTAL		893	1,606	2,470	65.02

Courtesy : Karnataka Electricity Board

15. Census of Fishers

Item	1970-71	1976-77	Change
1. Inland area suitable for fishing (acres)	40,000 Acres	40,000 Acres	—
2. Inland area utilised	24,000 ,,	35,728 ,,	11,728 Acres (+)
3. No. of fishing Co-operative Societies	Seven	Seven	—
4. Quantity of fish hauled :			
i) By co-operatives	0.2 M. Tons	0.5 M. Tons	0.3 M. Tons
ii) By others	185.4 M. Tons	298.6 M. Tons	113.2 M. Tons (+)

Courtesy : Department of Fisheries

16. Mineral Production

Sl. No.	MINERAL	TONNS	
		1971	1976
11.	Fire Clay	6,105	—
2.	Quartz	645	18,100
3.	Corrundum	—	120
4.	Clay	—	4,036

Courtesy : Department of Mines and Geology.

17. Professional and Technical Education Facilities

Type of Institution	No. of Institution	Courses Offered	Intake sanctioned Capacity	Admission in 1st year (1977-78)		1977-78 Enrolment		Output (Annual Exam. 77)	
				Boys	Girls	Boys	Girls	Boys	Girls
1	2	3	4	5	6	7	8	9	10
Engg. Degree	5	1) Civil	294	303	8	1028	12	76	—
		2) Electl	270	26	26	634	66	66	—
		3) Mechl	270	271	1	1005	5	16	1
		4) Electronics	171	166	10	678	70	27	1
		5) Architecture	30	18	12	95	70	5	1
Degree in Textile	1	Textile	30	30	—	160	—	24	—
Evening Engineering Course :									
Degree	2	1) Civil	40	34	2	134	2	22	1
		2) Electl	45	45	—	205	—	17	—
		3) Mechl	60	60	—	285	18	18	—
		4) Electronics	30	30	—	—	—	—	—
Day Polytechnic									
Diploma	11	1) Civil (D. Ship)	180	149	29	376	74	63	3
		2) Mechanical	153	150	—	461	—	78	—
		3) Electrical	150	145	5	387	8	90	—
		4) Machine Tool	30	30	—	105	—	22	—
		5) Heat Power	20	20	—	52	—	13	—
		6) Insutrumnt Technology	20	20	—	69	—	8	—
		7) Welding	20	20	—	48	—	14	—

		8) Automobile	30	30	—	81	—	21	—
		9) Public Health	20	17	3	17	3	—	—
		10) Telecommunication	90	55	35	171	124	34	20
		11) Sound	20	17	3	48	7	10	—
		12) Cinemotography	20	20	20	45	—	14	—
		13) Ceramic	20	20	20	43	—	7	—
		14) Printing	60	57	1	128	1	13	—
		15) Weaving	40	40	—	111	—	24	—
		16) Secretarial Practice	130	12	118	40	264	11	12
		17) Library Science	30	—	30	—	56	—	26
		18) C. D. D. M.	30	—	30	—	74	—	7
		19) Horological	20	17	3	43	6	37	7
Diploma	11	20) Business Administration	40	20	6	25	9	4	3
		21) Craftsmanship (Trade & Craft courses)	160	71	53	71	53	55	32
Post Diploma		1) Computer Engg.	44	40	4	40	4	17	2
		2) Environmental Performance Assumling	22	10	—	—	—	18	—
		3) Machnie Tool Technology							

Note : Enrolment & out turn for MSR College of Engg. not included since the report is not received from the Principal. It is a private institution. Courtesy : Department of Technical Education.

18. Distribution of Technical and Vocational Education and Training Institutions by Various Characteristics

Sl. No.	Type of Institution	Total No. of Institutions	Location		Character		Residential Facility			Management			Type of Course		
			Rural	Urban	Boys	Girls	CR	PR	WR	Public	Private-Aided	Private-Unaided	Full	Part	Both
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Polytechnic	9	1	8	8	1	2	3	4	6	3	—	8	1	1
2.	Industrial Training Institute	1	—	1	1	—	1	—	—	1	—	—	—	—	1
3.	Crafts and Handicrafts School	6	1	5	—	6	1	1	4	6	—	—	6	—	—
4.	Industrial and Technical School	6	—	6	5	1	—	—	6	5	—	1	6	—	—
5.	Agricultural School	1	1	—	1	—	1	—	—	1	—	—	1	—	—

