



# **TOWARDS VOCATIONALISED EDUCATION**

NIEPA DC



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**DIRECTORATE OF  
SCHOOL EDUCATION & SCERT  
TAMILNADU**

**Sub. National Systems Unit,**  
**National Institute of Educational**  
**Planning and Administration**  
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**Presented by**

**Thiru J.A. RYAN**

**Director of School Education and SCERT, Madras**

**on the occasion of the**

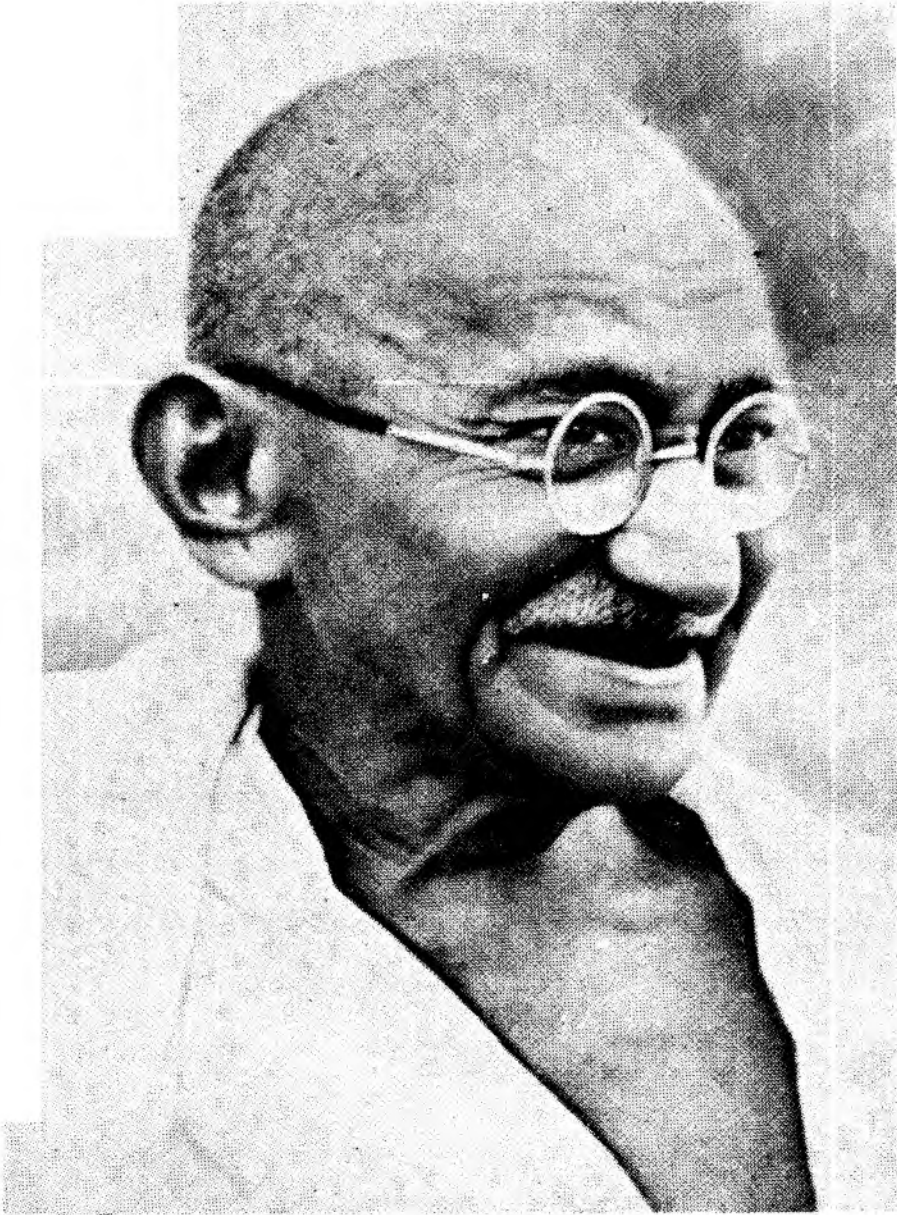
**National Seminar on Vocationalisation of Education**

**at +2 Stage**

**held at P. S. G. College of Technology,**

**Coimbatore**

**from 12-2-83 to 15-2-83**



“Begin the child’s education by teaching it a useful handicraft and enabling it to produce from the moment it begins its training.”

— MAHATHMA GANDHI



"A country's human resources constitute its greatest asset. Attitudes and skill make a nation. Education provides the key to both."

**Tmt INDIRA GANDHI**  
Prime Minister of India



“ While every effort has been made to increase the employment opportunities in the State during the last few years, ..... a new thrust is necessary to give further impetus to create fresh job openings. ”

**SUNDER LAL KHURANA**

*Governor of Tamilnadu*



“The real education lies only in developing his personality to enable himself to use his skills for the good of the society.”

**M. G. RAMACHANDRAN**

Chief Minister of Tamil Nadu



" We.....constitute the third largest pool of  
scientific and technical manpower in the world."

**Tmt SHEELA KAUL**

Minister of State for Education  
and Culture  
Government of India  
New Delhi





" Our education should be programmed with the view that we should train not only those who will seek employment but also those who will create employment."

**C ARANGANAYAKAM**

Minister for Education,  
Tamilnadu



"The learned are respected everywhere."

K. DIRAVIAM, I.A.S.  
Chief Secretary  
Govt. of Tamil Nadu



“ I would also like to.....impress upon you the need for giving extra special attention to ‘value orientation’ in education and vocationalisation of + 2 education ”

**Tmt SERLA GREWAL**

Education Secretary  
Government of India  
New Delhi



"The major thrust of the change under the new pattern of education should be to break the rigid barriers between the world of learning and the world of work and to bring about a fusion between the two."

**C. RAMDAS, I.A.S.**

Commissioner and Secretary to  
Government Education, Science and  
Technology, Govt of Tamil Nadu



“ The qualified persons in the respective professions should also be involved in an increased measure in the training programmes for the vocational teachers and students of the +2 stage ”

**J. A. RYAN**

Director of School Education &  
SCERT Madras

**C. ARANGANAYAKAM**, M.A., B.L., B.T.  
*Minister for Education, Tamilnadu*

FORT ST. GEORGE,  
MADRAS-600 009.

1st February, 1983

## FOREWORD

I am extremely happy to note that the Director of School Education and SCERT, Tamilnadu, is bringing out a booklet covering various aspects in planning and implementation of the Vocationalisation Programme in Tamilnadu at the + 2 level. The booklet gives a comprehensive view of the progress and achievements made since 1978-79 in this area.

Tamilnadu started the Higher Secondary Programme in a big way in 1978 providing for academic and vocational streams. The Governmental inputs, the cooperation extended by various agencies and the enthusiasm of the teaching community have all been responsible for our achievements in the field of vocationalisation. Realising the need for improving the system by rectifying the defects noticed in it, the Tamilnadu Government appointed a High Power Committee which recently submitted its Report containing far-reaching recommendations to the Government. I am glad that this booklet has given the summary of its major recommendations also.

The Kothari Commission has categorically stated: "A dearth of competent and trained manpower is now felt in nearly every branch of national life and is probably one of the biggest bottlenecks to progress." I strongly believe that this endeavour of Tamilnadu to meet this contingency by the introduction of vocationalisation at the + 2 stage will surely serve a big public cause of great and immediate utility and will be of immense value in the long run.

It is fitting that this booklet is brought out for use at the National Seminar on Vocationalisation at + 2 Stage for the Education Secretaries of all the States to be inaugurated by my esteemed friend, Prof Nurul Hasan, on 12th February 1983 at the P. S. G. College of Technology, Coimbatore.

**C. ARANGANAYAKAM**

**C. RAMDAS**, I.A.S.,  
*Commissioner and Secretary to Government*  
*Department of Education, Science & Technology,*  
*Government of Tamil Nadu.*

**FORT ST. GEORGE,**  
**MADRAS - 600 009.**  
1st February, 1983.

## PREFACE

Education has been defined as an investment in future. It can yield rich dividends only if the whole system is directed to meet the demands of the society. The wide gulf between the world of pure theory and the world of work in the traditional system has been responsible for its products failing to become productive units in the society. The major thrust of the change under the new pattern of education should be to break the rigid barriers between the world of learning and the world of work and to bring about a fusion between the two. Vocationalisation in the + 2 stage has been designed to provide a corrective to some of the deficiencies of the existing system and to make education more relevant and meaningful to life.

Tamil Nadu has made a bold beginning for providing the right type of education needed for our national development. It has the necessary support for its growth and expansion and in a few years it may bring about a revolutionary transformation in our employment scene.

I have great pleasure in introducing this small booklet to all the Education Secretaries attending the National Seminar on Vocationalisation at + 2 Stage at Coimbatore and I hope it will serve as a guide for planning and implementing the vocational programme in the different States.

**C. RAMDAS**

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Chapter I

## VOCATIONAL EDUCATION IN TAMILNADU A RETROSPECT

**J. A. RYAN,**  
Director of School Education,  
Madras

The year 1978 witnessed a major thrust in the reconstruction of the educational system in Tamil Nadu with the adoption of the new pattern of 10+2+3 for School and College classes. The two-year course forming the upper deck of 912 schools, extended this level and type of education to the interior rural parts, replacing the pre-university course, which was provided in 188 colleges, most of them in urban location.

The firm decision to locate the plus two stage in schools and to extend the benefit to every nook and corner of the State and to all sections of society, especially to the neglected rural population was the first effective step taken to correct the imbalance in higher educational provision. The credit for this goes entirely to our Education Minister, Thiru C. Aranganayakam, who piloted the scheme right from the start in 1977 with a firm faith in the system.

The distinct advantages in upgrading select high schools into higher secondary schools are easier accessibility to this stage of education in the rural areas; keeping the cost of education within manageable limits in schools; lesser

indiscipline problems in schools; more number of working days than the colleges and congenial atmosphere to pupils by the extension of the familiar school studies. Above all, it was considered easier to vocationalize education at the school system than in colleges or universities which usually offered degree or diploma courses at a higher level. For many reasons, academic and sociological, it was decided to impart vocational training in the same school where general education was imparted to overcome the unhealthy mental barriers of standard, status, means and intellectual abilities among the students who are admitted to academic and vocational streams. The medium of instruction adopted was mainly Tamil or the mother tongue with facilities of free education for them. Community service, physical education and moral education were also part of the course.

At the higher secondary stage two distinctive streams were introduced, one preparing students for advanced education in the universities and the professional colleges and the other preparing for a variety of occupations immediately after completion of vocational studies.

According to the Kothari Commission, with proper planning, co-operation, co-ordination and implementation of the scheme of vocationalisation, it should be possible to divert at least 50 percent of the students who successfully complete 10 year education to the vocational stream, thus reducing the pressure on the universities on the one hand and preparing the students for gainful employment including self-employment on the other. For a majority of vocational higher secondary students this would be a terminal stage in the sense further educational facilities would be made available so that those in jobs may benefit through part-time or evening studies.

Hence in the Tamil Nadu Programme, the facilities for vocational education were suitably diversified to cover a large number of fields such as agriculture, fisheries, engineering, industry, banking, trade, commerce, medicine, public health, home management, arts, crafts, music, dance including Bharatha Natyam, secretarial training, etc.

The course of studies for the two streams was so framed that the student of general education would do two languages, one of which will be English and a combination of four subjects of arts, science or inter-disciplinary nature. The students in the vocational group had to do the same two languages and one or two subjects related to the vocational subject and the remaining part of the time was devoted to the study of the selected vocational subject.

Thus the 2 year stage between the school and university stages of education was regarded not merely as college preparatory but as a period for preparing an increasingly larger number of school leavers for different vocations in life.

Thus vocationalisation of education is a major breakthrough in the reconstruction of the present educational system. Through vocationalisation it would be possible to prepare middle level manpower, who would not merely be superior to skilled workers but who would work with their brains as well as their hands in view of their academic and vocational background. The stress was laid increasingly on self-employment, due to the fact that all those who qualify in vocational studies are unlikely to secure gainful jobs of their choice in the organised sectors.

