



GOVT. OF KARNATAKA

Vocational Survey Report

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DEPARTMENT OF
VOCATIONAL EDUCATION
KARNATAKA
1978



GOVT. OF KARNATAKA

VOCATIONAL
SURVEY REPORT
OF
HASSAN DIST.

DEPARTMENT OF
VOCATIONAL EDUCATION
KARNATAKA
1978

Sub. National Systems Unit,
National Institute of Educational
Planning and Administration
17-B, SriAurobindo Marg, New Delhi-110016
DOC. No.....
Date.....



M E S S A G E

“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 schools of Bangalore, South Kanara and Dharwar, on an experimental basis. Dr. Malcolm 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 closed agreement with the plan of the 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 board 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.

B. Subbaya Shetty
Minister for Education

FOREWORD

The growing problem of the educated unemployed has been examined by various commissions and Governments 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 Hassan District, compiled by Sri G. B. Joshi, Deputy Director of Vocational Education, Mangalore presents the major areas of economic activity in the District supported by relevant statistical data.

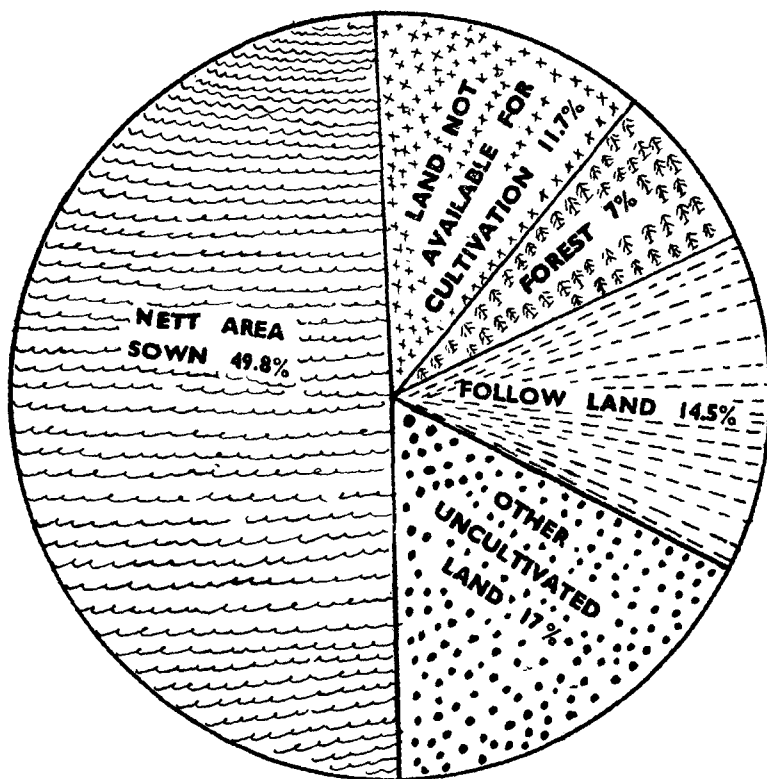
Also Employment potential has been indicated with a projection into the future wherever possible. New courses have therefore, been suggested based on the employment potential in the District. It is on this basis that the data contained in the handbook has been used in predicting new areas and implementing the 'Job-oriented Diploma courses' in Hassan District to answer the felt needs of the society in its economic activity.

E. S. Gurubasappa

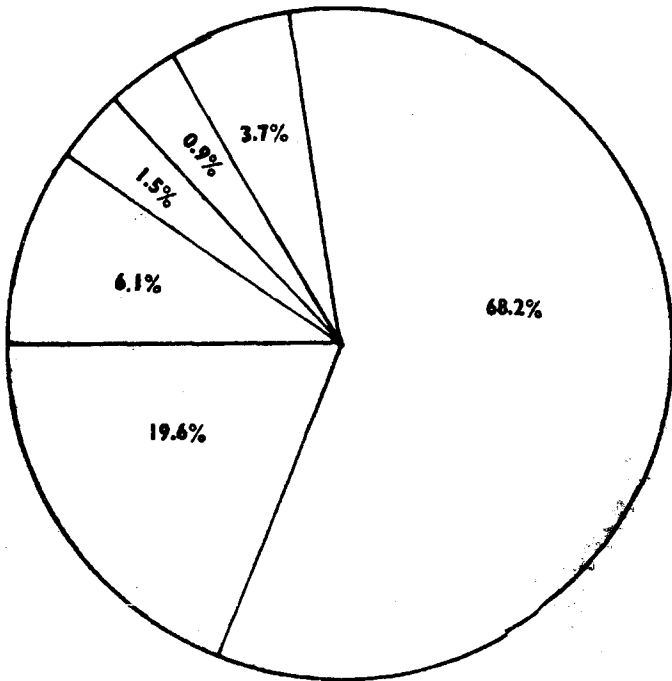
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Date : 7-6-1978

MAP SHOWING THE LAND-UTILISATION IN HASSAN DISTRICT

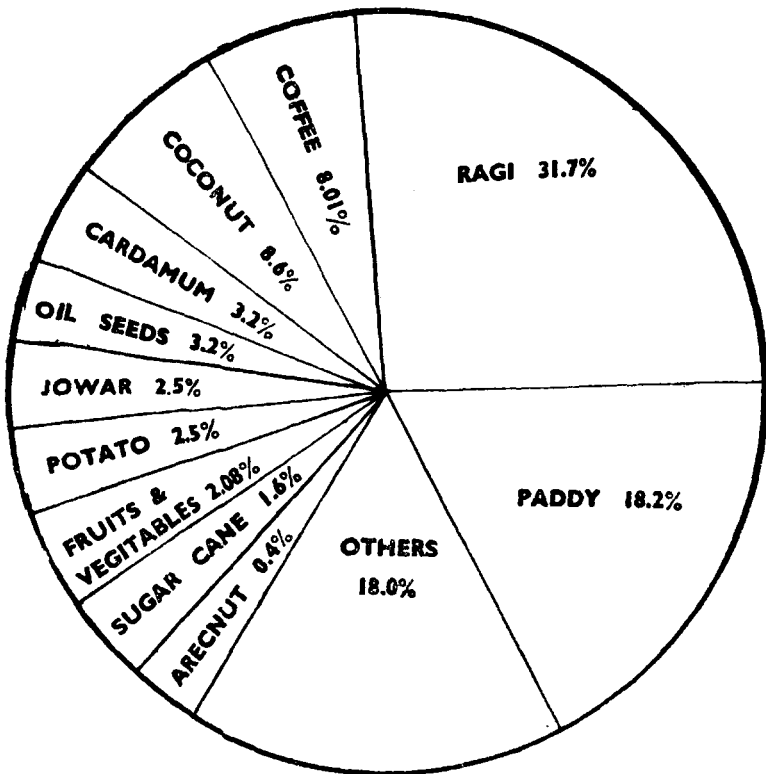


**MAP SHOWING OCCUPATIONAL PATTERN OF
HASSAN DISTRICT**



CULTIVATORS	19.6%
AGRICULTURAL LABOUR	3.7%
MINING QUARRYING AND ORCHARDS	0.9%
WORKERS ENGAGED IN INDUSTRY	1.5%
OTHERS	6.1%

**MAP SHOWING THE CROPPING PATTERN OF
HASSAN DISTRICT**



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Vocational Survey of Hassan District

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 10 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 or may be interested, in self-employment.

The National Policy of Education Resolution in agreeing with the recommendations of the Education commission on 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 field 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 sub-viable 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 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 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 metriculation, 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 report 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 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 and 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 a 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 development 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 pace of socio-economic change vocational training of to day may not remain relevant to the needs either of the individual 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, board theoretical education related to the vocation and practical training. Study of languages and the relevant aspects of general science, Mathematics, economics 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 aspect 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 and Objectives

Based on the recommendations of the Education Commission Government of India have evolved a scheme of Vocationalisation of the Higher Secondary Education Stage (-- 2) of the 10+2+3 structure of Education.