6. Nursing, A. N. M. and Health Visitors' School	6	—	6	2	4	6	—	—	3	1	2	6	—	—
7. Pharmacy School	1	—	1	1	—	—	1	—	1	—	—	1	—	—
8. Other Para-Medical School	3	—	3	3	—	—	2	1	3	—	—	3	—	—
9. School for Training in Co-operation	2	—	2	2	—	1	1	—	2	—	—	2	—	—
10. Commercial Trading School	7	—	7	7	—	—	—	7	—	1	6	1	6	—
11. School for Music, Dance, Drama, etc.	16	—	16	14	2	—	1	15	—	15	1	8	7	1
12. School for Drawing und Painting	1	—	1	1	—	—	—	1	—	1	—	—	—	1
13. Special School	3	—	2	2	—	—	—	2	—	2	—	1	—	1
14. Other Schools	3	—	3	3	—	2	—	1	3	—	—	3	—	1
TOTAL	64	3	61	50	14	14	9	41	31	23	10	46	14	4

19. Schools & Enrolment in General Education

Sl. No.	Taluka	No. of High Schools	Higher Secondary School	Junior Colleges	Composite Colleges with P U State	Enrolment in 1977-78				
						IX	X	XI (PUC I)	XII (PUC II)	Total
1.	Anekal	...	1	-	-	...	...	...	...	...
2.	Bangalore North	...	8	22	32	...	...	...	...	...
3.	Bangalore South	...	1	-	-	...	...	...	...	...
4.	Channapatna	...	1	-	-	...	...	...	...	...
5.	Devanahalli	...	12	24	71	...	...	...	...	...
6.	Doddaballapur	337	1	2	-	33,916	27,414	19,681	15,678	96,689
7.	Hoskote	...	1	-	1	...	...	...	...	...
8.	Kanakapur	...	-	-	2	...	...	...	...	...
9.	Magadi	...	1	-	-	...	...	...	...	...
10.	Nelamangala	...	1	-	-	...	...	...	...	...
11.	Ramanagaram	...	1	-	-	...	...	...	...	...

20. Statement of Questionnaires Issued and Response Thereto

1. Nfo. of questionnaires issued	5468
2. Nfo. of filled in questionnaires received	313
3. Nfo. of questionnaires returned un-delivered	380
4. Nfo. of establishments who have regretted to furnish the information	48
5. Nfo. of establishments reported as closed	32
6. Nfo. of establishments as shifted	3
7. Nfo. of establishments who have not responded	4692
	<hr/>
TOTAL	5468
	<hr/>

**THE SCHEME OF
VOCATIONALIZATION
IN KARNATAKA**

Department of Vocational Education

Government of India has formulated a scheme for the Vocationalization of Higher Secondary Education. Accordingly, a separate Department of Vocational Education was created in the State during July 1977 for the efficient implementation of the centrally sponsored scheme.

Vocationalization of Higher Secondary Education has been designed to offer the student greater scope for employment/self-employment while building up skills at the middle level of management and reducing the often meaningless scramble for collegiate education.

During 1977-78, a pilot scheme was introduced in 3 districts of the State namely, Bangalore, Dharwar and Dalkshina Kannada. As many as 13 institutions were identified in the private sector where the managements showed considerable interest and enthusiasm in implementing these courses. In addition, the existence of suitable infrastructure in the form of trained staff or equipment and other facilities was considered desirable. A backward and rural area which needed strengthening of educational facilities of the vocational type, if available, was selected. One Women's College was also selected for implementation of programme.

(ii)

21 Vocational courses covering all the major areas of economic activity such as Agriculture, Technical Education, Health, Banking and Commerce were identified and introduced in suitable combinations where the infrastructure and other facilities would ensure their successful implementation. Details of the courses, colleges and enrolment are given in Annexures 1 and 2.

Finances

The Scheme of vocationalization at XIth and XIIth standards is sponsored by Government of India. Government of India assistance is made available in the following manner :

- (1) For conducting District Vocational Surveys—Rs. 10,000 per district.
- (2) Assistance for salary of District Vocational Education Officer at Rs. 15,000 per annum per Vocational Education Officer (3 Officers)
- (3) Assistance for salary of District Vocational Education Officers for implementing the scheme at Rs. 15,000 per annum for full year in three district (3 officers).
- (4) Expenditure towards salary of Vocational Education Officer (Examination and Survey) .
- (5) Assistance to Colleges for starting Vocational Courses :
 - (i) for equipment at Rs. 11,250 per annum for each course; and

(iii)

(ii) salary for 2 teachers at Rs. 7,500 per annum for each teacher for each course.