On the lines suggested by the NCERT and the Centre for the Study of Regional Development of Jawaharlal Nehru University (JNU), occupational surveys were conducted as a preliminary step in all the districts with a view to identifying the manpower needs, demand for new skills, vocations in which there is shortage of trained personnel, the emerging industrial, agricultural, commercial and trade development, the facilities available for vocational training, the areas for self-employment opportunities and the facilities for on-the-job training to students.

Six major occupational areas were identified and the list of vocational subjects under each is furnished in Annexure I. Experts, Specialists, Professionalists connected with each vocation such as Senior Engineers, Doctors, Lawyers, Agricultural Professors, Home Science Teachers, Bankmen, Co-operators, Industrialists, Foremen of firms, were associated in the preparation of the syllabus and course of study with a stress on practical work.

In view of the changing pattern of vocations, it was considered that substantial

hardware and permanent facilities should be created only for those vocations which would have a longer span of life. For others, as far as possible, existing facilities in educational institutions or other organisations could be utilised and teachers or instructors appointed on a part-time basis from amongst those who have expertise in the vocations concerned. The facilities available in the institutions belonging to different departments of the Government, public enterprises and private organisations were harnessed so that the cost of vocationalisation may be kept down. Several public and private sector industries and undertakings were associated with vocational programmes introduced in the area schools.

The requirements of teaching staff for the various vocational courses were met partly by inducting the personnel of erstwhile bifurcated courses into the Higher Secondary Schools and for the rest, it was considered that the object of these vocational courses will be better served if suitable persons working in the field in the locality are made available to handle both theory and practical classes on part-time basis. Permission was also accorded for holding the classes in the place of normal work of the part-time instructor such as banks, factories, farms, industries, hospitals, Primary Health Centres, private organisations, etc.

Posts of part-time vocational instructors have been sanctioned at the rate of two for each vocational class on a consolidated remuneration of Rs. 150 p.m. per person.

The implementation of the vocational scheme was left to the local Headmasters and the Parent Teacher Associations and the Vocational Committees formed for each school. Girls are provided with a variety of courses under Home Craft. The Heads of Schools may change the vocational subject depending upon the job market with advance intimation. Internal assessment has been adjusted to assess the involvement of pupils in the vocational practicals. Hence for teaching the theory and practical of a vocational subject, a teacher should have first class practical competence; he must also possess comprehensive knowledge of scientific principles underlying the practicals. Therefore, practitioners from the particular vocation have been invited to participate in the instructional work. There is an advantage in having persons from the field to instruct the students. Not only the latest practices will be imparted and through his influence regular on-the-job training can be arranged but it may even ensure employment to the students ultimately resulting in a good collaborative arrangement.

Many retired personnel with appropriate skills are appointed on short-term basis. But there is a demand that a certain percentage of teaching personnel must be appointed in each school on regular basis. There is also a demand to increase the rate of remuneration to part-time instructors. To the extent possible, the Heads of Institutions were themselves authorised to appoint persons possessing the qualifications mentioned in Annexure III subject to the age limit of 60 years. In special circumstances persons with lesser qualification were permitted. Government also authorised all the Heads of Departments to permit

their staff to serve as part-time instructors and to receive the remuneration allowed.

To assist the vocational instructors, Student "Vocational Monitors" are appointed on the "Earn while you Learn" principle on a monthly remuneration of Rs. 20. Two Vocational Monitors are permitted for each course—one for the first year class and the other for the second year class.

The Tamil Nadu Programme has provision for attaching the vocational courses with the industries, factories, banks, farms, hospitals, etc, to make the course fruitful. All leading industrialists and Chambers of Commerce have been consulted in the matter of linking vocational education with industries and commerce and a fair degree of success has been achieved in forging a linkage.

A District Committee on vocational education has been formed in every district with the District Collector as Chairman, the Chief Educational Officer as Convener and the District Officers in the Departments of Agriculture, Public Health, Industries and Commerce and Employment and Training as members to guide in the task of linking education with job. This has to be stabilised further to make it fruitful.

As an essential step, the Heads of Higher Secondary Schools having vocational courses have been given orientation training. With a view to orient the teachers of vocational courses the National Council of Educational Research and Training, New Delhi (NCERT) has organized in-service courses. The State Council of Educational Research and Training (SCERT) also plays a significant role in organizing

orientation courses, induction courses and in-service training programmes.

There is also a proposal to give apprenticeship facilities to students with the co-operation of the related departments and organizations. To obviate the difficulties encountered, necessary measures to bring the vocational students under the purview of the Apprenticeship Act are being worked out by the concerned Ministry in the Government of India.

The production of suitable textbooks for a large variety of vocational subjects was considered a formidable task and a time-consuming job. Therefore, in the initial stage suitable publications were procured from other Departments and Institutions where similar courses or allied courses are conducted, and adopted by teachers and students for consultation and study. Simultaneously knowledgeable authors were involved to write well illustrated vocational Guide Books in clear and simple language with authentic practical details based on the syllabus, keeping the local conditions in view. Guide Books have been supplied to teachers free of cost to guide them in the method of instruction. So far 105 guide books have been published covering 48 vocational subjects.

The vocationalisation of education at +2 stage is being so structured as to make it both terminal and continuing. The aspirations of the students for a better position on the employment market has been taken into account and now the system permits them to secure further qualifications for vertical and horizontal mobility whenever they desire or opportunities occur.

The objective is most of the students of the Vocational Courses should enter into the world of work either through self-employment or taking up a job. For those who wish to continue and improve their qualification, there is provision for allowing them admission in technical and professional institutions as follows in specialised areas, provided they fulfil the admission norms.

1. Engineering Colleges
2. Second year of Polytechnic and 10% of seats will be reserved for them
3. Agriculture and Veterinary Courses
4. MBBS and BDS Courses

The area-wise distribution of students who have offered vocational courses in the past four years is as follows :

#### HIGHER SECONDARY EXAMINATION

	1980	1981	1982	1983
Total number of candidates Registered for the Higher Secondary Examination, both general and vocational ..	1,18,084	1,23,757	1,30,389	1,42,729
Number of candidates Registered for Vocational Subjects :				
1. Agriculture ..	2,910	1,979	2,476	2,237
2. Home Science ..	1,543	1,616	1,398	1,463
3. Commerce and Business Management ..	11,574	12,914	14,777	16,037
4. Engineering and Technology ..	6,877	6,201	7,287	8,437
5. Health ..	1,580	2,610	2,078	2,242
6. Miscellaneous (Photography, Tourism, Bharatha Natyam) ..	60	55	48	45
<b>Total ..</b>	<b>24,544</b>	<b>25,375</b>	<b>28,064</b>	<b>30,461</b>

*A stabilised vocational scheme at the School stage will solve many of the ills of the present day imbalances in the employment market.*

5. Vocational students of 'Nursing' subject in the B.Sc. (Nursing) in the 2nd year of the course

Similarly universities do not close the doors for those who wish to pursue studies by suitably offering courses in subjects studied by them in relation to the vocational courses. They may also appear in an additional subject of study outside school hours for this purpose.

To help the students to make a judicious selection of vocational courses, it is considered desirable to provide guidance and counselling for careers and courses to the students.

The total number of vocational courses started in 940 out of 1360 schools is 1,432.

## Chapter II

# THE COURSE OF STUDIES

**A. Muthukrishnan,**  
Joint Director of School Education,  
(Higher Secondary), Madras.

The Higher Secondary course offers two streams; (i) General Education (academic) and (ii) Vocational. The course consists of three parts. Under Part I, Tamil or the mother-tongue or a classical language or any foreign language other than English is offered. Any one of the following languages may be offered : (1) Tamil (2) Hindi (3) Kannada (4) Telugu (5) Malayalam (6) Urdu (7) Gujarathi (8) Sanskrit (9) Arabic (10) Persian (11) French (12) Latin and (13) German (German may be taken under Part I of Part III-Group A and not under both.) Under Part II English is offered. Parts I & II are compulsory for students of both the academic and vocational streams. Under Part III—optionals a student may choose subjects either under Group A or Group B.

### Group A — Sciences and Humanities

Any four of the following subjects may be offered and they are available in ten combinations only : (1) Mathematics, (2) Physics, (3) Chemistry, (4) Biology (Botony & Zoology), (5) Botany, (6) Zoology, (7) Home Science, (8) History, (9) Geography,

(10) Elements of Economics, (11) Political Sciences-Modern Constitution and Civics, (12) Sociology, (13) Elements of Commerce (14) Accountancy, (15) Logic, (16) Psychology, (17) Philosophy, (18) Any one of the advanced languages, English, Tamil, Sanskrit, French, Urdu, Arabic, German, Gujarathi, Hindi, Telugu, Kannada, Malayalam, Persian and Latin, (19) Any one of the Fine Arts (a) Drawing and Painting, (b) Indian Music (c) Western Music (20) Indian Culture, (21) Environmental Studies, (22) Statistics, and (23) Siddha.

### Group B—Vocational

The vocational subjects have been placed under six vocational areas :

(1) Agriculture, (2) Home Science, (3) Commerce and Business, (4) Engineering and Technology, (5) Health and (6) Miscellaneous. A committee under the Chairmanship of Prof A. P. Jambulingam, the then Principal, Technical Teachers' Training Institute, Madras, identified 58 vocations. From among these, 49 vocational courses are offered in Tamil Nadu. *Vide Annexure I for these courses.*

The following allocation of periods is followed :

Language/Subject	For a week of 35 periods	For a year of 180 instructional working days excluding examination days	
		Academic	Vocational
Part I—Language	.. 4	144	144
Part II—Language	.. 4	144	144
Part III—Optionals			
Subject 1	.. 6	216	864 for
Subject 2	.. 6	216	vocational
Subject 3	.. 6	216	course and
Subject 4	.. 6	216	a related
			subject
Physical Education and Community Service	.. 2	72	72
Moral Instruction	.. 1	36	36
<b>Total</b>	.. 35	1260	1260

NOTE : Students offering a vocational subject under Part III Group B shall do Parts I and II and a subject under Part III Group A related to the vocational subject chosen.

### Scheme of Examination

There has been only a common question paper at the revenue district level at the end of the first year with valuation being done in the respective schools. It is proposed to hold common examinations at the revenue district level from 1982 - 83 onwards for Standard XI. There is a public exami-

nation at the end of Standard XII covering the portions studied in that year only. The revised pattern of examinations is shown in Annexure II. The Director of Government Examinations conducts the examinations. A separate Board of Higher Secondary Examination has been functioning under the Chairmanship of the Director of Government Examinations.



## Chapter III

# VOCATIONAL SURVEYS AND COURSE SELECTION

**T. Pazhanivelu**

Deputy Director of School Education,  
(Higher Secondary), Madras

To identify the vocational needs of a geographical area and to prepare an appropriate scheme of vocational courses it is quite essential to conduct a vocational survey in the area. Such a survey determines the current available occupational skills and the requirements of the foreseeable future. In view of the fact that middle level personnel have limited mobility, the youth of a geographical area should be helped to convert the existing and emerging situations into gainful employment or self-employment opportunities.

### **Aims and Objectives of the Vocational Survey**

1. To explore the employment potential of skilled and qualified persons in the district under the control of all agencies
2. To assess the employment opportunities during the next 5 or 10 years in the industrial, commercial and agricultural spheres
3. To identify and locate the occupational areas where there is scope for self-employment
4. To assess the capabilities of schools to be upgraded as higher secondary schools so as to introduce new vocational courses
5. To identify the facilities for on-the-job training

6. To identify the professional people whose services could be best utilised

### **Procedure of Vocational Survey**

To achieve all the above-mentioned objectives and aims of vocational survey, the Government of Tamil Nadu, in G.O. Ms. No. 375 Education dated 25-2-78, sanctioned the vocational survey of 6 districts in the State three of which, viz., Madras, Coimbatore and Madurai, are considered to be advanced districts and the other three, viz., Salem, South Arcot and Tiruchy are considered to be less advanced districts. Survey in the above 6 districts was completed during July-November 1978. In the remaining 9 districts, viz., Kanyakumari, Tirunelveli, Ramnad, Thanjavur, Pudukkottai, North Arcot, Chengalpattu, Dharmapuri and the Nilgiris, the survey was conducted during April-June 1979 as per order No. F.21-19/77-Sch. 3 (V.E.) dated 16-3-79 of the Government of India.