The main recommendations of the Education commission on Secondary Education is that about 50% of the enrolment beyond the Xth Standard should be in part time or full time Vocational Courses which would be predominantly terminal, affording opportunities of employment or self employment in Various Vocations in the region to prevent un-purposeful and wasteful general Education at this Stage.

Government of India have drawn up a Scheme for encouraging State Government to initiate Vocationalisation of Higher Secondary Education in the Vth Plan period and to expand and consolidate it on a regular basis in the VIth Plan. Extensive preparation had been undertaken by the National Council of Educational Research and Training (NCERT) in this connection.

Under this scheme it is felt necessary that Vocational Courses are to be organised in consultation with employing agencies functioning in different regions and to ensure that the courses and their contents would be suited to their requirements and accepted by employers.

In order to identify suitable Vocational courses i.e. Job-Oriented course, the Vocational Survey was conducted in 40%

of the total Districts as envisaged by the planning commission.
The Various criteria for selection of Districts are :

- (a) The Districts which are specially Backward e.g. tribe areas.
- (b) The Districts which are predominately agriculture.
- (c) Districts which have industrial and commercial establishments.
- (d) Districts which have undertaken central project etc.

The Objectives of the Surveys are :

- (a) 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.
- (b) To identify the existing institutions which can be fruitfully utilised for Vocational Education and Training.
- (c) To identify the existing Vocation in the region.
- (d) To identify the new Vocations for the occupational categories which are currently in demand.
- (e) To make medium term projections, if possible taking in to account the rate of growth, process of development etc.

Source Material used for Vocational Survey are :

1. Census publication specially District census Hand Books of 1971 Census.
2. District and State level statistical Digests/Hand Books of State Bureau of Eco. and Statistics.

3. Report of 3rd All India Educational Survey [School Edn.] [NCERT].
4. Lead Bank Survey Reports.
5. Intensive Industrial Potential Survey Reports of Various Dist.
6. Agriculture Census Reports.
7. Statistical Report of Employment Exchange.
8. Industrial Development Potentialities in Hassan District.

Latest Plan for Vocationalisation :

- (a) NCERT forms were sent to all the non-farm establishments to gauge the potential for growth with the data available from them. The response has been very poor as expected. However, the available data has been collected and analysed whether it indicates any direction for the potential growth of job-opportunities in the area.
- (b) District Development Programmes, other approved schemes of the districts and the statistics available in the various departments and rural and other developmental programmes planned in the area were analysed and the possible areas of growth in (a) Agriculture (b) Industries (c) Banking and other Commercial activities (d) Requirements of health and other services arrived at. The district survey officers also met many knowledgeable people in the Taluks and many Industrialists and other interested in the development of the district and after discussion with them the trend in.
 - a) Changes in the economic poser
 - b) General economic activity and its direction

- c) The necessity to aid the existing vocational activities in the area by the introduction of courses in Science and Technology connected with them.
- (c) The local talents available and how a teaching and training programme in Vocationalisation would help their improvement in the locality using the equipment and institutions set up in the private or public sector in the area. On the basis of the above the survey officers have reported a number of areas in which vocational courses could be introduced this has been indicated in the Annexure I form sl. 1 to 45.

Vocationalisation has been fairly acceptable to the population of Karnataka, in general and the parents and students in particular—since for pursuing any academic course the requirements of academic excellence has shown a steep gradient in recent days necessitating those with average intelligence to pursue courses which are suitable for their special talents which lie in them.

Analysis of the Vocational Education Survey

1] NCERT questionnaires (Schedule I+II) despatched to various Non-Form Establishment and Industrial Units	966
2] No. of Questionnaires received duly answered	50
3] No. of Questionnaires returned without replies due to closure of the establishment.	20
4] No of questionnaire not received so far.	906

Criteria for Selection of Colleges

- a] Enthusiasm of the principal of Colleges and the Management and their capability to operate the scheme successfully.

- b] Their belief in vocationalisation as a useful means of diversification of training programmes and cater to the needs of the society.
- c] Infrastructures available in the matter of either equipment needed or availability of trained staff in the college, near by or both.
- d) One Rural College was specially located in each district where the chances of succes were highest.
- e) One Womens College in the Dist total selected for impementation of the programme.



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 discussions 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 departments 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 was 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 or 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 of majority had 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.

District Profile

Geographical feature : Hassan District is situated in south western part of Karnataka state. It is bounded on the north by Chickmagalur district, on the east by Tumkur and Mandya districts and the south by Mysore and Coorg districts and on the west by South Kanara district. This district is situated between 12°-31° and 13°-33° north latitude and 75-53'' and 76-31° east longitude. It is in the south western part of the State. The greatest length longitude district from north to south is about 80 miles (129 Kms) and its greatest breadth from east to west is about 72 miles (116 Kms). The Average height of the district is 3,149 ft. above the sea level.

Geographical area of the district is about 2,658 sq. miles, or 6,826 sq. Kms. This district lies partly in the malnad track and partly in the southern maiden track with a division of southern malnad semi-malnad and southern maidan. This district enjoys a moderate present climate and the year may be divided into 4 seasons viz. summer from March to end of May south-west Monsoon season from June to September, post monsoon season from October to November and dry season [winter] from December to February. The average rainfall of this district is about 101.52 cm. and the highest rainfall is about 2348.7 mm in Sakaleshpur Taluk and the lowest average rainfall is about 673.1 mm in Arasikere Taluk.

Rivers : There are three important rivers in this District viz. Hemavathi, Yagachi and Kaveri, while Hemavathi is a tributary of Kaveri and Yagachi is a tributary of Hemavathi and Kaveri flows only through a small portion of the district in the Arkalgud Taluk. The area of this district consists mainly of the Hemavathi river basin. Hassan district is fortunate to

have an irrigational project which is under construction at Gorur across the river Hemavathi with an estimated cost of about Rs. 45 crores and it will facilitate about 2 lakhs acres of land under irrigation out of which about 51,000 acres of land will be irrigated in Hassan district which will help for agro-industrial development.

Mineral : The Mining activity is centred rounds near Penasamudra and Byrapura. The production of Chromite from these mine between 1916 to 1930 averaged about 20,000 tonnes per year and the bulk of the production being from Byrapura. The diamond drilling explorations arrived at in 1954 indicated that Chromite lenses persist in depths and the reserves of high grade ore are estimated roughly at 1 million tonnes. The mines at Byrapura, (Channarayapatna taluk) which are worked by under ground methods have reached depth of 300 ft. surface. The most important mineral has been noticed on a small mound near Kalyadi of Arsikere taluk to the south west of Arsikere. The survey has revealed the existance of over 1.05 million tonnes of high quality copper ore in the area. It is found from the experimental processing of the ore that it has about 1.5% of copper content as against the 1% recovery required for economic extraction of copper.

Forest ; The total area under forest in the district is 200 sq. miles and the percentage of the forest area to the total area of the district is only 7.5% which is for below the state average of 18.4%. The district contribution to the total forest area of the state is only 1.5%. The Chief sources of forest revenue are sandalwood, soft and Hard wood. The western portion of the western ghats in Saklespur taluk are clothed with magnificent virgin forest. Some of these forest tracks along the slopes of the valleys have been taken up for coffee and cardamom cultivation. The western ghats exert incirect influence on the climate, regulation of moisture, prevention of soil erosion and also the fertility of the soil. On account of deforestation, the high valued timber like sandal wood, teak

and rosewood have been eliminated and now only jungle type of wood and soft wood for the present are available. In addition to the above, there are miner forest produce like honge, kakke and thangady chakka are available in the district.

Soil : The district consists of four types of soil viz. letterite soil, sandy soil, red soil and black cotton soil. But large areas of the district contain alkaline soils nearly 65% of the land having P.H. ranging from 8.0 to 9.0%.