The Government of Karnataka has agreed to meet the rest of the approved expenditure on hundred per cent grant-in-aid basis :

(1) Expenditure towards salary, travelling and other incidental expenditure for the establishment of the Director of Vocational Education in Bangalore.

(2) Expenditure towards salary of supporting staff for :

(a) The Director of Vocational Education.

(b) District Vocational Education Officers, and

(c) Vocational Education Officer (Examination and Survey).

(3) Expenditure towards salary of Additional Non-Vocational Staff, required to run the Vocational Courses.

(4) Expenditure towards consumables and other miscellaneous expenditure.

(5) Expenditure to meet transport facilities for students/teachers, etc., to and from the Institution to the places where training is arranged.

(6) Expenditure towards one Typist-cum-clerk and one helper for each of such Institution.

(7) Expenditure towards conduct of examinations, etc., and payment of professional and special services.

(8) Expenditure towards capital grants to certain institutions where the total requirement exceeds that sanctioned by Government of India in this behalf.

In addition, students opting for Vocational Courses are considered along with the students of other academic courses for purposes of grant of various fee concessions.

Students Enrolment

Against an anticipated strength of 1,200 as many as 1,030 had been enrolled by the end of 1st Semester. The number of students under training for each of the vocational courses introduced during 1977-78 is indicated in Annexure 2. For the training programme shown in Annexure 3, the following categories of teachers (full time, part time teacher, craft teacher etc.) are employed.

District Vocational Surveys

9 Districts in the State have been chosen for District Vocational Surveys. 3 more districts will also be taken up for conducting district survey by 31st March 1978. These reports reveal the main thrust of the economic activities of the community in the district. The existing job opportunities and a forecast of job opportunities on the basis of developmental activities envisaged by the several Departments of Government and the private sectors are also assessed. This information helps to identify the vocational courses suitable for implementation in a particular district.

Almost all the colleges have established close liaison with factories, industries, banking establishment, engineering contractors, Housing Boards, Health, Agriculture, Animal Husbandry Departments for imparting practical training to these students.

PROGRAMME FOR THE SIXTH PLAN PERIOD

The remaining 10 Districts of Karnataka are being surveyed to determine the major economic activity, existing at present and planned for them in the near future. The report will include the probable areas of job opportunities that are likely to be generated in the coming years. It will also include areas in which the local student population is likely to be interested in getting trained to answer a definite felt need in the community depending upon the nature of services required in the various sectors namely, Technical, Agriculture, Para-Medical Business and Banking.

After the survey reports are compiled, recommendations would be sent up to Government for the implementation of the scheme of Vocationalisation in some of the selected colleges in each district. As per the advice of the Man Power Planning Section, Government would decide on the number of colleges to be chosen depending upon their suitability for introducing vocational courses. It is proposed to recommend atleast 8 Institutions to be taken up for the implementation of the scheme for 1979-80 in each of the 10 Districts.

Vocationalisation is by and large acceptable to the population of Karnataka as revealed by the progress of the pilot scheme upto now. It is expected to be enlarged in the coming years so as to benefit all the Talukas in the State. By the end of the Sixth Plan period, it is hoped that Vocationalisation would be able to wean out about 20% of the students passing the X Standard from the academic stream into more useful avenues of an increasing number of vocations for which courses are being planned.

ANNEXURE 1

List of Vocational Courses introduced and student strength in each courses—1977-78.

<i>Courses</i>	<i>Total</i>
1. Accountancy and Auditing	.... 67
2. Accountancy and Costing	.... 49
3. Building Construction Technology	.... 144
4. Banking	.... 74
5. Clock and Watch Repair Technology	.... 34
6. Co-operation	.... 57
7. Dairying	.... 22
8. Electrical Wiring and servicing of electrical appliances.	.... 172
9. Fisheries	.... 24
10. Multipurpose Basic Health Worker (Male)	.... 34
11. Material Management Technology	.... 75
12. Medical Record Technician	.... 30
13. Optician and Refractionist	.... 4
14. Photography	.... 22
15. Physio Therapy and Occupational Therapy Technician	.... 17
16. Psychiatric Assistant	.... 10
17. Pesticides, Fertilizers and Weedicides	.... 62
18. Servicing Technology	.... 43
19. Sericulture	.... 43
20. X-Ray Technician	.... 4
21. Laboratory Technician	.... 43
Total :	.... <u>1,030</u>

ANNEXURE 2

Number of boys and girls enrolled for Vocational Courses during—1977-78.