To man the survey team, a top level officer in the grade of Chief Educational Officer/Deputy Director of School Education, a Senior Research Fellow in the cadre of District Educational Officer and two Last Grade Government Servants were sanctioned. The period of survey was 3 to 4 months. Adequate training was given for 3 days in Madras to all the District Educational Officers and Chief Educa-

## AGRICULTURE



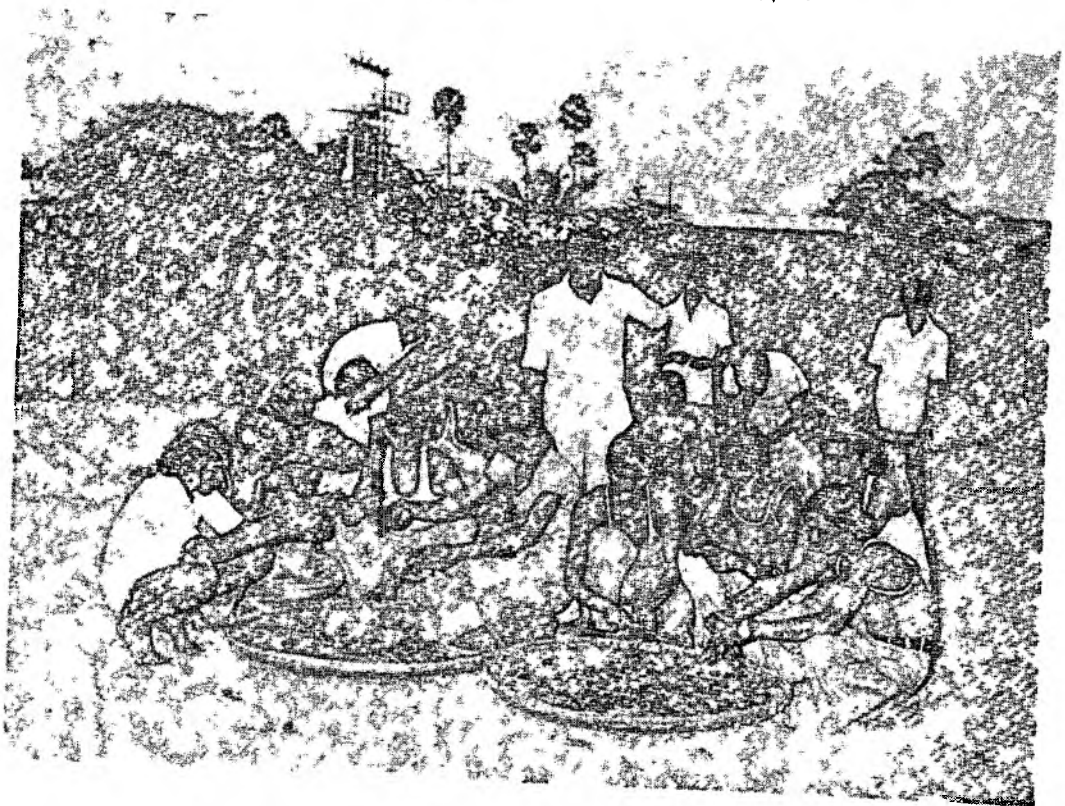
Crop Production — Tobacco Field

Neelambal Subramanian Higher Secondary School, Sooramangalam, Salem



Plant Production

Government Higher Secondary School, Manapparai



Sericulture

Government Higher Secondary School, Palakkad



### Small Farm Management

M. N. U. J. N. High Secondary School, Nagamalai, Madurai



Vegetables and Fruits — spraying pesticide

Little Flower Higher Secondary School, Salem

tional Officers under the guidance of Dr C. V. Govinda Rao of the NCERT, New Delhi.

Necessary primary and secondary data was collected from the concerned sources. The primary data was collected from the various departments from the latest statistics available with them. Secondary data was collected through questionnaires and schedules issued to various agencies.

Heads of various departments, managers of industrial concerns, public undertakings, important persons connected with education and all those who could help in the designing of new courses were interviewed and their opinions sought. They showed a keen interest in the survey and were very eager to know all aspects of vocationalisation. Opinions from the Heads of Educational Institutions were also obtained through a set of proformas and by way

of interviews. The survey team had the benefit of interviewing and discussing the availability of employment potential including self-employment and entrepreneurship with eminent educationists, industrialists, farm managers, etc. These helped the survey team to formulate their conclusions.

The vocational courses had been introduced in July 1978 on the basis of the survey made by the special staff sanctioned in the Directorate of School Education. They had followed the guidelines given by the Committee on Tamil Nadu Education Structure and Pattern, 1975, under the Chairmanship of Thiru C. G. Rangabashyam, the then Secretary to Government (Education). The District Vocational surveys conducted subsequently in the years 1978 and 1979, endorsed the recommendations made earlier and suggested some more courses.

## Chapter IV

# STAFF PATTERN AND ORIENTATION OF TEACHERS

**A. Muthukrishnan,**  
Joint Director of School Education  
(Higher Secondary) Madras

The Vocational Education Committee under the Chairmanship of Prof A. P. Jambulingam had suggested the basic qualifications required for the instructional staff of the vocational courses. This is given in Annexure III. Generally, the committee has recommended the first degree in the subject as basic qualification for the instructional staff. Regarding engineering vocations, a first class diploma qualification in the concerned field has been considered sufficient.

### Redeployment of Bifurcated Course Staff

Since the electives in Standards X and XI in the erstwhile Multi Purpose Schools have been abolished consequent to the switchover to the 10+2+3 pattern, the full-time teachers of the bifurcated courses have been redeployed to man the related vocational courses.

### Induction of Part-time Instructors

For meeting the requirements of teaching staff for the various other courses after

redeploying the personnel of erstwhile bifurcated courses to the higher secondary schools the Government considered that the object of these vocational courses would be better served if suitable and willing persons serving in the field in and around the concerned localities were asked to handle both theory and practical classes on part-time basis in schools. The instructional hours and days of vocational courses could be staggered according to the circumstances of each locality and the heads of schools have been given full freedom to arrange the time-table to suit local conditions and local talents. Classes can also be held at the places of normal work of the part-time instructors, (e.g., Agricultural Farm or Hospital). Examples of such staff of other Departments of the State Government, Quasi Government Institutions and other institutions, who can be so drafted, are given below :

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Category of Vocational Courses	Staff to be utilised on part-time basis from Institutions
Agriculture	State Seed Farms ; Rural Extension Training Centre Research Stations of Tamil Nadu Agricultural University.
Engineering and Technology	Agro Industries Corporation, Agro Engineering and Service Co-operative Federation Ltd., etc., Public Works Department, TANSI, etc.
Commerce & Business Health	Recognised Commercial Institutions, Auditors, etc. Hospital Staff, Staff of Institutions (Medical Colleges, etc.) under D. M. E. & D. H. S., established private agencies, etc.

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The Government have sanctioned the creation of posts of part-time vocational instructors at the rate of 2 for each vocational class, except for the classes which are handled by the erstwhile bifurcated course staff. These part-time posts each carry a consolidated remuneration of Rs. 150 p.m.

Nominations of the part-time instructors should be made by the heads of higher secondary schools themselves (including government and local-body institutions) as it is felt that the headmasters are in a better position to scout for local talents and fix these personnel quickly without delay. The headmasters follow the criteria laid down for these part-time appointments strictly and inform the Chief Educational Officers concerned for issuing formal orders. In the case of aided managements, the Correspondents make the appointments in consultation with the headmasters and send them to the Chief Educational Officers for formal approval. To the extent possible, persons possessing the appropriate qualifications have been appointed. All the heads of departments concerned and heads of State Government undertakings have been requested to permit such of the qualified and suitable staff of their departments as are drafted to serve as part-time instructors for vocational higher secondary courses and to receive the remuneration allowed. This order was sent to all District Collectors also, so that they could separately inform the District Officers of all the Departments concerned.

#### **Orientation of Teachers**

The staff of erstwhile bifurcated courses who are teaching the vocational subjects

now have certain pedagogic qualification. The part-time teachers do not have any such pedagogic qualification. So, in-service courses for exposing them to the higher secondary syllabus have been considered necessary. Certain orientation courses were organised for them by the NCERT and SCERT, Tamil Nadu.

#### **Guide Books**

It was also felt that these teachers should be given Guide Books. Hence, Guide Books were published and supplied free of cost to schools to help the vocational teachers in their work.

#### **Vocational Monitors**

The Government as per G. O. Ms. No. 1719, Education, dated 14th September 1978, have issued orders for instituting a very well received programme of student "Vocational Monitors" for the vocational courses under the 'Earn while you learn' principle for developing qualities of leadership among students. For this purpose, one of the willing and suitable students of each vocational class having the necessary aptitude and attitude has been designated by the headmaster as the Vocational Monitor for the course. This has been done in consultation with the vocational instructor. The Vocational Monitor assists the part-time instructor in conducting instruction classes.

The Vocational Monitor is paid a remuneration of Rs. 20 p.m. from contingencies for 10 months a year by the headmaster himself.



### **Buildings, Laboratories and Equipment**

The Government has come forward to sanction liberally grants towards school buildings, laboratories and essential equipment. The equipment that was available with the erstwhile multi-purpose schools offering bifurcated courses has been transferred to other schools offering the new vocational courses for being utilised fully. The Government has sanctioned Rs. 5,000 towards equipment to each government higher secondary school. So far, a sum of Rs. 25.40 lakhs has been sanctioned to 508 schools. At the rate of Rs. 2,500 per school, the Government has sanctioned Rs. 10.45 lakhs totally to 418 aided management schools. In addition to this, the Headmasters have been permitted to purchase necessary equipment from the accumulated funds of their schools.

### **Educational Complexes—Professional Complex Organisation**

For utilising fully the available facilities in the neighbourhood, the Higher Secondary Schools have been attached to

university level institutions such as Arts and Science Colleges, Colleges of Education and other professional institutions as part of educational complexes. Similarly, the Higher Secondary Schools offering vocational courses have got associated with the nearby Polytechnics or Industrial Training Institutes as professional complex organisations and make use of the laboratory and workshop equipment and personnel for the sake of the vocational students.

### **Link with Production units and Scope for Self / Wage Employment**

Sufficient care has been taken to attach the Higher Secondary Schools to the nearby production units for giving the students opportunity to develop work-orientation in the vocational areas of their choice. In the existing situation, there is no statutory provision for providing apprenticeship facilities to these candidates. The scope for self-employment or wage-employment of these candidates has also received serious consideration while formulating these courses.