Crops : The main crops of the district are as follows food crops like paddy, ragi, jawar, pulses etc, and commercial crops like potato, cardamom, sugarcane, areaca, coconut, groundnut, oil seeds, coffee and small quantity of tea.

Water Supply : There is adequate water supply from Hemavathi, Yagachi rivers and almost all the towns have been supplied with protected water and there is sufficient water for Industrial purpose in this district.

MANAGEMENT WISE LIST OF HIGH SCHOOLS/ JUNIOR COLLEGES

Kinds of Institutions	Junior Colleges		High Schools		Total
	Boys	Girls	Boys	Girls	
1. Govt. High School and Junior College	1	.....	9+2	4	14 + 2
2. Ex. Municipal High Schools and Junior Colleges	5	.....	3	.....	8
3. Ex. T.D.B. High Schools and Junior College	1	.....	30	.....	31
4. Private High Schools [Aided] and Junior Colleges	1	.....	17	7	25
5. Private High Secools [unaided]	.....	.....	11	1	12
Total	8	.....	70	12	90 + 2

Pupils of the present day after the completion of general Education of S.S.L.C. are found misfits in the employment market as they have not acquired any Job-oriented education. They find it very hard to get suitable Jobs in big Industrial and commercial centres nor they have developed sufficient skill and confidence to take up any self employment opportunity or trade. Being ill-equipped for life situation, they don't fit into the local environment.

The Youths of our country will get lot of scope for the development of necessary skills of different trades, after the completion of Job-oriented courses at (+ 2) stage under the scheme of vocationalisation of Higher Secondary Education.



Infrastructure Facilities

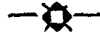
Hassan district is well connected through roads from important towns and villages. There is national highway in this District, from Bangalore to Mangalore viz. Hassan the length being 220 miles. But the State highways connect the District Head Quarters, Towns and other important villages. The State Highway passes through this district to Bangalore Honnavar, Bangalore-Mangalore and Hassan-Chickmagalur.

Railway : Hassan District is served by two metergauge Railway lines with a total length of 78 miles only. The new Railway line from Hassan to Mangalore covering a distance of 117 Miles (188 Kms.) which is under construction will be completed by the end of 1978. The line from Hassan to Sakleshpur covering a distance of 24 miles has been completed and the Railway traffic is in operation from June 1976. This railway route will serve as a key to the development of malnad Area, which has rich natural resources and can help to transform the area and to usher in an area of prosperity.

Further this new line will help to transport huge quantities of iron ore from Chickmagalur district and also connect the harbour of Mangalore and also to industrialise the hinterland of the Malnad. The western Ghats rich in Flora and Founa and noted for scenic beauty and in addition Hassan district which has world famous ancient monuments would see a boon in tourist traffic Air Strip. This district has the advantage of air strip at the Bhuvanahalli about 4 miles from Hassan, which is under construction and this will facilitate air

travel and save a good deal of the tourists who wish to visit world renowned monument of Belur, Halebid and Sravana-belagola of this district. Which brings good lot of foreign exchange to the country.

Communications : Hassan district has not well knitted telecommunications (post and telegraphs) which has got exchange facilities to all the important towns of the district.



Existing Resources

Existing Industries in Hassan District : Hassan District has not industrially developed, even though the district has got rich agricultural potentials which is not exploited for industrial purpose. Hassan town is industrially developed to the little extent. But on the whole the district is industrially backward. The economy of the district is predominantly based on agriculture and the pressure of population on land has not been yet reduced to any appreciable degree. The land per capita comes to about 2 acres and the per capita income is about Rs. 307/- and mere agricultural production is meagre to ameliorate the economic condition of the people and there is lack of entrepreneurial talent in this district. Hence, there is immediate need of intensifying the industrial activities in the district for better economy besides providing employment to the unemployed and underemployed.

The Village artisans continue to function on traditional lines and offering useful services in return for cash or kind. The carpentars, the blacksmiths, the leather workers, the pottery and the weavers form the important members of the group. The averages annual income of this group comes to about Rs. 1200/- to Rs. 1500/- Many of them possess one or two acres of land which they cultivate. They have their own small houses or huts to live in. The other possessions of the group are implements necessary for their crafts.

Malnad Productivity Council, Hassan : To increase productivity consciousness among the industrialists as well as prospective entrepreneurs, an institution called "Malnad Productivity Council" is functioning in Hassan town since

1958 and it caters to the districts of Hassan Chickmagalur and Shimoga. This Council organises meetings, seminars and lectures by experts on Industry and Agriculture with a view to educate Industrialists to augment production with the available local resources.

Large Scale Industries : At present there is only one large scale industry by name "The Mysore Implements Factory at Hassan". The State Government had established this factory in 1939 for the manufacture of agricultural implements. The main items produced at present are pickaxes, munties, beaters, sledge hammers, Crowbars, Ploughs and other miscellaneous agricultural implements. Lately the factory has also taken up the manufacture of light structurals. Transmission linetowers and also manufacture of R.C.C. Poles required by the K.S.E.B. Since agriculture in India is being gradually mechanised and more tractors and power tillers are coming into use, the Factory is being geared to diversify its line of production and to take up the manufacture of tractor and power tillers. With the completion of Hassan Mangalore Railway Project, some of the present transport bottlenecks of the factory would be overcome in so far as the despatch of articles from and import of machinery and equipment to the Factory are concerned. The factory is proposed to be converted into a limited company, major share holders being Agro Industries Corporation. At present the factory has employed 215 workers.

MEDIUM SCALE INDUSTRIES

In Hassan District there are 4 Coffee Curing Works under Medium Scale Industries and they are looked after well by the Coffee Board.

Sl. No.	Name of the Unit	Capital Investment (in Lakhs)	Production (in crores)	Number of Person employed
1.	Hassan Coffee Curring Works Hassan	22.5	1.2	250
2.	Kothari Coffee Curring Works Hassan	13.0	1.0	260
3.	Bharathi Coffee Curring Works Hassan	10.5	0.50	155
4.	Planters Coffee Curring Works Hassan	1.5	0.18	100

After the cured coffee seeds are graded the broken pieces and shrivels are separated which are bought by manufacturers of product of coffee which included Coffee Powder makers and instant coffee makers. The present output of these Coffee seeds is about 6,000 tonnes. With an emphasis on developing industries within the District with local raw materials, it would stand to reason to plan for a sufficiently large Instant Coffee Plant to utilise to the inferior grades of Arabica and Robust Coffee.

Small Scale Industries Play a vital role in the Modern Economy providing greater employment and income opportunities. They act as a great establishing force and contribute to a fast, rate of Industrial Development by servicing as feeder and ancillary unit.

In Hassan District there are 5976 different types of Small Scale Industries with a total investment of Rs. 2.85 crores employing 10,601 persons.

Forest Produce based Industries: As can be seen from the Survey conducted in respect of the existing Industries in

this District a large number of Forest based Industries like Saw Mills, Match Industries have come up especially in Hassan Town and also in Holenarasipur, Arasikere and Belur. So far as the Match Factories are concerned the raw material and favourable infrastructure, have already created as many as 14 splints and veneer factories, in the district. Unfortunately a full fledged Match Factory for further processing the splints and Veneer to match sticks and boxes has not come-up. Splints are now going to Shivakashi in Tamilnadu. It is stated that atmosphere humidity gradient in the District between the West and the East Under the Circumstances. it should be possible to set up a large sized match Factory in drier Areas like Channarayapatna and Arasikere. To set up this Match Factory a Scheme costing Rs. 25 lakhs has been drawn and entrepreneurs who are interested are being enlightened with the Technical know how and other Institutional Finances so as to enable them to have one or two units in Hassan District.

Ply wood Factory and other Soft wood Products ;
 There are 18 Saw Mills in Hassan Town and also there are 12 in Sakaleshpur Belur and Arasikere. At present these saw mills are engaged in cutting planks and manufacture of Packing cases and the saw dust at present becomes a waste which is used as fuel. To make the best use of this saw dust ways and means has to be found out to manufacture press boards and saw brickets of different qualities and strength.