		1	3	4
<i>Name of the College</i>	<i>Courses</i>		<i>Boys</i>	<i>Girls</i>
1. Sri Jagadguru Renukacharya Arts and Science College, Bangalore	1. Building Construction Technology	25	....
	2. Electrical Wiring and Servicing of Electrical Appliances	25	....
	3. Accountancy and Auditing	25	....
	4. Accountancy and Costing	25	....
2. Rural College, Kanakapura, Bangalore Dist.	1. Building Construction Technology	21	....
	2. Servicing Technology	19	....
	3. Photography	11	....
	4. Sericulture	24	1	
3. N.M.K.R.V. College for Women, Jayanagar, B'lore	1. Clock and Watch Repair Technology	....	10	
	2. Photography	....	11	
	3. Physio-therapy and Occupational therapy Technician	....	13	
	4. Psychiatric Assistant	....	6	
4. M.E S. College, Bangalore	1. Multipurpose Basic Health Worker (Male).	11	....
	2. Banking	14	11	
	3. Materials Management Technology	19	6	
	4. Laboratory Technician	10	9	

<i>Name of the College</i>		<i>Courses</i>	<i>Boys</i>	<i>Girls</i>
1		2	3	4
5.	St. Alloysius College, Mangalore	1. Building Construction Technology	24	...
		2. Electrical Wiring and Servicing of Electrical Appliances	25	...
		3. Fisheries	24	...
		4. Pesticides, Fertilisers and Weedicides	22	...
6.	M.G.M College Udupi	1. Building Construction Technology	22	...
		2. Electrical Wiring and Servicing of Electrical Appliances	25	...
		3. Laboratory Technician	21	3
		4. Physio therapy and Occupational therapy technician	4	...
		5. Medical Record Technician	6	...
		6. Psychiatric Assistant	4	...
		7. X-Ray Technician	4	...
		8. Optirion and Refractionist	4	...
7.	Viveka College Kota (S.K.)	1. Co-operation	11	11
		2. Pesticides, Fertilisers and Weedicides	17	...
		3. Banking	12	12
		4. Accountancy and Auditing	15	8
8.	Vivekananda College, Puttur	1. Co-operation	12	5
		2. Accountancy and Auditing	10	9
9.	B.A.S.G. Science Vidyagiri College Dharwar	1. Building Construction Technology	25	...
		2. Electrical Wiring and Servicing of Electrical Appliances	25	...
		3. Materials Management Technology	25	...
		4. Accountancy and Auditing	21	3

Name of the College *Courses* *Boys* *Girls*

	1	2	3	4
10.	Municipal Composite Junior College, Gadag, Dharwar District	1. Building Construction Technology 2. Electrical Wiring and Servicing of Electrical Appliances 3. Medical Record Technician 4. Multipurpose Basic Health Worker (Male)	24 25 24 23	................
11.	Mahantaswamy Arts and Science College Haunsbhavi, Dharwar Dist.	1. Electrical Wiring and Servicing of Electrical Appliances 2. Clock and Watch Repair Technology 3. Sericulture 4. Co-operation	25 24 18 18	................
12.	K.E. Board Vidyaranya K.S. School. Dharwar	1. Dairying 2. Servicing Technology 3. Electrical Wiring and Servicing of Electrical Appliances 4. Pesticides, Fertilisers and Weedicides	22 24 22 23	................
13.	Basel Mission Composite Junior College, Dharwar	1. Banking 2. Materials Management Technology	23 23	2 2

Total : 908 122

ANNEXURE III

List of Teachers employed for Job-oriented Diploma Courses

Vocational :-

1. Full-time	....	26
2. Part-time	....	140
3. Worker Teacher	....	11
4. Helper	....	11
		<hr/>
		188
		32
		<hr/>
Total :	....	220



ANNEXURE IV

Regulations, Courses of Study of Scheme of Examinations for Job-Oriented Pre-University Diploma Courses

1. Qualifications for admission :

a) Admission to all the Vocational courses shall, in general, be open to all students who have passed.