## HOME SCIENCE



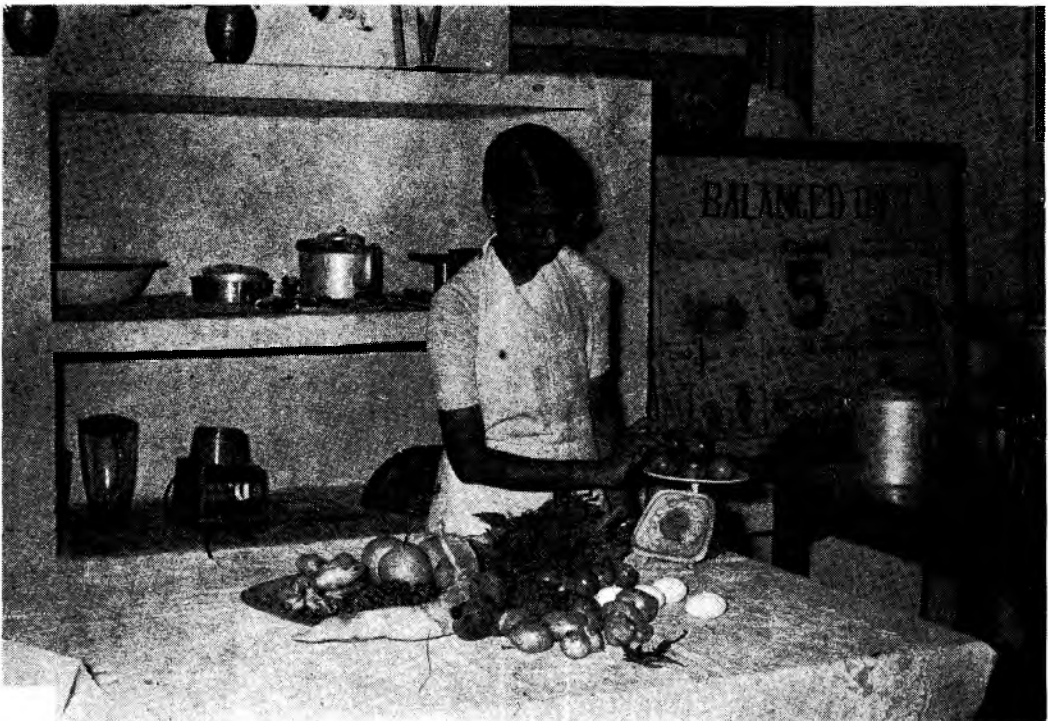
**Child Care and Nutrition**  
Avinashilingam Higher Secondary School (Girls), Coimbatore



**Dress Designing and Making**  
O.C.P.M. Girls Higher Secondary School, Madurai



**Dietetics, Nutrition and Food Preparation**  
Adarsh Vidyalaya Higher Secondary School, Madras



**Dietetics, Nutrition and Food Preparation**  
Corporation Higher Secondary School, Nungambakkam, Madras

## ISSUES IN VOCATIONLISED EDUCATION AT THE PLUS TWO STAGE

**Dr. M. Raghuramsingh**

Professor and Head, Examination Reform  
Unit SCERT Madras-6

### 1. Objective-oriented approach

Among the major objectives of introducing vocationalised education at the plus two stage, the following merit special consideration at this stage of implementation of the 10+2+3 pattern of education :

1. To provide relevant education and training to the youth befitting the modern times
2. To relate their education and training to the community needs and the world of work and make them productive citizens
3. To divert a considerable section of the youth from pursuing the traditional university education and ease the pressure on the university system

Keeping the above-mentioned major objectives in mind, it is necessary to think and discuss certain questions in the light of the experience we have gathered during the last five years. How far have we succeeded in providing relevant education and training? The vocational courses introduced should be the ones for which there is occupational demand in the district. The courses should match the community

needs of the district. This requires systematic vocational surveys for identifying the self and wage employment potential in the district. Planning vocationalised education should not be confined to the Directorate of Education level. Decentralised planning is the need of the hour. Adequately trained vocational survey units at the directorate and district levels would provide the much-needed backbone for the programme of vocationalised education.

### 2. Preparation for a Technological Age

How much have we accomplished in our endeavour to provide education and training appropriate to our fast changing scientific and technological age? The curricular content and the teaching-learning process at the plus two stage need to be viewed from this point of view. What proportion of time is devoted for the language vis-a-vis the vocational subjects in the plus two curriculum and with what object? Language education at the plus two stage needs to be functional and, in the case of vocationalised courses, language teaching and learning needs to be geared for special purposes only. The vocational subjects have to be presented to students in the form of meaningful experiences. This can be

done through the right sort of teachers in the context of good school facilities such as the library, laboratory, workshops etc. The schools should be assured of certain minimum standards with regard to provision of infrastructural facilities.

### **3. The right type of Faculty**

Have we the right type of people for imparting the vocationalised education? Has the scheme of part-time instructors introduced for the plus two vocational courses brought out the best talent from the locality? The intention was to get people who were competently engaged in industry, trade, commerce and other establishments for part-time engagement in the school so that they would transmit their practical competencies to the students and also bridge the educational institution with their production units. In order to involve the local talent, the Headmasters of the Higher Secondary Schools were delegated with the powers of appointment for the part-time staff. It may be necessary to review the situation and if necessary adopt suitable changes to attract the right sort of personnel for teaching in the vocationalised courses.

### **4. Link up with Production Units**

How strong and functional is the association between the Higher Secondary Schools and the production units? Annexure IV shows how the students of different vocational courses are exposed to work-experience situations in different production units. Monitoring such associations may be required at different levels in implementing the programmes. Whenever and wherever there is no working relationship between a Higher Secondary School

and the production unit it may need to be remedied in good time. The vitality of the vocationalised education programme largely depends on the golden link between the schools and the production service units. It is said the strength of a chain is equivalent to its weakest link and this is applicable to the plus two stage as well.

### **5. Apprenticeship training facilities**

Are the students of the vocationalised education courses getting conditioned and fashioned in developing certain marketable skills? Most of these courses give them a kind of preparation, which may not be complete. They may need formal apprenticeship training for six months to a year to make them well-rounded in their work related competencies. A few batches of students have left the portals of the schools without these facilities. Urgent action is necessary at the highest level for amending the existing apprenticeship laws and extending these benefits to this category of students.

### **6. Terminal Concept and Guidance and Placement Services**

What is the proportion of students who consider these courses as terminal among those who complete successfully and what percentage of them get either self or wage-employed? Systematic guidance and placement services should be organised for the sake of such students. The existing machinery of the school department and the department of employment and training may not be adequate to do such services. If the pressure on the university system has to be reduced and a section of the vocationalised course students have to view the plus two as terminal, it is imperative such guidance and place-

ment services should be organised in a planned manner.

### **7. Scope for Vertical Mobility**

There has been considerable public discussion on the need for vertical mobility for the students of vocationalised courses. This has to be viewed from two points of view: (i) mobility in the given field of specialised study chosen by the student of the plus two stage and (ii) mobility outside the specialised area of study of the student. One may expect that after plus two there should be courses available at the sub-university and university level for the vocationalised course graduates to pursue their education and training. 20—25% of the plus two graduates may be expected to go for such vertical development. What is the existing situation? The other sectors of education and training have not been resilient to respond to these demands on them. It is necessary to move them towards the development of new programmes for the sake of the graduates of the vocationalised courses at the plus two. Besides, a small section of the graduates of the vocationalised courses may opt to change over to the more traditional university courses at the plus three stage even if facilities become available for vertical development in their own earlier areas of specialised study and training. Human nature, being what it is, it should be possible to provide them with suitable opportunities. The demand

for such education will decline in course of time when social values change in harmony with other social structural changes.

### **8. Educational Reform or Social Transformation**

The problems confronting the planners are of no small magnitude. What is being attempted is not mere educational reform. It is basically a social revolution or transformation and it calls for nerve and demands the whole-hearted and imaginative participation of all sections of community and all public and private agencies. A new social order, wherein everyone can do work and contribute to the nation's productivity as well as adopt new social values is what is being attempted. A massive involvement exercise all-round is what is called for urgently. In the long history of vocationalised education, a history which has largely been confined to the respectable pages of the reports of education commissions and committees in this country, for the first time so many have plunged in this colossal experiment because this is the right direction. Vide Annexure V and VI. The scheme has been conceived well, but then, what is going to decide the future course of events is the tremendous organisational talent of the governmental departments and the enlightened co-operation of the private sector and the wholesome support of the community at large.

## **Chapter VI**

# **HIGH POWER COMMITTEE CONSTITUTED BY GOVERNMENT OF TAMILNADU FOR RESTRUCTURISATION OF HIGHER SECONDARY VOCATIONALISED EDUCATION**

## **SUMMARY OF MAJOR RECOMMENDATIONS**

### **1.0 Qualitative Improvement**

- 1.1 The skills required in the various courses may have to be identified through periodic vocational surveys.
- 1.2 Every vocational course must be provided with minimum workshop, laboratory equipment and other infrastructural facilities.
- 1.3 Each course should have at least one full time teacher.
- 1.4 The available facilities in the community around the school should be utilized for skill development and training and such utilisation may be reviewed annually.

### **2.0 Apprenticeship Training**

- 2.1 Those students seeking employment may be provided with apprenticeship training for one year.
- 2.2 The Government of India may be requested to amend the existing apprenticeship act for extending apprenticeship facilities to these students and also permit them to get stipends on par with sandwich diploma students..
- 2.3 The Government of Tamil Nadu should constitute a State Council of

Vocational Education. The council will award diplomas for those completing apprenticeship. However the two year Higher Secondary Examination certificates will continue to be awarded by the Directorate of School Education.

### **3.0 Employment and Job Market**

To promote scope of employment for the vocationalised stream students, the job requirements in private and Government organisations may be reviewed and the vocationalised courses may be prescribed for appropriate jobs immediately. Other things remaining the same, these candidates may be given preference over others.

### **4.0 Administering Vocationalised Education**

- 4.1 The direct responsibility for the vocationalised education at the +2 stage may be given to an Additional Director of School Education (Vocational) who will be assisted by six Deputy Directors who are specialists in the six vocational areas.
- 4.2 A vocational survey unit may be established in the Directorate of School Education.

## COMMERCE & BUSINESS



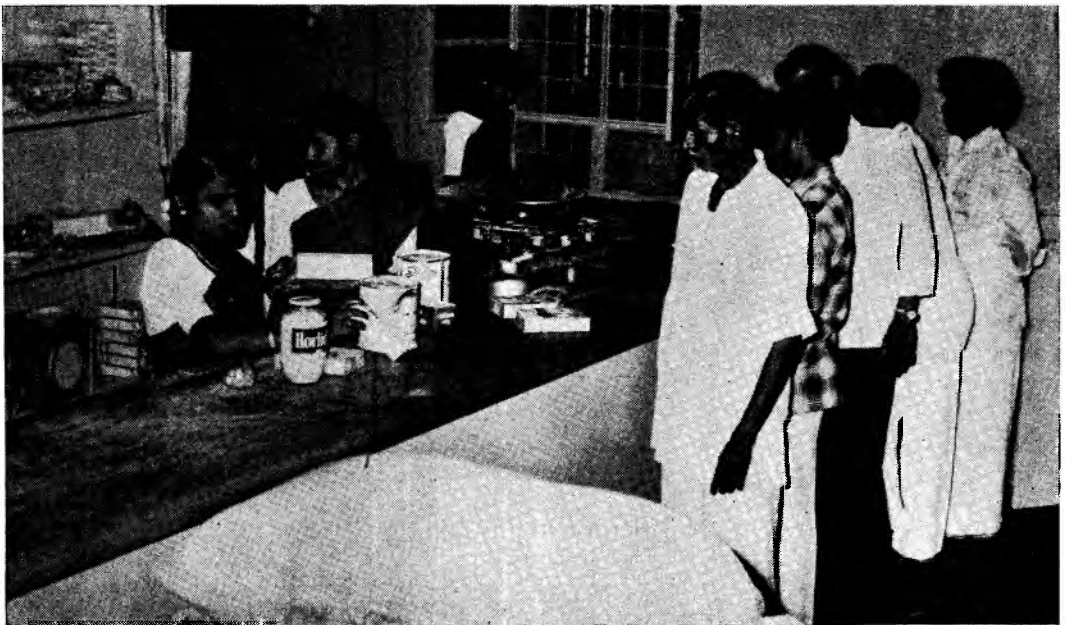
Office Secretaryship

Dr Ratnavelu Subramanian Girls Higher Secondary School, Madras





**Office Secretaryship**  
Mani Higher Secondary School, Coimbatore



**Marketing and Salesmanship — Practical Training**  
at Sri Karthikeya Mills Cooperative Stores  
P.S.G.G. Kanyagurukulam, Coimbatore

- 4.3. The district level Vocational Educational Councils may be reconstituted.
- 4.4. A Board of Studies for each one of the six vocational areas may be constituted.

**5.0. Vertical Mobility**

5.1. To facilitate vertical mobility of the vocationalised stream students, the courses offered under Part III need modification to ensure better preparation in sciences/social sciences for making the present position of ineligibility for higher education real and practical. The combination of subjects under Part III may be modified to consist of the following alternatives.

Combination (1) :

	Marks
One related subject from Group A ..	200
Three vocational subjects from Group B ..	600

Combination (2):

	Marks.
Two related subjects from Group A ..	400
Two vocational subjects from Group B ...	400

Both the combinations must be available in a Higher Secondary School and it is left to the student to choose either of them. If a student chooses combination (1), he may take three vocational subjects and if he opts for combination (2), he needs to do only

two subjects. In order to facilitate such student-choice, the vocational subjects must be structured to consist of modules.