This is one Medium Scale Industry by name Lakshmi Saw Mills located at Belur-Town engaged in the manufacture of plywood sheets and slate frames. This medium scale Factory has got the capital investment of Rs. 20 Lakhs producing plywood sheets and slate frames worth of Rs. 25 Lakhs per annum having 100 workers. The peeling lathes, Cutting Machines, Drying Chambers are all imported machineries of sophisticated type engaged in manufacture of Plywood sheets of different millimeters. This Factory is producing the Raw

Material viz fine tree from the Forest Department of Sakleshpur and Belur Range on lease basis. The Plywood sheets so manufactured are being sent to Bombay, Gujarath and Jaipur. There is good demand for this product and there is scope for increasing the production. Further this Factory is also manufacturing slate frames out of soft wood and transporting the same to the sister concern at Bagalkote, where-in that concern is engaged in the manufacture of slates. In addition to it an ancillary unit is engaged in the manufacture of slates. In addition to it an ancillary unit is also established in Lakshmi Saw Mill, Belur for the manufacture of packing cases out of the waste pieces of soft wood. In addition to it an ancillary unit is engaged in the manufacture of slates.

II. Agro Based Industries Existing in Hassan District :

1. Jaggery manufacture in Halebid Area of Belur Taluk. In about 1500 acres, Sugar Cane is grown in Halebid area of Belur Taluk and particularly Large area of Sugar Cane cultivation comes under Halebid Tank Ayaket, About 500 cultivators are engaged in the manufacture of Jaggery by getting Bullock Driven Sugar Cane crushers on hire basis from Channarayapatna area. The Jaggery at present is manufactured in most antiquated method containing Lot of impurity in the Jaggery through open pan process and the colour of the Jaggery being black which fetches low price than the whitish variety. Very few people are using Hydros (Chemical) for manufacturing whitish variety of jaggery. At present the Bullock driven sugar cane crushers used on hire basis will have to be replaced by Electrically operated sugar cane crushers and refined Jaggery will have to be manufactured to run the Industry on profitable lines gradually, Jaggery Industry can be switched to the manufacture of Khandesari Sugar by establishing a medium scale Khandesari Sugar unit at Halebid with a capital investment of Rs. 20-25 lakhs.

Rice Mills in Hassan District : Since Hassan district is a paddy growing area and 1,08,138 tonnes of paddy is grown

in 54,360 H. In view of this above potentiality there are 51 Rice Mills in this District.

Some of the rice mills in the district especially in Alur taluk are of old types and needs modernisation. The rice mills existing in this district are to be replaced by sheller type of machinery, which gives more of rice recovery per quintal.

In additional to one modern Rice Mill a pressure par boiling unit can also be established at Sakleshpur since there is ready market for boiled rice at South Kanara, Coorg and Chikmagalur District.

Bee-Keeping Industry in Hassan District : (Alur, Belur and Sakleshpur Taluks) The Khadi and Village Industries Commission has taken up the development of beekeeping industry in this district. In view of the forest area in taluks of Alur, Belur and Sekaleshpur and also coffee plantation there is plenty of pollen yielding plants and the best suited for the development of bee-keeping industry. A bee-keeping Co-operative Society at Sakleshpur has been organised and working since 1940. The society has distributed 17,843 bee-hives 335 honey extractos at subsidised rates to 2,353 bee keepers in about 435 villages. The total production of honey in the order of 70148 Kgs. worth of Rs. 2,36,435. In addition to this bee wax to the tune of 7,570 Kg. valuing Rs. 66,831 is also produced. This Society has also proposed to establish honey processing plant for the purification of raw honey received from Bee-Keepers.

There is scope for expansion of Bee-Keeping Industry in this area as it helps for augmenting Agricultural Production through cross Pollination by establishing bee colonies.

Coir Industry : Coir industry is one of the important Cottage Industries in this district. Traditionally Coir Industry is concentrated in Arasikere and Channarayapatna Taluks of

this district. Coconut is grown in 69,500 acres which has immense potential for the development of Coir Industry. While the whole coconut is being economically exploited in some form or the other yet it is interesting to note that mechanised process has been introduced in this Industry to defiber the dry coconut husk which was hitherto been burnt or wasted as fuel and avoided the age old retting processes. The rapid development of this Industry in this district has helped the agriculturists to supplement their income and build up rural economy, thereby avoiding wastage of industrial raw material. It is estimated about 12 crores of coconut husks are available annually.

Coir Industry in Karnataka State could not be developed on the lines of Coir Industry in Kerala State due to non-availability of backwater facilities suitable for retting purpose. The Government of Karnataka established demonstration cum production defibering units and provided their technical feasibility and economic viability. After successful demonstration at the Government Mechanised Units individual entrepreneurs came forward for establishing their own units. Karnataka is pioneer in starting mechanisation in India in Coir Industry and is only next to Ceylon in the whole world in the extraction of Coir Fibre through mechanised process. At present there are 13 mechanised units working in this district with a total capital investment of Rs. 20 lakhs and an annual production of about Rs. 15 Lakhs though Ceylon type of defibering drums were introduced in the State in the beginning from the experience gained in working of these units and also for increase production and marketability of the Coir fibre, producing beaters have also been introduced in getting increased production and also cleaned and glazed fibre at more economic prices than other method of extraction of fibre.

So far as the spinning of fibre is concerned, it has not made much headway due to inherent defect in the Coir fibre which is not suitable for the manufacture of coir products

unlike Kerala Coir Products. Hence Coir fibre of Hassan district is more suitable for the manufacture of rubberised Coir products like mattresses, upholstery material and packing cases, which has strengthened the mechanisation of coir industry. Through Coir Fibre is being extracted through mechanisation it has become very difficult to reduce the cost and the cost of production of fibre is high to meet the competition in the world market, of late the demand for coir fibre is diminishing due to competition from the Ceylon market. Hence it is suggested that improvement in the machinery employed for defibering for a better turnover and easy operations may reduce the cost of production.

With all the development made so far, only a fraction of the total raw material is utilised and there is therefore vast scope for a large scale development in Channarayapatna taluk. It is estimated that husk is available to the tune of 12 crores. Taking into consideration that about 2 crores of husk are used for Industrial purpose and about 5 crores are made use of for fuel purpose where there is acute shortage of fuel the remaining quantity of about 5 crores of husks will help to convert the present waste into Industrial raw material. It is an established fact that the coir industry is an export oriented industry and its development will augment the export potential and increase foreign exchange earnings for the country.

III. Mineral Bases Industries Existing in Hassan District :

Hassan district is endowed with mineral resources mostly in Holenarasipur taluk, Arsikere and Channarayapatna taluks. The gneiss rocks occupy a greater part of the district and consists mainly of a complex of banded gneiss mainly Biotitic containing occasionally strips and strings of the older schists. They generally form low hills and gently undulating mounds. This is a very important characteristic feature of a landscape

off Hassan district. The newer granites was seen especially around Arasikere and Banavara. They form bold hills and stand out as huge bosses with high peaks and consist of a medium even grained granite or porphyritic, granite grading into granite porphyries, the colour of these several types varying from pink to grey.

Cromite mines are found all along the belt from Penasandra (near Arasikere in the north to Jampur in the South. The mining activity is centred round Penasandra and Bhyrapura near Nuggehalli of Channarayapatna taluk. The production of Chromite from these mines averaged about 20,000 tonnes per year and the bulk production being Bhyrapura. The mines at Bhyrapura which are worked by underground methods have reached a depth of 300 feet surface.

The next mineral is corundum which is next to diamond in hardness and is widely used in the manufacture of Abrasives. There are deposits of this mineral in Bhyrapura, Channarayapatna taluk. This mineral is also said to have occurred at several places in the neighbourhood of Bageshapura.