- i) The S. S. L. C. Examination conducted by the Karnataka Secondary Education Board; or,
- ii) The Indian Certificate of Secondary Education Examination conducted by the Council for the Indian School Certificate Examination; or
- iii) Any other Examination recognised as equivalent to the Karnataka S. S. L. C. Examination :

b) Admission shall be made on the basis of merit in the qualifying Examination and an aptitude test prescribed by Government.

2. Duration of the Courses :

- i) The course of study shall extend over a period of 2 academic years comprising of four semesters.

- ii) The duration of the course, the scheme of teaching, training and Examination in subjects listed under PART-I of the course shall be common to both Academic and Vocational streams.
- iii) The teaching, training and Examination of subjects under PART-II of the Vocational courses, shall be arranged under a SEMESTER SCHEME Consisting of 4 Semester of 4 months each.
- iv) The scheme shall also include period of intensive practical training in vocational courses during the Summer Vacations wherever necessary.

3. Medium of Instruction and Examinations :

The Medium of Instruction and Examination in the course shall be ENGLISH or KANNADA.

4. Courses of Study :

- i) The details of the subjects to be studied and the number of hours/week allotted for them in both PART-I and II is separately specified for each course.

There shall be Common Syllabi and Scheme of Examination prescribed for both accademic and Vocational Scheams during first and second year classes.

1. Kannada/or any other Indian Languages	4 Hrs./week
2. English	4 Hrs./week

- ii) For part-II Subjects :

For each theory paper as also Drawing, there shall be a maximum of 100 marks distributed for evaluation as under:

For each subject of 1st & 3rd Semesters

Continuous Internal Assessment	50	Marks
Internal Examination at end of Semester (3 hrs. paper)	50	„

For each subject of 2nd & 4th Semesters

Continuous Internal assessment	50	Marks
External Examinations at the end of Semester (3 hrs. paper)	50	„

- iii) Each practical under II shall carry a maximum of 100 marks distributed as under ;

For each practical of 1st & 3rd Semesters

Continuous internal assessment	50	Marks
Internal Examination at the end of Semester (3 hrs. paper)	50	„

For each Practical of the 2nd & 4th Semesters

Continuous Internal assesment	50	Marks
External Examination at the end of Semester (3 hrs. Paper)	50	„

- iv) The practical experience or field training or in plant training or intensive practical training arranged shall be valued on the basis of daily record prepared by the candidate as an internal assessment only for a maximum of 50 Marks,
- v) An additional 50 marks shall also be prescribed as a maximum for Evaluation of report on the Education Tour, if any, when prescribed for the subjects in Part-II.

5. Minimum Attendance :

- i) A candidate shall put in a minimum of 75% attendance in each of the subjects of Part-I.
- ii) A candidate shall put in a minimum of 80% average attendance taking attendance in all the subjects of Part-II for both the semesters of the year together.

6. Condonation of shortages of attendance :

- i) Heads of Institutions shall have powers to condone 15% shortage in attendance for both 5 (i) & 5 (ii) above for valid reasons.
- ii) Those candidates who fail to put in the minimum acceptable attendance as per Clause (5) read with (6) (i) above are required to repeat the course afresh in all respects.

7. Admission to the Examination :

Admission to the External Examinations at the end of 2nd & 4th Semesters shall be open to candidates.

- i) Who satisfy the attendance requirements as per Clause 5 and 6 (i) above.
- ii) and whose progress and conduct is satisfactory as per the certificate of the Head of the Institution.

8. Minimum for a pass :

- a) Candidates who secure not less than 30% in the subject and 35% in the aggregate for Part-I shall be declared to have passed in Part-I.
- b) No candidate shall be declared to have passed any Examination in a subject under Part-II unless he obtains not less than 40% of the marks in each of the theory

papers and 50% in each of the practicals prescribed for examination for both internal assessment and examination at the end of the Semester put together for that paper.

9. Classification of successful candidates :

- a) Candidates who obtain 60% and above of the maximum marks for each part shall be declared to have passed that part in FIRST CLASS.
- b) Candidates who obtain 50% and above marks but less than 60% of the maximum for each part shall be placed in SECOND CLASS For that part.
- c) All other successful candidates shall be placed in the PASS CLASS in the respective parts.