5.2. In order to provide for flexibility in the mix between theory and practical for the different vocational courses, the following two patterns of relative weightages have been suggested.

	Marks
Pattern (1) — Theory ..	50
Practical ..	150
Pattern (2) — Theory ..	100
Practical ..	100

The mix between theory and practical need not be the same for all the three vocational subjects in a course. A combination of patterns (1) and (2) may be adopted.

5.3. The question paper for theory examination will consist of three parts-A, B and C and each carrying 50 or 100 marks. Each part will be written in separate answer books. If a student does two subjects under Part III he would answer only those two parts and a student choosing three subjects will have to attempt all the three parts.

5.4. In the interest of providing adequate opportunities for the vocationalised stream students to take the three year degree courses, the universities may have to restructure their courses by introducing changes such as :

- (i) having the possibility of certain subjects being different between the academic stream and vocationalised stream during the first

semester of the degree programme

- (ii) offering such theory subjects to the vocationalised stream students as might have been missed by them in the +1 stage, either as compulsory subjects or as subjects for auditing
- (iii) granting exemptions to the vocationalised stream students from practical and/or theory subjects, the equivalent of which they might have completed in the +2 stage
- (iv) having a common programme for the students of both the streams from the second semester

5.5. New courses such as Two year Post Higher Secondary Diploma courses may be introduced at the sub-univer-

sity level in the polytechnics and in professional institutions in fields like Agriculture, Veterinary Science and Para Medical Services.

5.6. At present the successful vocationalised stream students are admitted in the 2nd year of the Diploma Course in Engineering in the Polytechnics. Similarly they should be treated in the Institutes of Commerce, Nursing Schools and other sub-professional level institutions.

5.7. A certain percentage of seats may be reserved in professional courses as well as courses in Commerce, Home Science, Corporate Secretaryship and the Sciences. This reservation is intended to enable at least 20%—25% of the vocationalised stream students to pursue education at university or sub-university level.

## ENGINEERING AND TECHNOLOGY



**Electrical Domestic Appliances — Repairs and Maintenance**

Government Muslim Higher Secondary School, Vellore



Electrical Appliances - Repairs and Maintenance  
Municipal Higher Secondary School, Svakasi



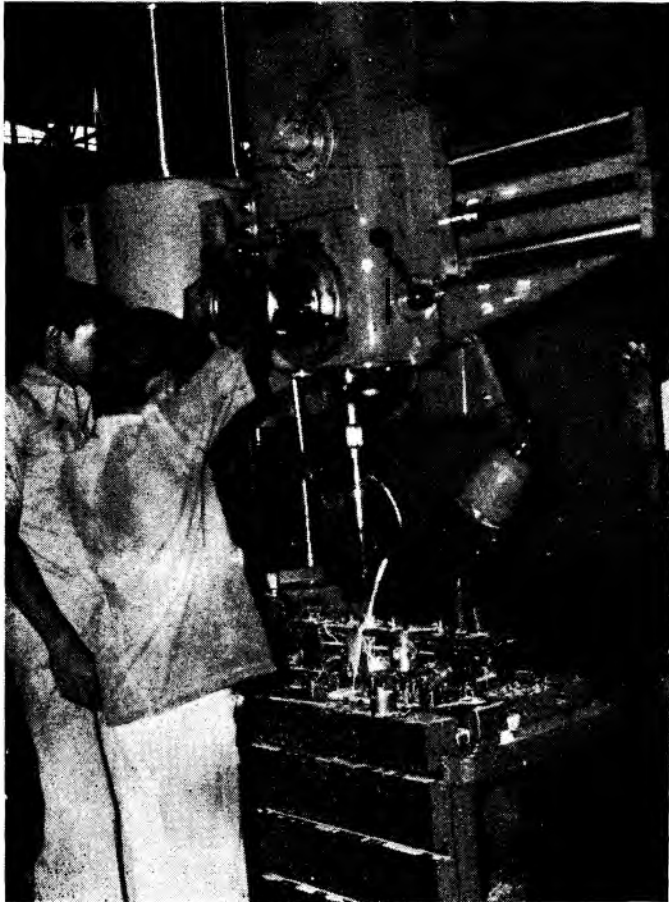
MOTOR REWINDING WINDING CONNECTION OF  
3 PHASE STATORS

Electrical: Motor Rewinding  
Government Higher Secondary School, Tirupattur, North Arcot



**General Machinist**

**S.B.G. Higher Secondary School, Pudukottai**



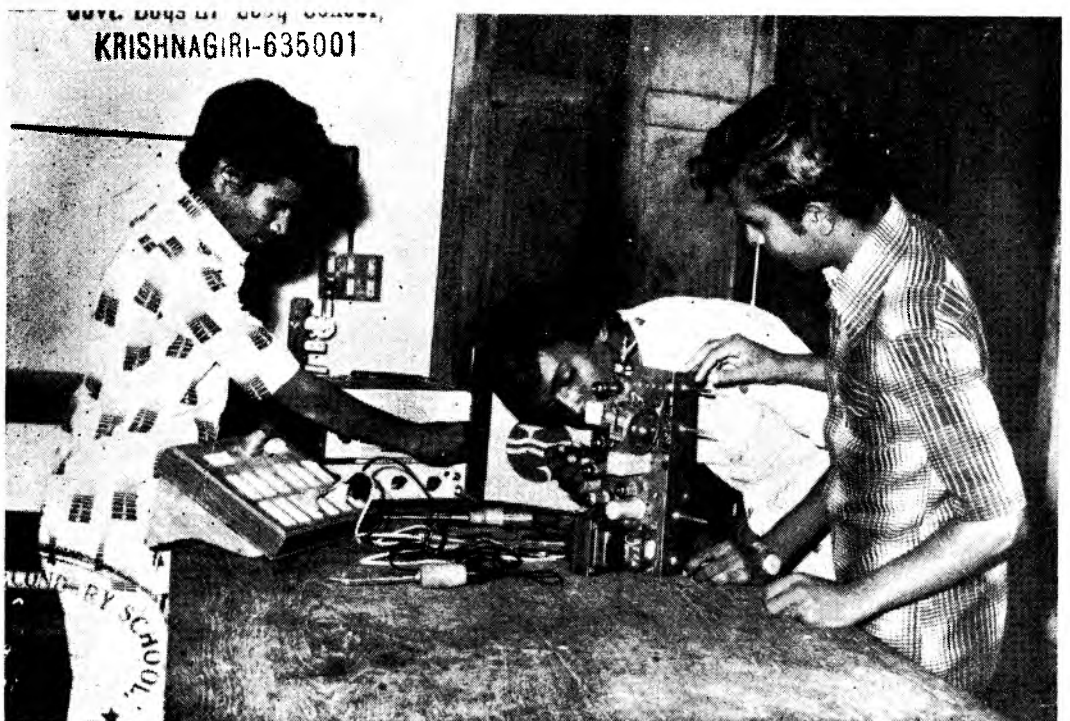
**General Machinist — Practical Training  
in Vijay Engineering Works**

Swathantra Higher Secondary School, Athipalayam

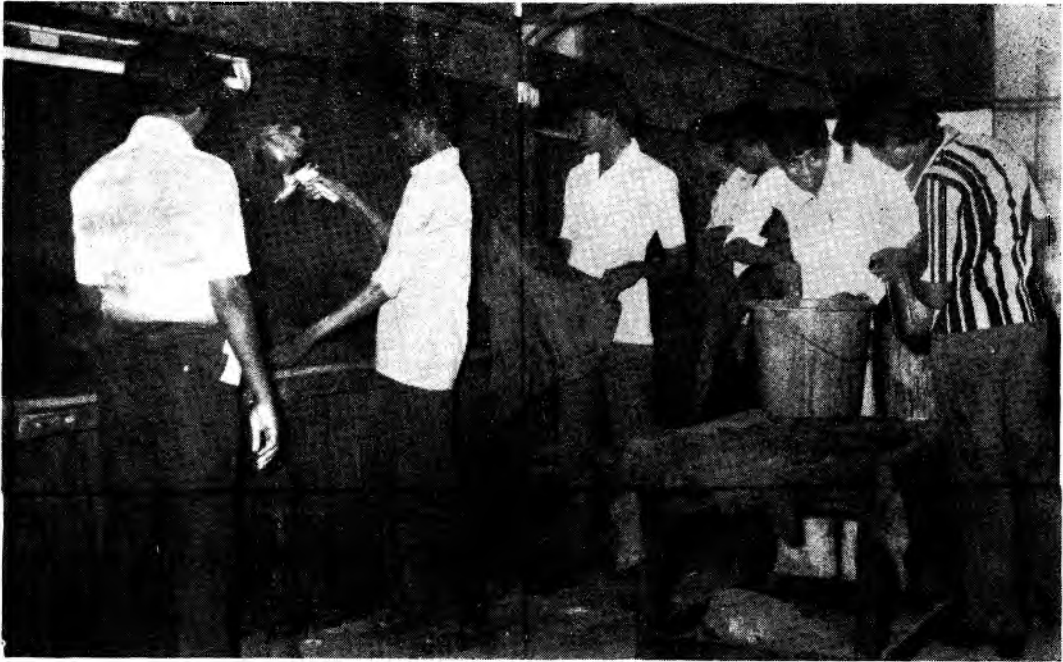




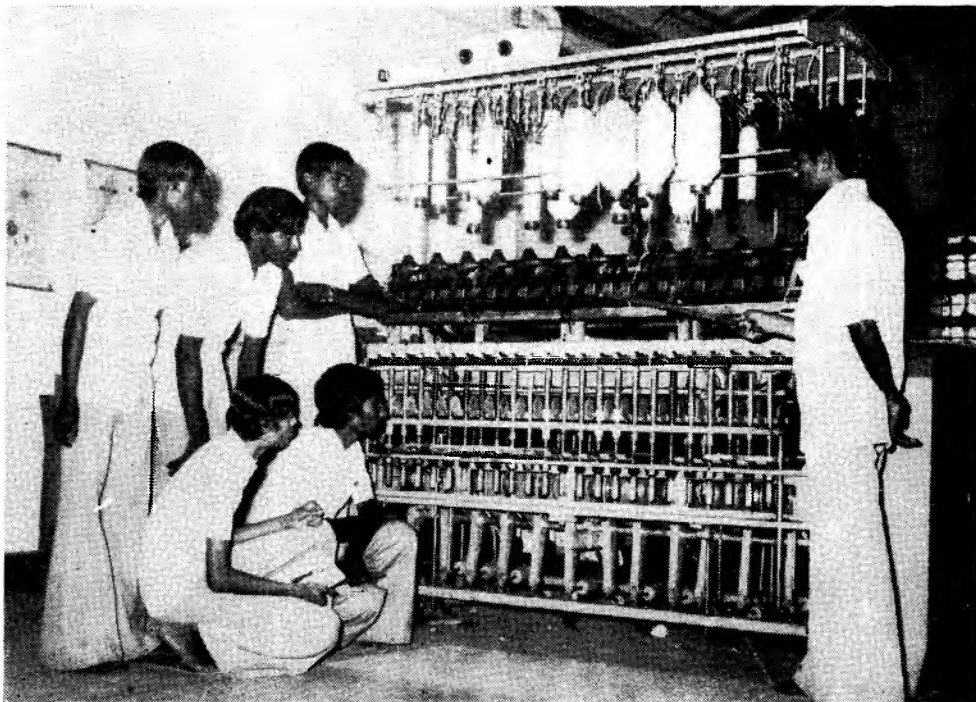
**General Machinist — on-the-job training**  
at Nachimuthu Polytechnic — Government Higher Secondary School, Kottur