The next mineral of the district is Copper which is noticed on a small mound near Kalyadi of Arasikere Taluk near South West of Arasikere. Recent survey conducted on intensive scale at this place and the Drillings based on the Survey have indicated good Copper mineralisation in the Quartzities. The Survey has also revealed the existence of over 1.05 Million Tonnes of High quality Copper ore in the area. It is found from the experimental processing of the ore that it has about 1.5% of Copper content as against the 1% recovery required for economic extraction of Copper.

This district has also got deposits of China Clay (Kootur) a pleasing white colour, are found near Bageshpur of Arasikere Taluk. One or two Washing plants are constructed at the

place for treating the mine clay and refining it for being used as a filler in paper and in ceramic Industries.

The clay fraction obtained as a by-product which is rich in allumina is used for manufacture of refractory bricks.

Another mineral called Vermiculite is also available in this District. This is a micaceous mineral which expands 10 to 25 times on heating. The exploits product has a great many industrial applications. Deposits of this mineral occur near Bageshapur in Arsikere Taluk.

Further in Channarayapatna Taluk of this district the gneissic granite are also found which is excellent for building stones. The material can be quarried from the surface and it preserves an Extraordinary freshness. The fine grained granite found at Sravanabelagola is of excellent quality. The famous Monolithic statue of Gommateswara or Indragiri is carved out of this granite.

Holarasipur taluk is also noted for rich minerals in this district. This taluk can be called as a granery for minerals. The following are the minerals available in this Taluk near Yannehole, Rangana Betta and Doddakadnur. Asbestos, Kyanite, Staurclate Gernet, Quartz, Corundum, Manganatite, Chromite, Calcite, Chlorite, Thrmeline, Graphite, Vermiculite, Lime Stone, Silica, Soap Stone Flux Site, Copper sulphate, Mica Magnesite, Talc. To Exploits these minerals, the Mysore Minerals Private Ltd, Under the Department of Mines and Geology have taken systematic exploitation of ores and minerals. The Chief among the above minerals is Asbectos.

Asbestos : It is estimated that about 25,000 tonnes of Asbestos is available in the above area. The Mineral Asbestos is found suitable as an insulating material for steam pipes boilers, skill brake linings and also drop curtains in theatres and fire proof wall linings screen, Asbestos

cordage cloths similar to Textile product Asbestos ropes yarn spun used for brake band linings and cultch facings, card and wanes gloves, aprons, rope ladders, protective clothing for fire fighting ingredients for non ferrous foundry course and to give better collapsibility, elasticity and ventilating qualities ingredient in fire proof paints and roofing cement, floor tiles-mates for stores, iron etc, and for domestic use.

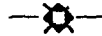
Beryl: Crystal of Beryl are also found in some of the mica bearing pegmatites near Doddakadnur in Holenarsipur Taluk, Beryl is a Chief source of Beryllium which metal is of great importance in atomic energy establishments. It is also used in the preparation, of special alloys with copper.

Feldspar: A large number of pegmatite veins was found between Holenarsipur and Krishnapur containing feldspar which is used in ceramic Industry. Further potash feldspar is used in ceramics for making Pottery both in the body of ware and in the glaze. It is also used in glass manufacture, tiles porcelain sanitaryware and for making electrical porcelain Insulators. It is estimated that about 40,000 tonnes feldspar is available in the area.

Kyanite: Kyanite in association with staurolite occurs in white band of micaceous schist to the east of Holenarsipur. Crystals of Kyanite often 3 to 4 in length are found segregated in patches. Kyanite is also found associated with corundum in Harbour and Mavinakere area. It is available in plenty and it is estimated that about 75,000 tonnes of Kyanite is available. Its industrial uses are alluminous refractories for making bricks, blocks and other shapes for Industrial furnaces of all kinds of glass furnaces and tunnel kilns and for the rechartrsmuffls, crucibles and saggars. It is also used as Abrassives and in sand papers.

Although Hassan District is rich with minerals, but unfortunately there is no proper organisation to explore the

available mineral and use the same for Industrial purposes which the country is badly in need of. At present Government has leased wide range of areas to Mine Owners on nominal royalty basis. In turn the Mine owners are excavating the minerals in a raw condition and exporting the same to different parts of the country instead of starting Mineral based Industries in that area which would provide employment to the local people, besides increasing producing and developing the areas. The Mining Industry requires huge capital in terms of crores besides the Industry is complicated and complex in excavating and exploring the different types of minerals. In spite of heavy investment etc. it is essential in the interest of the State, it is better that the State Government should strengthen the mining organisation and the department on scientific line with Technical know how so that many mineral based Industries could be started in the area itself as this would facilitate to improve the economy of the area. The mine owners instead of exporting the excavated mineral in a raw condition, restriction should be placed on mine owners to start Industries in the area by using the available minerals and establishing processing plants and other machineries for providing employment to the local people for developing the area.



Resource Analysis

(a) Preservation of Potato through Cold Storage :

Hassan District is rich in production of cash crop like potato with an acreage of 12,000 Hectares and the production of potato is about 90,000 Tonnes per year. Owing to ideal climate and suitable soil, this cash crop has gained momentum during the last five years. Taking into consideration the yield, there is no proper agency to help the grower in marketing the potato and also its preservation. There are about 175 traders and middlemen at present to collect the potato from producers and to sell to the traders at consuming points like Bangalore, Hyderabad, Bombay, and Ahmedabad etc. in order to meet the demand and lessen the wastage of foundation seeds table potatoes, there is already a cold storage plant at Hassan constructed by the Department of Horticulture at a cost of Rs. 4 lakhs with capacity of storing 400 Metric tons of Potatoes. Considering the volume of productions of potatoes in Hassan Dist. There is dire necessity of another cold storage plant of a bigger type which caters to the needs of potato growers. As such the capacity of the cold storage plant should be increased by 5 times the present capacity of 400 metric tonnes. So a plant with a capacity of 2,000 Metric Tonnes should be installed at Hassan to protect and preserve the potato. There is invariably a glut in the market during the season resulting in considerable decrease in prices. Only a small percentage of the total production is stored under cold storage, which is sold at very high rate after the potato season is over.

(b) Dehydration of Potato at Hassan :

The essential feature of potatoes as a method of food preservation is that moisture content of food stuff in the potato

is reduced to a level below that at which micro-organisms can grow. This reduction of moisture is accompanied by a corresponding reduction in weight and frequently in volume of potatoes. So far no organised effort is made in this area to sell dried potatoes in suitable consumer packings. Since the Defence Forces in the Country require packed dried potatoes in bulk, this Industry has good prospectus in this district.

The Shelf life of the dehydrated potatoes if properly packed and prepared to adequate specifications will last for more than 12 months. The lower the moisture content the longer the shelf life at high storage temperature. For quick turn over, the dried potatoes can be packed in cellophane bags. Dried potatoes are used in frying and salting. Deep fat fried and salted potatoes is an established consumer trade. Dried reconstituted Potatoes can be used in cooking in place of fresh potatoes. Modern methods of dehydration of potatoes enable the preparation of dehydrated potatoes which retain to a very large extent the desirable qualities of nutritive value from fresh potatoes. Cooked fresh potatoes maintain three times as much vitamin "C" as cooked dehydrated potatoes.

(c) Manufacture of Dehydrated Potato Chips at Hassan :

Good quality uniform sized potatoes are to be used for the preparation of wafers (Chips). Frying of potato slices in Hydrogenated oil is preferred. The crispiness of the wafers can be preserved by cooling the fried chips and immediately packing them in pliofilm bags which are water proof and heat sealed. Under these conditions, crispiness of the wafers can be maintained, for about Six months. The dried product is essentially meant for local market and the excess product manufactured in bulk may not only have the civil market but large quantities can be purchased by the Defence Forces of the Country.

d) Manufacture of Potato Starch at Hassan :

Dried potato flour is used in vegetable soups and as a stabiliser and also as a thickening agent in different industries. Thoroughly washed potatoes are resped and are meshed well in such a way that as many cells as possible get captured. The pulp is then sieved in a stream of water in shaking sieves so as to separate the fibre present in it. The starch thus deposited from the suspension is recovered by filtering the water through filtered cloths. Most of the starch falls to the bottom and most of the fibre will settle in tank. The starch retained in the tables is again suspended in water and retabled till a pure product is obtained. It is then dried at a temperature of about 35° to 40° Centigrade.