10 Promotion from one Semester to another :

- a) Promotion from the first semester to the second and from the third semester to the fourth is automatic.
- b) However, promotion to the third semester shall be subject to the condition that a candidate should not have failed in more than three subjects in all of the Ist and IInd semesters put together.
- c) The marks once awarded for internal assessment shall be final unless the student is permitted to repeat the course afresh.
- d) The results of the final semester shall be with held until a candidate has passed in all the papers of all the semester and has submitted the report of the inplant or intensive practical training diary and the same has been valued and judged as satisfactory, as per Clause 4 (iv) above.

ANNEXURE V

Courses introduced for 1977-78

Sl. No.	Code No.	Name of Course
Duration 2 years		
1.	TE 1.01	Building Construction Technology.
2.	TE 2.01	Servicing Technology (Office Equipment)
3.	TE 3.01	Electrical Wiring and Servicing Electrical Appliances
4.	TE 6.01	Clock and Watch Repair Technology
5.	TE 7.01	Photography.
6.	AG 1.01	Poultry Science
7.	AG 1.02	Dairying
8.	AG 1.03	Sericulture
9.	AG 1.04	Fisheries
10.	AG 1.05	Co-operation
11.	AG 1.06	Pesticides, Fertilizers and Weedicides.
12.	HE 1.01	Laboratory Technician
13.	HE 1.02	Physio Therapy and Occupational Therapy Technician (Rehabilitation therapy Assistant)
14.	HE 1.03	X-Ray Technician (Radiological Assistant)
15.	HE 1.04	Medical record Technician.
16.	HE 1.05	Optician and Refractionist.
17.	HE 1.06	Multipurpose Basic Health Workers (Male)
18.	HE 1.07	Psychiatric Nursing Assistant (Psychiatric Nursing Aid)
19.	B 1.01	Banking
20.	B 1.02	Materials Management Technology
21.	B 1.04	Accountancy and Auditing
22.	B 1.05	Accountancy and Costing

ANNEXURE VI
**Courses Proposed to be Introduced
during 1978-79**

Sl. No.	Code No.	Name of Course
Duration 2 years		
1.	TE 4.01	Assembly and Servicing (Electronics)
2.	TE 7.02	Painting and Commercial Art
3.	TE 8.01	Printing and Book Binding
4.	TE 8.02	Clothing and Embroidery.
5.	TE 8.03	Textiles Assistant
6.	TE 8.04	Sugar Technology (Pan Boiling)
7.	AG 1.09	Agricultural Economics and Farm management.
8.	HE 1.08	Applied Nutrition, Dietetics and Institution Management
9.	B 1.03	Accountancy and Taxation
10.	B 1.06	Primary Education
11.	B 1.07	Office Practice and Procedure.
12.	B 1.08	Salesmanship
Duration one year		
13.	1.B 1	Pre-School Education

ANNEXURE VII

Salient Aspects of Survey of Vocationalisation at the Higher Secondary Stage

1. The Government of India took a policy decision of far reaching consequence when they sponsored Vocationalisation of Education at the Higher Secondary stage viz. the XII and the XIIth Standards. The Government of Karnataka approved this scheme and sanctioned Additional sums for its implementation from 1977-78 onwards. It is included as a Central Sector Scheme.

2. Many educationists and parents of students were pointing out from some time past, that their wards were forced to study academic courses since vocational courses of their choice and aptitude were not available in colleges/institutions.

3. It was also felt that in certain organised sectors like industrial establishments, and other public service, there is considerable dearth of people with vocational skills.

4. It is therefore felt that instead of general education, Vocational education must be introduced to answer the need for providing trained personal with the required skills.

5. It was therefore necessary to have a new approach to Education and the necessity to structure training programmes to suit the needs of the society.

6. Depending upon the findings of a District Vocational Survey conducted in many Districts, a large number of vocational courses are being planned when the needs are so established. Teachers and experts in the field, available in the region are identified and they are requested to teach and train the students in these vocations.

7. The courses are generally terminal in nature and the duration varies from one to three years depending on the nature of the skills required to be developed for the situations.