**Radio and Television — Repair and Maintenance**  
Government Boys Higher Secondary School, Krishnagiri



**Leather Technology**  
Islamia Higher Secondary School, Vaniyambadi

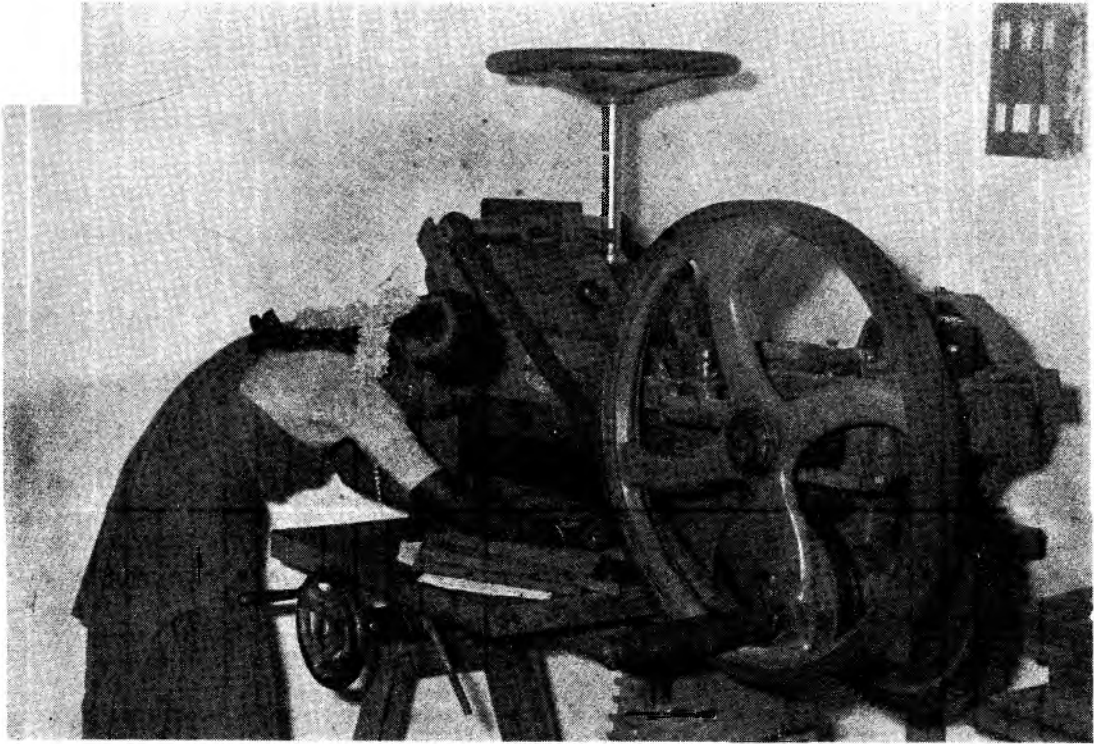


**Textile Technology — Servicing and Maintenance —**  
**Observational session in a Textile Mill**  
Sri R. S. Higher Secondary School, Salem



### Textile Machinery

Mani Higher Secondary School, Coimbatore



**Printing Technology**  
Kalyanam Girls Higher Secondary School, Madras



**Auto Mechanic**  
Government Higher Secondary School, Poonamallee



**Auto Mechanic**

National Higher Secondary School, Tambaram

## A FOLLOW-UP STUDY OF THE STUDENTS OF VOCATIONAL STREAM IN COIMBATORE DISTRICT

**C. Narayanaswamy,**  
Assistant Director of School Education  
(Statistics), Madras

### Introduction

Higher Secondary Education was introduced in Tamilnadu during the year 1978—79, with two streams, viz., General and Vocational. When the course was introduced in 912 upgraded Higher Secondary Schools in the State, Coimbatore District had 85 schools. After the bifurcation of Coimbatore District as Coimbatore and Periyar Districts, Coimbatore District still has 84 Higher Secondary Schools out of 1360 in the State.

At present 2.92 lakhs of students (Boys and Girls) are undergoing the +2 course. 940 schools are offering vocational courses with a total strength of 57,258 (38,549 Boys, 18,709 Girls). A total number of 19,851 students are undergoing the +2 course in Coimbatore District, out of whom 3957 are on vocational courses. The vocational course has attracted students since its introduction because it prepares them for the world of work.

### Aim

To make a follow-up study of the vocational students who have done the courses and left the schools either as passed or as failed candidates, and to

find out how many are seeking college courses and how many are gainfully employed, a survey was conducted in Coimbatore District. The study covers both the failed and the passed candidates of this District.

### Methodology

To achieve the prime aim of the survey, a proforma was designed by the Assistant Director (Statistics) and a senior officer was deputed to Coimbatore and he did the briefing of the Headmasters of the schools having vocational courses. Sufficient time was given to the Headmasters to go back to their stations and make suitable entries in the relevant columns in the proforma from the records and other sources. They were able to finish their job in a week's time. The Headmasters furnished the required data course-wise for their schools. The completed forms were collected from the Headmasters after a careful scrutiny of each form.

### Tabulation and Analysis

The collected data were tabulated according to the vocational area and analysed. The course-wise facts



of the survey are given in Annexure VII relating to the position of the vocational students who have completed their courses during the years 1979-80, 1980-81 and 1981-82. The tabular forms represent not only the follow-up of a number of students who have passed but also those who have failed and their percentages. The vocational area-wise findings are as follows :

### **Major Area—I AGRICULTURE**

Though Coimbatore District is mainly a centre for Textile Mills and Engineering Industries, it also has sufficient cultivable land and is noted for Agriculture. But of the 30 vocational courses offered in this district, five are in the agricultural occupational category. In the vocational course, 'Agricultural Crop Production', the percentage of successful candidates was 50 in 1980, 87 in 1981 and 46 in 1982. Among those passed, the percentages of candidates in self-employment in areas relevant to their vocational courses are 14 in 1980, 23.5 in 1981 and 16 in 1982. Among those who passed, 41% of the students were unemployed in 1980, none in 1981 and only 6% in 1982. Among those who failed, a considerable percentage got self-employment in all the three years and that shows the courage these vocational students had developed owing to their vocationalised education and practical training in skill development.

Regarding other vocational courses, Farm Mechanics and Post Harvest Technology and Agricultural Chemicals were offered in one and three schools respectively in 1980, discontinued in

1980-91 and again reintroduced in 1981-82 in this district. Dairying was available in one school for the 1980 examinations and it was discontinued afterwards. It may be due to the non-availability of students for this course. Agro-based Industrial Course was started only in 1980-81 and those students took their examination in April 1982 in one school and it may find its value in the years to come.

The number of courses offered in the agricultural occupational area and the number of students enrolled therein have been increasing over the years under review.

### **Major Area—II HOME SCIENCE**

The most wanted courses in this major area are Dietetics, Nutrition and Food Preparation, Child Care and Nutrition, Home Science and Dress Designing and Making. Dietetics, Nutrition and Food Preparation Course was available in 4 schools with the strength remaining as 66 in 1980, 29 in 1981 and 33 in 1982. The number of passes was reported as 30 (45%), 13 (45%) and 17 (52%) respectively for these three years. Among those who passed, 46% in 1980, 62% in 1981 and 71% in 1982 joined the Arts and Science Colleges. 20% in 1980 and 29% in 1982 got other employment. Child care and Nutrition Course was introduced in 5 schools with a strength of 89 in 1980, 37 in 1981 and 41 in 1982. About 50% pass was noticed in this course, and of that an average of 40% joined Arts and Science Colleges every year. 13% is reported to have got self-employment relevant to this

vocation in 1980 and the percentage increased to 22 in 1982. Among the failed candidates also, a good number is reported as either employed or self-employed.

Home Science Course was not reported to be popular here and only 8 candidates were presented for the 1980 examination. Dress Designing and Making was offered in 6 schools which presented 56 students in 1981 and this declined to 4 schools with 47 students in 82, 63% of the candidates passed in 1981 and 74% in 1982. Among those who passed in 1981, 46% have joined the college course, 11% remain unemployed and 14% have self-employment relevant to this vocational area. 6% have self-employment not relevant to this vocation and the position of 23% has been reported unknown. Of those who passed in 1982, 32% have joined the college course, 9% remain un-employed and 11% have self-employment relating to this vocation. Among those who failed, 48% in 1981 and 25% in 1982 have been reported to be self-employed. Perhaps they have taken to tailoring.

Food Preservation Course was introduced in 1981 only. It is reported that 85% of those who passed the Food Preservation Course have joined the Arts and Science Colleges.

### **Major Area—III COMMERCE AND BUSINESS**

Among the six major occupational areas, this area is attracting the largest number of pupils year after year. Very attractive courses in this area are Accountancy and Auditing, Banking Assistant and Office Secretaryship. In

Coimbatore District, 42 schools are offering Accountancy and Auditing, 14 schools are offering Banking Assistant course and 25 schools have Office Secretaryship course.

#### **1. Accountancy and Auditing**

The first set of 497 students of the +2 vocational course were presented for the Government Examination in April 1980. Among those who appeared, 73% i.e. 364 students, came out successful. Among those who passed, 55% i.e. 201 students, have joined Arts, Science and Commerce colleges, especially the B.Com. degree courses.

In 1981, 675 students appeared for the examination and 498 i.e. 74%, passed. Among those who passed, 54% i.e. 267 students, got admission into Arts, Science and Commerce colleges. In 1982, 1003 students appeared for the examination and 757 i.e. 75% passed and 44% i.e. 330 students, have joined Arts, Science and Commerce colleges. A good number of students have been admitted in other colleges not mentioned in the list.

Among those who passed, about 20% were reported as either wage-employed or self-employed every year. The Heads of schools were not able to know the whereabouts of a good number of passed as well as failed students because of the large strength in this course. If this portion was located, the proportion of those in employment would be much more than what is reported now.

#### **2. Banking Assistant**

The percentage of passes ranged between 65% and 79% for this course.



Arts, Science and Commerce colleges accommodated about 40% of these students every year. Of those who passed, 19% in 1980, 15% in 1981 and 17% in 1982 were reported to have other employment. In general about 40% of those in this course gained employment every year. It is encouraging to note that self-employment among those failed was found fairly high and, if the position of the students not known were found, it is hoped that the self-employment among the failed candidates may be much higher. About 14% are self-employed and 14% to 20% are employed in other areas.

### **3. Office Secretaryship**

72% (277 students) in 1980, 80% (280 students) in 1981 and 75% (347 students) in 1982 graduated from this course. 128 students (46%), 122 students (44%) and 163 students (47%) got admission into Arts, Science and Commerce Colleges during 1980, '81 and '82 respectively. Among those who passed, 12% got gainful employment in 1980, 8% in 1981 and 9% in 1982. With regard to employment, self-employment relevant to their vocation and other employment constituted about 18% of the passed candidates.

The other courses available in this major area are Materials Management, Business Management for Small Scale Industries and Marketing Salesmanship. The Materials Management course was introduced in 1981. Out of 24 students who appeared for the examination, 16 students i.e. 67% passed; 31% joined Arts, Science and Commerce Colleges; 13% went to other colleges; 50% got gainful employment and 6% got other

employment. Among the failed candidates, 88% were wage-employed and 12% were self-employed.

The Business Management for Small Scale Industries course was offered in 1980 and 1981 but not in 1982. Of the 64% who passed, 40% joined Arts and Science Colleges, 20% got gainful employment, 10% were under-employed and 24% got 'other employment'.

The Marketing Salesmanship course was introduced later and 19 students took the examination of whom 14 i.e. 74% have come out successful. Among those who passed, 43% joined colleges. Among those who failed, 20% got employment and the position of the other 80% is not known.

## **Major Area—IV ENGINEERING AND TECHNOLOGY**

Twelve Engineering Vocational Courses are available in Coimbatore District, which is well known for its Textile Mills; Foundries and other Industries. Very popular courses in this area are General Machinist, Electrical Motor Rewinding, Electrical Home Appliances, Refrigerator and Air Conditioning and Maintenance and Repairing of Radio and Television. In keeping with the nature of Textile industrial work in this district, Textile Technology, Foundry Technology and Auto Mechanic courses are also offered in a good number of schools.

### **1. General Machinist**

This course was available in 17 schools. 193 students in 1980, 178 in 1981 and 243 in 1982 took this course in this District and the percentages of

passes were 49 (94 students), 35 (62 students) and 51 (125 students) respectively in 1980, 81 and 82. Among those who passed, about 30% were able to join Arts and Science Colleges while 9% in 1982 joined the professional course in Engineering Colleges. Polytechnics were in a position to provide admission to 17% in 1980, 19% in 1981 and 14% in 1982 and this admission was in the second year of the polytechnic course. 28% (i.e. 26 students) got gainful employment in 1980 and it was 14% in 1982. Self-employment relevant to the area of vocational education was 11% in 1982. Among the failed candidates also, the percentages of wage-employed and self-employed were higher than those who were unemployed or whose position was not known.