Manufacture of Ragi Malt at Hassan :

Hassan District produces 8,87,875 tonnes of ragi, out of which 6,62,875 tonnes is used as staple food and the remaining quantity of 2,25,000 tonnes of ragi can be made use of for the manufacture of ragimalt in this District. Malt is obtained by germinating, drying and powdering the grains. Malt-food can be used as a supplement in addition to milk in the diet of children and adults. It has got high nutritive value and highly pelatable.

Sugar Factory in Hassan District :

Since Hassan District has got the transportation facilities like road and railway that are easily accessible, it is feasible to locate two sugar factories in this District, preferably one at Hassan and the other at Holenarasipur. Besides, the climate of this District is suitable and also there is water facilities in the above two areas for the establishment of 2 sugar factories in the District,

Establishment of Modern Rice Mill at Alur and Holenarasipur :

The rice mills existing in this district are of old type and need modernisation with objective of getting more rice recovery through sheller-type of hulling. One such unit can be established either at Alur or at Holenarasipur with a capital investment of Rs. 2 lakhs. In addition to the modern rice mill, a pressure par boiling unit can also be established at Sakaleshpur with a capital investment of Rs. 1 lakh since there is ready market for par boiled Rice at South Kanara, Coorg and Chikmagalur District.

Cardamom :

Cardamom is one of the costliest spices. At the time of Industrial Survey it is ascertained that 1 1/2 lakhs Kgs. of cardamom is grown annually in the area of Sakaleshpur Taluka in an area of 26,000 acres. The bleached variety of Cardamom has got a good market in foreign countries. The Greenish variety of Cardamom which is about 75,000 kgs. fetches lower price and can be used for extraction of cardamom oil. It is learnt that 7% of oil content is available in greenish variety. The oil so produced is made use of in perfumery, Pharmaceuticals, liquors, and as a flavouring material for meat and bakery products. It is proposed to set up a combined processing grading and oil extracting unit at Sakleshpur with a capital investment of Rs. 4 1/2 lakhs, providing employment of 20 persons.

Textile Mills at Arsikere :

Arsikere is a Trading Centre for the receipt of cotton from from Chickmagalur, Shimoga, Mysore and Hassan Dist. The types of cotton that are grown in this District are only My-14 and sea-Island Cotton. It is estimated

that 4,700 tonnes of Cotton is grown in this District and to process this cotton there is already a ginning and pressing factory at Arsikere and Arkalgud. The soil of the District is also suitable for growing cotton and more acreage can be brought under cotton cultivation by persuasion and propaganda. Further there are a number of handloom weavers in Arkalgud and Holenarasipur Taluks and they required certain counts of yarn for their handloom industry. This is a need based industry which can be set up at Arsikere which has got congenial atmosphere like weather Rail facilities, and also it is a big trading centre of the District. So there is scope for one Textile Mill with a capital investment of Rs. 1 crore having 25,000 spindles capacity with an employment potential of 300 to 350 persons.

Manufacture of Hard Board Out of Saw Dust

Hard board can also be manufactured out of saw dust by making use of the entire district, production of saw dust that is available. The other raw materials required are tamarind, wood tar, phenyle which are available in the Market.

Industries based on Mineral resources - Manufacture of Asbestos Cement Pipes :

It is roughly estimated that M/s Mysore Asbestos Private Ltd. Holenarasipur are producing 600 tonnes of asbestos powder per year and they are exporting the same. It is advisable to use the above quantity of raw material for establishing asbestos cement pipe factory at Holenarasipur.

Copper Project :

At Kalyadi in Arsikere Taluk, Copper is available and it is estimated that 2.5 million tonnes of ore is available and the



project is still in the experimental stage. If the project is successful, a concentration plant unit at a cost of Rs. crore may be established and employment opportunities given to local persons of the area.

Manufacture of Automobile Rubber Products (Washers, Bushes, Handles)

The raw rubber is first masticated and then the other ingredients are incorporated by sparkling them on the sheets and then passing them through the rollers. The rubber is passed and repassed through the rollers until the various ingredients are properly incorporated. The equipment for the manufacture of rubber moulded goods is indigenously available and suitable dyes are also being made in the country. It is also estimated that there are 2740 vehicles registered in the district as per Regional transport authority and 230 tractors and adding some more vehicles to an extent of 2000 plying through the district. There is possibility of expanding the automobile rubber products unit at Arsikere.

Rerolling Mill for the Manufacture of Brass and Copper sheets at Sravanabelagola :

Historically, Sravanabelagola is famous for brass and copper industry from times immemorial. This brass and copper, which is an age old industry now decayed to some extent. It has to be revived in view of the skill and local talent available in the artisans of Sravanabelagola. At present about 150 artisans are engaged in this industry. In order to revive this industry, it is most essential to supply the brass and copper sheets of different gauges to these artisans for the manufacture of domestic utensils. Hence there is need for starting a rerolling mill at Sravanabelagola.

Modernisation and Development of Brass and Copper Industry at Sravanabelagola.

With a view to revive the age old brass and copper industry and also to encourage the existing artisans to improve their skill and talent to earn better wages, this industry has to be developed on modern lines, in the manufacture of brass and copper vessels, in addition to the manufacture of aluminium vessels at a cost of Rs. 8 to Rs. 10 lakhs on a medium scale basis. This industry can be run so long as there is demand for brass, Copper and aluminium vessels and in alternative, this industry can be switched on, to the manufacture of stainless steel products, when the demand for copper, brass and aluminium vessels diminishes.

Conclusion :

The Industrial Survey of Hassan district has already revealed that the district has not made much headway in industrial development. But it has necessary potentiality for development. The main difficulty in the way of Industrial development has been the paucity of entrepreneurship. Further the study has also revealed the good scope for developing agro-based, plantation based, live stock based, mineral based and demand based industries in the district. An atmosphere should be created for the flow of technical know how to take up new industrial ventures. Wide publicity and propaganda are quite necessary to induce and cajole the artisans and local entrepreneurs, both educated and uneducated people so as to avail the concessions and incentives given by the government, department of industries and commerce and several agencies functioning, in the District.



Identification of Courses of Institutions

Hassan district is one of the six districts in Karnataka State which is chosen for the introduction of vocational courses on a pilot scheme basis from the 1978-79 academic year.

Accordingly vocational courses have been proposed to be introduced in the following colleges in the district.