8. Courses of 2 years duration have two parts. Part I (consisting of two languages) is common with the Pre-University academic stream. This helps to organise bridge courses if later needed to provide for vertical mobility and for introducing flexibility into the system. Part II of the programme is for the vocation subjects (18 to 24 hours per week). This would be utilised for providing the theoretical background and developing the necessary skills for a definite vocation. Out of this nearly 50 per cent would be practical oriented, tailored to suit the requirements of the profession or a job.

9. The maximum intake for each vocational courses is fixed at 25. The student has to take an aptitude test to determine where his talents lie.

In some courses like Psychiatric Nursing Assistant, Rehabilitation Therapy Technician, etc., the aptitude test based on Psychological assessment alone makes a candidate eligible.

10. The course of two years duration is organised in four semesters of 4 months duration each. The emphasis of training is on the learning aspect with the view to make the candidate highly acceptable in the professional field and the requirements of the profession dictate the contents of syllabi and scheme of training. The scheme of training is not examination oriented but learning oriented.

11. First and third semester examinations are conducted by the staff of the college. Examinations at the end of II and IV Semesters will however be public examinations and conducted by the State Council of Vocational Education. Wherever

possible people of the profession and those in the field of employment will be associated in the assessment programme.

12. The Scheme provides for the involvement of people in the profession, representatives of industries and of employers as guest lecturers. Some workers with specialised skills are also included in the training programme to demonstrate and teach the practical methods adopted to develop skills of the profession.

13. There is a new move to prevail on the Universities to organise examinations leading to the award of external degrees for proficiency in some of these vocations, after a certain number of years of field experience of job training.

14. Government of India has come forward to meet a portion of the expenditure towards (1) Library, Furniture, equipment for each of these courses (2) Salary expenditure of one full time teachers and worker teachers, whose ability to train the students in practical subjects is recognised.

15. Government of Karnataka has come forward to meet other approved expenditure other than the above on a 100% grant-in-aid basis.

16. The course is proposed to be organised at selected institutions running the XI and XII standards, Junior Colleges Composite Colleges, etc, where necessary facilities of infrastructure and the appropriate atmosphere are available.

17. In some of the courses, 4 to 8 weeks of in-plant training/field training or institutionalisation is insisted upon as pre-requisite for award of Diplomas. In this, the student has to maintain daily reports of work done and practical experience gained. This is expected to familiarise the students with the working procedures in the field of service.

18. Most of the regulations, and rules for the award of sciholarships etc. are common with the academic stream of the Pre-University Course though a separate set of Regulations are prescribed governing the operation of the scheme of Training amd Examination for the Vocational Stream.

19. The State Council of Vocational Education issues Diploma recognised by State Board of Vocational Education to the successful candidates. All the Government Departments and the Government of India are being separately requested to identify the various posts and cadres in services where appropriate edlucational technology (Diplomas of the State Council of Vocational Education) could be recognised for purpose of recruitment.



ANNEXURE VIII

Salient Points in the Implementation of a Programme of Vocationalisation at the 11th & 12th Standards

I. Selection of Colleges

1. Colleges with an average total student in the First P.U.C. class of more than 100 for the previous 3 years—may be chosen for one or two selected rural Colleges.

2. Colleges with an average total student strength at the First P.U.C. of about 200 may be selected for introducing four courses provided additional rooms/facilities are available.

3. The Principal should be dynamic and resourceful enough as judged by the Directorate, to arrange for effective liaison with industries/other establishments/agricultural universities/chartered accountants/practioners/hospital superintendents/bankers, etc. for getting practical training required in the particular fields.

II. Selection of Courses For Each College

This is decided upon by a combination of the following factors as a result of discussions of the College authorities with knowledgeable people in the field and the liaison which can be established by them :

1. The trends of employment opportunities predicted by District Vocational Survey conducted by this Department and the local conditians of availability of qualified staff for giving effective training in some of those fields as also the popularity of vocation with the students concerned.

2. The economic development envisaged for the region as included in the development plans of the district.

3. Socio-economic background of the majority of the student community.

4. Requirements of teaching staff and the training staff.

5. The proximity of Engineering College or a Polytechnic or a Hospital/s or a Dairy or a Training Institute/Industry providing additional facilities for implementation of a course.

III. Selection of Students

1. No courses shall have more than 25 students nor fewer than 15 unless otherwise specially permitted by the Director.

2. There should be reservation for S.C./S.T. and other weaker sections of the society as per Government Notification in this behalf in each course

3. There shall be an aptitude test or a method of evaluation of the suitability of individual student for each course adopted of selection in addition to the marks in the qualifying examination.