## **2. Electrical Motor Rewinding**

This course finds its place in 7 schools and it presented 136 students in 1980, 88 in 1981 and 83 in 1982. The decrease in the strength was due to the introduction of new courses like Foundry Technology and Auto-mechanics in later years. About 48% came out successful each year. Among those who passed, 36% were admitted in Arts and Science Colleges in 1980 but only 18% in 1981 and 1982. The admission of these students has increased from 15% in 1980 to 27% in 1982 in the polytechnics and from 5% in 1980 to 8% in 1982 in the Engineering Colleges. 10 to 20% were able to get gainful employment and 5 to 8% got self-employment relevant to their vocational courses. Among those who passed, only 5% were reported as un-employed in 1980 and there were

none in the subsequent years. This marks an achievement in this area.

## **Maintenance and servicing of Textile Machinery**

A pass of about 90% was noticed every year in this course and a very good number (about 30% were admitted in polytechnics. Among those who passed, 23% to 39% were under employed between 1980 and 82 and the number of unemployed was found negligible. Among the failed also no one was reported unemployed. The position of two students in 1981 and one in 1982 was not known. Other failed students of this course have been either reported as employed or self-employed. An interesting fact is that 50% to 75% of the failed students got employment between 1980 and 82.

## **Electrical Home Appliances :**

It was found that the percentage of passes was 46 in 1980, 25 in 1981 and 76 in 1982 in this course. A majority of them got admitted in colleges and polytechnics. Among the failed candidates, the percentage of those who got employment was 15, 40 and 69 for 1980, 1981 and 82 respectively.

A good number of successful candidates found admission in the second year in polytechnics from the students of Textile Technology, Foundry Technology, Auto Mechanics and Building Maintenance courses. Every year one or two students were able to get admission in the professional Engineering Colleges from these courses. It is most interesting to note that not even a single student among the passed

candidates was reported as unemployed in all these Engineering courses in Coimbatore District. It appears that the scope for employment of +2 candidates is bright in this District. Courses such as Refrigerator and Air Conditioning and Building Maintenance presented candidates in 1982 and it remains to be seen how they develop in the next few years. Among those who failed in these areas, it is reported that a good number of students have got employment or self-employment due to the experiences they gained in the vocational areas.

#### **Major Area—V HEALTH**

There are 8 vocational courses available in this occupational area, but only two courses, viz., Nursing and Medical Laboratory Assistant find their place in this District. Nursing course was available in 11 schools while the other course was available in only one school and that too was discontinued after 1980.

142 Nursing students in 1980, 101 in 1981 and 76 in 1982 appeared for the examination and 77 students (54%), 57 students (56%) and 42 students (55%) passed the examination in the respective years. 16% in 1980, 25% in 1981 and 5% in 1982 were admitted in Arts and Science Colleges and 2 students of this Nursing Course got admission in the Medical College in 1980. 97% got admission in the Para Medical Course in 1980. It was reported that most of the candidates who passed out had been absorbed as Nursing Assistants by local doctors in their clinics.

Accordingly, 7% got this type of gainful employment in 1980, 35% in 1981 and 24% in 1982. The percentage of unemployed was reported as 12, 9 and 14 for 1980, 81 and 82. Among those who failed, 17% in 1980, 39% in 1981 and 27% in 1982 got employment and the position of the rest is not known.

Among the 65% who passed in the Medical Laboratory Assistant Course, 54% joined the college course, 13% got gainful employment, 7% are unemployed, 13% got other employment and the position is not known for 13%. Among the failed candidates 37% was reported as employed and 50% remained unemployed.

#### **Major Area—VI MISCELLANEOUS FINE ARTS**

Only the Music Course was available in this District under this area. The Music Course was also introduced in only one school with the minimum strength of 4 and they took the Examination in 1980 with cent percent success. One joined the college and the other three have bravely found self-employment relevant to this vocation. Though employment-oriented, this course did not develop well and it has since been discontinued.

#### **Conclusion**

In Coimbatore District 30 vocational courses were offered in as many schools as possible according to the demand and availability of students. More Engineering courses have been

offered largely due to the demand from the Textile Mills and Engineering Industries for skilled employees. In some courses student enrolment has shown a tendency to increase and this may be due to the employment opportunities the successful students had immediately after the course. Some might have preferred the vocational courses to prepare themselves for self-employment.

This study has generally shown

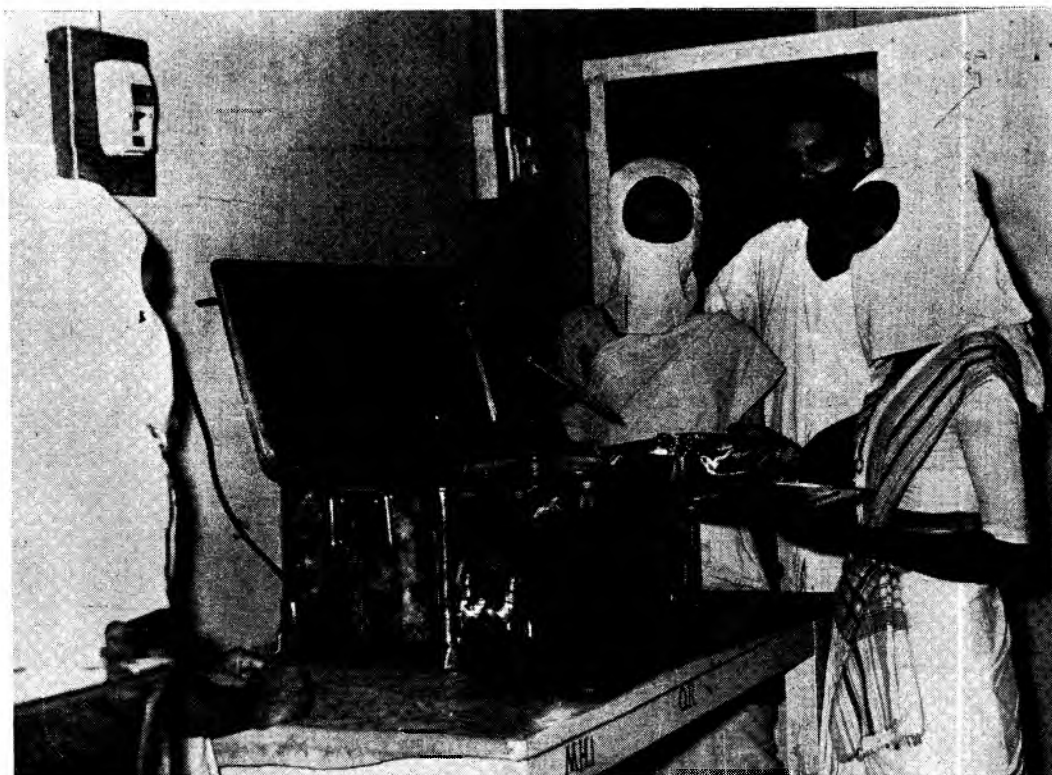
that not only the passed students but also the failed ones have been able to gain employment—either self-employment relevant to the vocational study or employment in areas for which they have not had any special education or training. Coimbatore District has presented the picture that the vocationalised courses are very relevant to its demands and students have adequate scope for employment and higher education.

## HEALTH



Nursing Course Student

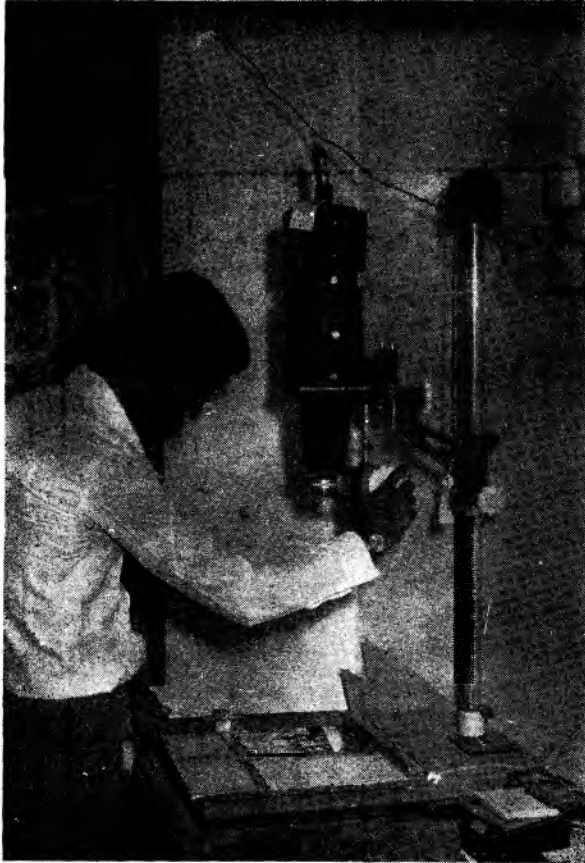
Avvai Home Higher Secondary School, Adayar



**Nursing — Training in sterilization of instruments**

**Corporation Girls Higher Secondary School, Coimbatore**

## MISCELLANEOUS



### Photography

Corporation Boys Higher Secondary School,  
Choolaimedu, Madras

ANNEXURE I

**VOCATIONAL COURSES INTRODUCED IN THE HIGHER  
SECONDARY SCHOOLS IN TAMILNADU**

S. No.	Vocational Area	Vocational Course	Year of introduction
1	<b>AGRICULTURE</b>	Agricultural Chemicals	1978—79
2	"	Agro-based industries	"
3	"	Crop Production	"
4	"	Dairying	"
5	"	Fisheries	"
6	"	Floriculture & Medicinal Plants	"
7	"	Farm Mechanic & Post Harvest Technology	"
8	"	Poultry	"
9	"	Plant Protection	"
10	"	Sericulture & Apiculture	"
11	"	Small Farm Management	"
12	"	Spices and Plantation crops	"
13	"	Vegetables & Fruits	"
14	<b>HOME SCIENCE</b>	Child Care and Nutrition	"
15	"	Dress Designing and Making	"
16	"	Dietetics, Nutrition & Food Preparation	"
17	"	Food Preservation	"
18	"	Textiles & Designing	1979—80
19	"	Designing, Dyeing & Printing	"
20	"	Catering	1980—81
21	<b>COMMERCE &amp; BUSINESS</b>	Accountancy & Auditing	1978—79
22	"	Banking Assistant	"
23	"	Business Management for Small Scale Industries	"
24	"	Cooperative Management	"



25	(COMMERCE & BUSINESS (Contd.))	International Trade	1978—79
26	"	Marketing & Salesmanship	"
27	"	Office Secretaryship	"
28	"	Materials Management	1979—80
29	ENGINEERING & TECHNOLOGY	Building Maintenance	1978—79
30	"	Electrical Domestic Appliances—Repairs and Maintenance	"
31	"	Electrical Motor Rewinding	"
32	"	General Machinist	"
33	"	Radio and Television—Repair and Maintenance	"
34	"	Leather Technology	"
35	"	Textile Technology	"
36	"	Domestic Electronic Equipment & Projection Equipment—Servicing & Maintenance	1979—80
37	"	Foundry Technology	"
38	"	Maintenance & Servicing of Textile Machinery	1978—79
39	"	Composing & Printing Technology	"
40	HEALTH	Hospital Housekeeping	1978—79
41	"	Medical Laboratory Assistant	"
42	"	Nursing Course	"
43	"	Dental Hygienist	1979—80
44	"	Ophthalmic Technician	1981—82
45	MISCELLANEOUS	Music	1978—79
46	"	Bharathanatyam	1980—81
47	"	Photography	1978—79
48	"	Tourist Guide	1979—80
49	"	Advocate's Assistant	

Abstract of Vocational Courses introduced

1978—79	..	37
1979—80	..	46
1980—81	..	48
1981—82	..	49

**ANNEXURE II**  
**HIGHER SECONDARY EXAMINATIONS**

*REVISED PATTERN—I*  
(From 1982 onwards)