No.	Name of the College	Courses proposed
1.	Hoysaleswara College Arsikere	1. Electrical Wiring & Servicing of Electrical Appliances. 2. Banking 3. Co-operation 4. Accountancy & Auditing
2.	Navodaya Jr. College Channarayapatna	1. Electrical Wiring & Servicing of Electrical Appliances. 2. Accountancy & Auditing
3.	Junior College Holenarsipura	1. Co-operation 2. Primary Education
4.	M. Krishna College Hassan	1. Primary Education 2. Banking
5.	Junior College Belur	1. Poultry Science 2. Agriculture Economics and Farm Management





APPENDICES

I. Industrial Activity by Areal 1971

Taluk	Raw Clay (Metric Tonnes)	Soap Stone (M. Tonnes)	Cownsium (M. Tonnes)	Asbestos (M. Tonnes)	Kaynite (M. Tonnes)	Chromite (M. Tonnes)
Alur	....	....	....	....	....	....
Arkalgud	....	....	....	....	....	....
Arsikere	23488	63	36	....	....	....
Belur	....	....	....	....	....	....
Channarayapatna	....	....	....	....	....	4078
Hassan	....	....	....	....	....	....
Holenarsipur	....	....	139	169	13	....
Sakleshpur	....	....	....	....	....	....
District	23488	63	175	169	13	4078

2. Area and Population

Taluk	Area in (Sq. Kms.)	Rainfall (Ten year Average Annual in MM)	Total Population	Rural Population		Urban Population		Total S. Cs & S. Ts Population	No. of Towns	No. of Village	
				Total	% of Rural Population total	Total	% of Urban Population total			In habited	Un habited
1. Alur	428.5	1108.1	60203	56483	93.8	3720	6.2	11871	1	241	19
2. Arkalgud	674.0	869.2	127960	113699	88.8	14261	11.2	21657	2	258	42
3. Arsikere	1277.8	525.3	208961	180402	86.3	28559	13.7	33638	2	324	46
4. Belur	840.2	1107.8	121578	111099	91.3	10479	8.7	28662	1	341	42
5. Channarayapatna	1043.4	619.0	170546	156626	91.8	13920	8.2	14219	2	364	23
6. Hassan	943.8	586.1	214707	163382	76.0	51325	24.0	22869	1	368	32
7. Holenarsipur	604.4	593.5	107240	91247	83.5	15993	16.5	17890	1	01	48
8. Sakleshpur	1029.2	2379.4	91175	80021	87.7	11154	12.3	20394	1	219	8
Total-Dist.	6823.00	973.5	1102370	952959	86.4	149411	13.6	171200	11	2316	260

The total of the Area figures of the Taluks will not tally with the District figures because the former represents Land use area and are derived.

3. Schools & Enrolment in General Education

District	No. of Institutions			Enrolment in					
	High/Higher Secondary	Intermediate Colleges	Colleges with in Intermediate school	Total	IX	X	XI P.U.C.	XII TDCE	Total
Hassan	Junior Colleges	....	....	7	1119	916	734	551	3320
	Govt. Boys High Schools	....	....	11	814	595	....	....	1409
	Govt. Girl's High Schools	....	....	4	390	325	....	....	715
	Ex-TDB Taken over	....	....	31	2488	1327	....	....	3815
	Aided Private High Schools	....	....	17	1229	889	....	....	2118
	Aided Girls High Schools	....	....	7	553	373	....	....	926
	Un aided Boys' High Schools	....	....	11	411	284	....	....	695
	Un aided Girl's High Schools	....	....	1	42	37	....	....	79
	Ex-Municipal High Schools	....	....	3	308	246	....	....	554
	Total	....	....	92	7354	4992	734	551	13631

4. Employment Trends

Employment and Unemployment

Taluk	Number employed in organised sector (000)*		Number of application on the Live register of Employment Exchange (end of Dec. 1969)				Number of applicants on the live register of employment exchange end of December 1971				End of Dec. 1975			
	Total		Educated				Total		Educated		Total		Educated	
	Graduats Post Graduats	Graduats	Metri- culates	Others	Illiter- ate	Graduats Post Graduats	Metri- culates	Graduats Post Graduats	Metri- culates	Others	Illiter- ate	Graduats Post Graduats	Metri- culates	Others	Illiter- ate
Alur								314	37	159	96	22		
Arkalgud								893	137	434	251	71		
Arsikere								1005	115	568	254	68		
Belur								698	79	434	149	36		
Channaraypatna								757	84	457	160	56		
Hassan								4135	414	2030	1163	828		
Holenarsipur								1124	82	485	348	209		
Sakleshpur								482	56	231	146	49		
District	27.6	29.5	1910	3058	3519	3247	8463	472	4027	9708	1004	4798	2567	1339

5. Land Utilisation

Particulars	Hassan	Alur	Belur	S. Pur	Arkalgud	Arsikere	CR. Patna	HN.Pur	Total
Ge-ographical area (Hects)									
as per Village (Papers)	86391	42476	71422	105414	64548	122920	103852	58325	655348
Forest (Hect)	4561	1377	3220	18210	3508	15550	472	1407	48305
Area net available for cultivation (Hect.)	13735	3610	7036	5996	5541	13542	15879	12461	77800
Other uncultivated land (Hect.)	12954	13988	12328	24963	12431	19983	7879	8606	113132
Fallow Land (Hect.)	13974	7327	10506	20348	6315	6952	16404	12886	94712
Net area sown (Hect.)	41167	16174	38332	34897	36753	66893	63218	22965	321399
Total area cropped (Hect.)	47491	17115	40824	41071	47604	77624	41071	28836	366689
Area shown more than once	6200	2575	2731	1132	7217	6519	4600	1179	32153

5A. Area and Production of Different Sources

Area Irrigated under different sources

Net area Irrigated (He)	7614	7007	8969	12425	4601	1934	3947	4570	51067
Area irrigated by Canals (He)	1200	405	1322	....	1438	....	1785	1404	7554
Area irrigated by Wells (Hect)	636	151	334	715	333	400	428	236	3234
Area irrigated by other sources	420	265	....	7264	70	....	75	....	8094
Area irrigated by Tanks	5358	6186	7313	4446	2760	1534	1658	2930	32185

6. Area and Production of Different Crop

Items	Hassan	Alur	Belur	Sk. Pur	Arkalgud	Arsikere	Cr. Patna	Hn. Pur	Total
Area Under crops : Paddy	4438	6866	11271	14547	2000	1155	2806	4780	47663
„ Ragi	22159	3810	10913	179	6800	32000	21800	14648	112309
„ Jowar	2860	36	1700	....	1247	5523	2200	720	14286
„ Wheat	4	4	60	....	....	69	35	12	184
„ Cotton	12	35	2561	....	1392	2830	....	10	6840
„ Minor Millet	45	11	80	....	....	313	2380	145	2974
„ Sugarcane	839	48	893	....	100	36	1230	260	3406
„ Tur	555	13	145	....	220	426	740	326	2425
„ Bengalgram	218	1	75	....	334	446	380	100	1554
„ Groundnut	370	8	891	....	300	1250	600	600	4019
„ Other Pulses	5794	1967	2363	....	4320	11008	12842	5842	44136
„ Chillies	405	13	597	....	340	1386	500	340	3581
„ Coconuts	1200	17	590	6	375	13454	12280	558	28480
„ Aracnuts	230	12	116	18	840	23	129	50	1409

7. Growth in the No. of Agriculture Implements

Items	Hassan	Alur	Belur	Sk. pur	Arkalgud	Arsikere	Cr.Patna	Hn.Pur	Total
Agril. implements & machineries									
except IP sets & Tractors	56268	21540	37665	14968	24470	53089	63854	26636	294490
Tractors	109	26	5	77	4	17	9	4	251
No. of I.P. Sets	259	47	157	101	149	249	303	152	1437
No. of Wells	219	46	159	98	158	328	375	196	1579
Tanks a. 40 Hect. & more	34	4	28	15	7	26	27	13	154
b. Less than 40 Hec.	1029	922	1596	816	763	223	215	320	5884

8. Increases in the No. of Villages Electrified

Tahsil	No. of Villages (Inhabited)	No. of Villages (Electrified)	%of electrified
1. Alur	241	65	
2. Arkalgud	259	101	
3. Arsikere	325	84	
4. Belur	342	56	
5. Channarayapatna	364	69	
6. Hassan	371	86	
7. Holenarsipur	201	34	
8. Sakleshpur (Manjarabad)	219	69	

9. Growth of Co-operative Movement

Taluks	No. of Co-operative (Credit & Non Credit) Societies	No. of Farmers Service Society	Regulated Markets		Co-op. Marketing Societies	
			No. of Unit	Value of produce handled	No. of Unit	Value of produce handled
1. Alur	37	....	....	....	1	46
2. Arkalgud	32	1	....	....	1	....
3. Arsikere	88	....	4	38665171	1	161
4. Belur	52	....	....	....	1	....
5. Channarayapatna	72	....	1	8704443	1	186
6. Hassan	99	2	2	17155881	1	342
7. Holenarsipur	33	....	2	2063467	1	154
8. Sakleshpur	28	....	1	23009382	1	....
District	441	3	10	89598344	8	889

10. Professional and Technical Education Facilities

Type of Professional Institutions	No. of Institutions
1. Primary Schools	69
2. Junior Secondary/Middle Schools	37
3. Higher Secondary/or Sec. Schools	20
4. Arts/Science/Commerce Colleges	4
5. Engineering Colleges	1
6. Polytechnics	1
7. Recognised Shorthand/Typewriting & other Vocational Training Institutes	8
8. Other	33
9. Public Libraries	10

II. High Yielding Varieties Programme

Since the inception of this programme, there has been a steady increase in the coverage from season to season. Hy. Jowar has caught the minds of the cultivators of the district because of its rich yielding and the area under local jowar has been dwindled. Further there is potentiality to introduce Hy. Maize in the district and there are chances of reduction in the area under Ragi, Potato, etc., The achievement of the year 1975-76 is noted below.