4. For some of the courses, a psychology test or physical fitness or age or all of it may be considered.

IV Selection of Teachers.

A. For Vocational Subjects :

For vocational courses, one lecturer-full time and one worker teacher-full-time may be appointed by a duly constituted selection committee. Part-time lecturers and part-time worker teachers can be appointed for practical training for specific periods a week or specific duration. A full-time teacher has to take 20-22 units of work (one hour lecture is taken equivalent to 2 units and one hour practical is equivalent to one unit).

Each of the teachers has to agree to the following :

1. to take the classes regularly as per the time-table.
2. to conduct periodical test, correct periodical assignments, conduct quizzes, arrange announced and unannounced tests to be evaluated. They form the basis for continuous evolution for each student and a register should be maintained to report the marks obtained in each of the subjects entrusted.
3. he has to prepare brief notes and get them cyclostyled in the office for distribution to students. Stationery will be made available by the Principal.
4. he has to conduct an End-examination for the subjects of first and third semesters and report the marks in the prescribed form within the due dates stipulated.

The Staff Pattern For Each Course Should be Got Approved by the Director Before any Appointments are Made.

Guest lectures could also be arranged for each course with the previous permission of the Director.

The total expenditure per year on salary and honoraria on vocational training is to be limited to Rs. 15,000/- per course for each class.

Success of the scheme directly depends upon the teacher and his love to inculcate practical aspects of the vocation in the student.

Note : All the full-time posts will have to be classified and recruitment done providing suitable reservations in each cadre as per Government Orders in this behalf.

A. *For non-Vocational Subjects :*

Unemployed graduates with suitable qualifications may be preferred as part-time lecturers in languages.

Maintanance Accounts :

Seperate registers will have to be opened for maintaining accounts of all kinds including store account and will have to be produced before the auditing authority from the Directorate or the Accountant General as per rules. Vouchers will have to be maintained for all expenditure and accounts will have to be clearly written under each head, sub-head covering all expenditure under maintenance grant, contingency, T.A. and other miscellaneous accounts.

In respect of purchases rules laid down in the Manual of Financial Powers, Government of Karnataka are only applicable and should be strictly followed.

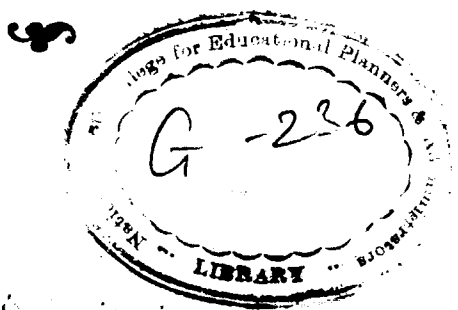


ANNEXURE IX

Statement showing the particulars of the Institutions in starting the vocational courses during

1. Name of the Institution
2. Name of the Principal with age, qualification and address
3. Details of courses existing at present :
 - (a) Academic
 - (b) Vocational, if any
4. No. of teachers employed with their age and qualification and experience (a separate list to be enclosed)
 - (i) No. of acres of land available
 - (ii) Liasion with industry if any
 - (iii) involvement of the other voluntary and service agencies.
6. No. of students admitted to the I.P.U.C. during-
 - 1975-76
 - 1976-77
 - 1977-78
7. Fee structure at the + 2 Stage.
8. Particulars of infrastructure already available for starting vocational courses if any :
 - (i) Additional room space
 - (ii) Additional furniture available
 - (iii) Duplicator
 - (iv) Overhead projector
 - (v) Movie projector
 - (vi) Slide projector
 - (vii) Trained Staff, in any trade - give details
 - (viii) Any other facility such as Typewriters, Printing Press, Hobby Centre Agricultural & Dairy, Polutry, Co-operative Society, Banks, Sewing Machines, Workshop, Garrage.

9. Which courses according to you may be more popular and why?
 - (a) Agricultural oriented
 - (b) Technical oriented
 - (c) Medical oriented
 - (d) Business & Commerce oriented
 - (e) Nursing oriented
 - (f) Any other area to be specified
10. A brief history of the Institution.
11. Financial position of the management in brief.
12. Any other information you would like to furnish to substantiate the claim of your Institution for selection.



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