Name of Crop	Kharif		Rabi/Summer		Summer	
	Target	Achievement	Target	Achievement	Target	Achievement
HYV. Paddy	5000	4279	....	....	7000	8161
HY. Jowar	8250	12623	1000	1676	....	22
HY. Maize	4000	5672	1450	435	1450	62
Mex. Wheat	....	....	400	299	....	....
HYV. Ragi	19750	25397	12425	9546	4000	4372

12. Electrification No. of Connections

No.	No. of Town	Dome- stic	Indus- trial	Commer- cial	Road light- ing Points	Others
1.	Alur	260	9	....	74	2
2.	Arkalgud	950	....	10	156	....
3.	Arsikere	2345	161	850	533	8
4.	Banavara	208	1	93	162	....
5.	Belur	1030	7	53	220	....
6.	Cr. patna	652	36	6	229	....
7.	Hassan	5777	367	2042	1633	....
8.	Holenarsipur	1081	56	301	286	....
9.	Konanur	272	15	90	116	1
10.	Sakleshpur	866	46	400	434	....
11.	Sravanabelgola	194	12	30	106	4

13. Transport & Communication

Taluk	Surface Road Length (area Kms.)	Road length per S. Km. (area Kms.)	No. of Villages not connected by roads	Route length of Railways (Kms.)
Alur	143.0	33.3	87	....
Arkalgud	65.0	39.3	62	....
Arsikere	457.0	35.7	27	57
Belur	272.4	32.3	105	....
Cr. patna	421.4	40.1	1	....
Hassan	365.1	38.6	43	38
Holenarsipur	239.0	39.5	64	26
Sakleshpur	354.4	34.3	29	....
District	2514.3	37.0	418	121

14. Occupational Pattern of Work

Taluk	Total Work force	Work force in the category of			No. of Artisans
		Cultivators	Agricultural	Work force in Manufacture	
Alur	19573	10927	3151	693	485
Arkalgud	42093	30228	5441	1537	1914
Arsikere	61167	39249	7366	3290	3599
Belur	40152	22720	6457	1623	1522
Channarayapatna	55285	42207	5719	2144	4156
Hassan	61953	36748	4868	4179	3274
Holenarsipur	33818	25040	2287	1289	1003
Sakteshpur	35935	9377	6160	1311	680
District	349976	216496	40549	16066	16633

It includes in addition to manufacturing work force in processing Servicing & Repairs.

15. Industrial Estates

Taluk	Industrial Units		Indl. Estates & Indl. Area	
	No. of Larg & Medium Scale Unit	No. of Small Scale Unit	No. of Indl. Sheds in the estate comp.	Extent of Indl. Area (Growth Area Acres)
Alur	....	5	....	....
Arkalgud	....	16	....	....
Arsikere	....	32	....	....
Belur	....	8	....	....
Channaraypatna	....	23	....	....
Hassan	2	126	7	....
Holenarsipur	....	25	....	....
Sakleshpur	....	12	....	....
District :	2	247	7	....

Small Scale unit is one with an investment in plant and machinery not exceeding Rs. 10 lakhs.

16. Population-Scheduled Castes Scheduled Tribes

Name of the Town	Scheduled Caste		Scheduled Tribes	
	Male	Female	Male	Female
1. Alur	419	368	....	....
2. Arkalgud	697	630	....	....
3. Arsikere	1423	1268	2	1
4. Banavara	30	36	....	....
5. Belur	456	414	22	14
6. Channarayapatna	442	419	....	....
7. Hassan	1218	1038	9	3
8. Holenarasipur	1527	1484	13	6
9. Konanur	562	502	....	....
10. Sakleshpur	466	405	1	1
11. Sravanabelgola	95	83	....	....

17. Land Holding

Taluk	Number of holding in the size class (In Hectars)					Total
	Less than 1	1-2	2-5	5-10	10 & above	
Alur	2695 (31.8)	2217 (26.2)	2360 (27.9)	845 (10.0)	352 (4.1)	8469
Arkalgud	7815 (37.4)	6125 (29.3)	5484 (26.3)	1212 (5.8)	256 (1.2)	20895
Arsikere	6038 (23.3)	8154 (31.5)	9046 (34.9)	2197 (8.5)	459 (1.8)	25894
Belur	6854 (34.7)	5798 (29.3)	5053 (25.6)	1425 (7.2)	641 (3.2)	19771
Channarayapatna	13830 (39.3)	10383 (29.5)	8956 (25.5)	1764 (5.0)	261 (0.7)	35194
Hassan	11143 (40.5)	8475 (30.8)	6994 (23.6)	1163 (4.2)	240 (0.9)	27515
Holenarasipur	8904 (44.3)	5392 (26.8)	4727 (23.5)	951 (4.7)	144 (0.7)	20118
Sakleshpur	2546 (28.9)	1948 (22.1)	298 (26.1)	1158 (13.2)	852 (9.7)	8802
District	59828	48492	44418	10715	3205	166658
Total	(35.8)	(28.0)	(26.6)	(6.4)	(1.9)	

The percentage share of the number of holdings in each size class in the total number of holding in taluka is given in brackets.

**THE SCHEME OF
VOCATIONALISATION
IN KARNATAKA**

Department of Vocational Education

Government of India has formulated a scheme for the Vocationalisation 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.

Vocationalisation 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 Dakshina 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.

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 vocationalisation 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

(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	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 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, Fertiliseres 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 therpy technician	4	....
		5. Medical Record Technician	6	....
		6. Psychiatric Assistant	4	....
		7. X-Ray Technician	4	....
		8. Optician 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

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

	....	188
	....	32

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 Course :

- 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 Semister 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 academic and Vocational Streams 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 off Ist & 3rd Semesters

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

For each subject off 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 the Ist & 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 assessment	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 the 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 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 withheld until a candidate has passed in all the papers of all the semesters 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 Two 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 Two 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.	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 XI 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 services, 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 personnel 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 scholarships etc. are common with the academic stream of the Pre-University Course through a separate set of Regulations are prescribed governing the operation of the scheme of Training and 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 educational 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. One or two rural Colleges also selected.

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 suprintirdets/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 conditions 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/ 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 worker teacher-full-time may be appointed by a duly constituted selection committee. Part-time lecturers and part-time workers 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 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 cyclostylled 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.

Maintenance of Accounts

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

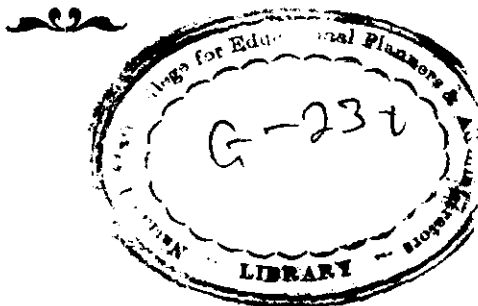


ANNEXURE IX

**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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