**Candidates offering one Related Subject**

Subject	Hours	Max. Marks
<b>Part I</b> — Tamil or Other Languages		
Paper I	3	100
Paper II	3	100
		Same as for General Education;
<b>Part II</b> — English		
Paper I	3	100
Paper II	3	100
		No change in the Scheme of Exam.
<b>Part III</b> — Group A—Related subject as per syllabus or as approved by Director of School Education common with General Education	3	200
		No change in the Scheme of Exam.
<b>Part III</b> — Group B—Vocational Subjects		
Theory— (Single paper covering the entire 12th Std. portion—Refer to Model Question Paper for guidance)	3	200
Practical- I in Vocational Subject	3	200
Practical-II in Vocational Subject	3	200
		<hr style="width: 50px; margin: 0 auto;"/> 1200 <hr style="width: 50px; margin: 0 auto;"/>

**REVISED PATTERN—II**

**Candidates offering two Related Subjects**

Subject	Hours	Max. Marks.
Part I — Tamil or Other Languages		
Paper I	3	100
Paper II	3	100
Part II — English		
Paper I	3	100
Paper II	3	100
Part III — Group A—Related Subject I	3	200
Addl. Related Subject II	3	200
(As per syllabus or as approved by Director of School Education, common with General Education/the subject Foundation Science for the Vocational Subjects under Health Area.)		
Part III — Group B—Vocational Subject		
Theory	3	200
(Single paper covering the entire 12th Std portion—Refer to Model Question Paper for guidance)		
Practical in Vocational Subject	3	200
(Note: Only one Practical—covering the entire practical portion as per syllabus for 12th Std)		
		<hr/> 1200 <hr/>

### ANNEXURE III

#### PARTICULARS OF QUALIFICATIONS FOR PART-TIME INSTRUCTORS IN HIGHER SECONDARY VOCATIONAL SUBJECTS

Subject	Qualification
<i>I—AGRICULTURAL VOCATIONS</i>	
1. <i>Dairying</i>	} B. V. Sc. with 5 years' experience in dairying/poultry
2. <i>Poultry</i>	
3. <i>Small Farm Management</i>	B.Sc. (Agri.)
4. <i>Agro based Industries</i>	} B. E. (Agri.)
5. <i>Farm Mechanic and Post Harvest Technology</i>	
6. <i>Rural Construction Technology and Soil Conservation</i>	
7. <i>Sericulture and Agriculture</i>	B.Sc. (Agri.)
8. <i>Plant Protection (Pests, disease and weeds)</i>	B.Sc., (Agri.)
9. <i>Vegetables and Fruits</i>	} B.Sc. (Horticulture)
10. <i>Floriculture and Medicinal Plants</i>	
11. <i>Agricultural Chemicals</i>	} B.Sc. (Agri.)
12. <i>Crop Production</i>	
13. <i>Spices and Plantation Crops</i>	B.Sc. (Horticulture)
14. <i>Fisheries</i>	B.Sc. (Marine Biology/Fisheries Science or Zoology)

#### II—HOME SCIENCE

1. <i>Food Preservation</i>	} B.Sc./B.Ed. (Specialised in Home Science)
2. <i>Baking and Confectionery</i>	
3. <i>Catering</i>	
4. <i>Dietetics, Nutrition and Food Preparation</i>	
5. <i>Interior Decoration</i>	
6. <i>Dress Designing and Making</i>	
7. <i>Designing, Dyeing and Printing</i>	
8. <i>Textile and Designs</i>	
9. <i>Child Care and Nutrition</i>	

#### III—COMMERCE & BUSINESS

- |                                |  |
|--------------------------------|--|
| 1. <i>Office Secretaryship</i> | .. Bachelor's Degree or Equivalent in Special Science/Commerce of an Indian University or recognised foreign University with a postgraduate diploma in Secretarial course. |
|--------------------------------|--|

Subject	Qualification
<i>Experience</i>	<p>1. Minimum two years' working experience in industry in the related area</p> <p style="text-align: center;">or</p> <p>2. Two years' teaching experience in the institutes or departments offering <i>Office Secretaryship course</i></p>
2. <i>Insurance</i>	<p>.. A degree in Commerce/Arts with a Diploma in Insurance</p>
<i>Experience</i>	<p>.. Two years' working experience in an Insurance company</p> <p style="text-align: center;">or</p> <p>Two years' teaching experience in the subjects connected with Insurance principles, practice and organisation</p>
3. <i>Accountancy and Auditing</i>	<p>.. A degree in Commerce with Accounting and Auditings specialisation</p>
<i>Experience</i>	<p>.. Two years' experience in Accounting and Auditing Departments in an industry</p> <p style="text-align: center;">or</p> <p>Two years' teaching experience in the related subjects at under-graduate level</p>
4. <i>Banking Assistant</i>	<p>.. A degree in Commerce with Advanced Banking/Commerce as special subject</p>
<i>Experience</i>	<p>.. Two years' working experience in any Bank</p> <p style="text-align: center;">or</p> <p>Two years' teaching experience at under-graduate level</p>
5. <i>International Trade</i>	<p>.. A degree in Economics/Commerce</p>
<i>Experience</i>	<p>.. Two years' working experience in Exporting/Importing Organisations (Private/Public Sector) with a knowledge in Export/Import trade processes</p> <p style="text-align: center;">or</p> <p>Two years' teaching experience in the subject "International Trade" at under-graduate level</p>
6. <i>Marketing &amp; Salesmanship</i>	<p>.. A degree in Commerce/Business Administration</p>

Subject	Qualification
<i>Experience</i>	.. Two years' working experience in any commercial undertaking
7. <i>Materials Management</i>	.. A degree in Commerce/Business Administration, Postgraduate Diploma in materials management being a preferential qualification.
<i>Experience</i>	.. Two years' working experience in an industry in the related field or Two years' teaching experience at under-graduate level.
8. <i>Business Management for Small Scale Industries</i>	.. A degree in Business Administration/Commerce
<i>Experience</i>	.. Two years in a small scale industry or Two years' teaching experience
9. <i>Co-operative Management</i>	.. A degree in Commerce/Economics with Specialisation in Rural Economics/Co-operation
<i>Experience</i>	.. Two years' working experience in a co-operative society or Two years' teaching experience

#### IV—ENGINEERING & TECHNOLOGY

1. *Building Maintenance*
  - .. (i) A First class diploma in Civil Engineering awarded by the State Board of Technical Education and Training, Madras
  - .. (ii) A diploma in Technical Teaching awarded by the Technical Teachers' Training Institute
  - .. (iii) A diploma in Civil Engineering awarded by the State Board of Technical Education and Training, Madras

*Experience :* .. As a mason for not less than 5 years in a reputed Civil Engineering organisation
2. *Electrical Domestic Appliances and Electrical equipments.* At least a diploma in Electrical Engineering with a minimum of 3 years' experience in the appropriate field
3. *Domestic Electronic Equipment and Instrument Servicing and Maintenance of Hospital Equipment, etc.* At least a degree in Electronics or Tele-communication Engineering  
A degree or diploma in Technical Teaching; Industrial teaching experience in the fields of Electronics, Radio/T. V. Engineering

Subject	Qualification
	A diploma in Electronics/Radio or Tele-communication
	Post Diploma in T. V. Engineering-Industrial Experience in the fields of Electronics/Radio/T. V. Engineering
4. <i>Textile Technology</i>	.. Degree in Textile Technology or Diploma with 3 years' experience
5. <i>Leather Technology</i>	.. Degree or Diploma in Leather Technology
6. <i>Maintenance and Servicing of Textile Machinery</i>	Diploma in Textile Technology
	Diploma in Mechanical Engineering/Electrical Engineering
V—HEALTH	
1. <i>Medical Laboratory Assistant</i>	.. M.B.B.S., D.C.P.
2. <i>Ophthalmic Technician</i>	.. M.B.B.S., D.O.
3. <i>Dental Mechanic</i>	.. } B.D.S.
4. <i>Dental Hygienist</i>	.. }
5. <i>Radiological Assistant</i>	.. M.B.B.S., D.M.R.
6. <i>Nursing Course</i>	.. B.Sc. (Post Basic or Basic)
VI—MISCELLANEOUS	
1. <i>Tourist Guide</i>	.. A History teacher may be put in charge of the course exclusively and he may be got trained by the Tourism Department of State and Central Governments
2. <i>Photography</i>	.. Diploma in Cinematography. A Photographer—Darkroom Assistant, S.S.L.C. passed with at least 5 years' experience in a processing studio
	The senior physics staff will be in charge of the course
3. <i>Music</i>	.. Graduate in Music. Music Diploma holders and holders of Sangeetha Sironmani title of Madras University, Sangeetha Vidwan title of Tamilnadu Music College, Sangeetha Bhushanam of Annamalai University with minimum educational qualification of an eligibility in S.S.L.C. Examination or its equivalent

## ANNEXURE IV

**Table showing the exposure of the +2 vocational course students to Production Units and the scope for self/wage employment on their graduation from the course**

Vocational category and course (1)	Linked to Production Units for training and probable employment (2)	Scope for self-employment (3)
<b>AGRICULTURE</b>		
1. Agricultural chemicals	Agro-Industries—Fertiliser industries, manure mixing firms and pesticide formulating centres	—
2. Agro-based industries	Agricultural University, Agro-Industries Corporation	Yes
3. Crop Production	Tamilnadu Agriculture University, State Department of Agriculture	Yes
4. Dairying	Department of Animal Husbandry, Tamilnadu Dairy Development Corporation, Dept of Co-operation, Private Dairies	Yes
5. Fisheries	Fish farms, boat-building yards, in-shore fishing stations, processing centres of Central and State Fisheries Departments  Department of Fishery Science in Tamilnadu Agriculture University	Yes
6. Floriculture and Medicinal Plants	Tamilnadu Agriculture University	Yes
7. Farm Mechanics and Post Harvest Technology	Small Scale Industries, Agro-engineering Federation, Agro-Industries Corporation, SIDCO	Yes
8. Poultry	Dept of Animal Husbandry, Tamilnadu Poultry Development Corporation, Tamilnadu Agriculture University, Dept of Co-operation	Yes
9. Plant Protection	Depts of Plant Pathology, Agricultural Entomology, Agronomy of Agriculture University	Yes
10. Sericulture and Apiculture	Dept of Biology, Agriculture University, Sericulture Wing of the Dept of Industries and Commerce, the Extension Centre of Sericultural Research Training Institute, Mysore	Yes
11. Small Farm Management	Agriculture University, State Dept of Agriculture Co-operative Department	Yes
12. Spices and Plantation crops	Agriculture University, State Dept of Agriculture and Co-operation	Yes



(1)	(2)	(3)
13. Vegetables and Fruits	Agriculture University, State Dept of Agriculture	Yes
<b>HOME SCIENCE</b>		
14. Catering	Catering Institute, Private and public catering undertakings	Yes
15. Child Care and Nutrition	Balwadi, Nursery Schools, Children's Hospital	Yes
16. Designing, Dyeing and Printing	Textile Mills, Textile Cottage Industries, Indian Handlooms, Arts and Crafts	Yes
17. Dress Designing and Making	Garment manufacturing units, Polytechnics offering Diploma in clothing, designing and dress making, Colleges of Home Science	Yes
18. Dietetics, Nutrition & Food Preservation	Catering Institutions, Hospitals	Yes
19. Food Preservation	Food Industry in Private and Public sector undertakings	—
20. Textiles and Designing	College of Home Science, Dept of Village Industries, Textile Research Association	Yes
<b>COMMERCE AND BUSINESS</b>		
21. Accountancy and Auditing	The Association of Chartered Accountants, (Local Chapter) The Association of Auditors (Local chapter) Nationalised Banks, Government organisations	—
22. Banking	Nationalised, Co-operative and Non-nationalised Banks, Commercial credit Corporations in private sector	—
23. Business Management for Small Scale Industries	Small Industries Service Institute, SIDCO, TIDCO, other Industrial Development Agencies in Tamilnadu	—
24. Co-operative Management	Primary Agricultural Credit Society, Co-operative Bank Employees' Society, Primary Stores, Primary Marketing Society, Taluk Co-operative Union, Industrial Co-operative Society, Office of Registrar of Co-operatives	—
25. International Trade	Exporting-Importing organisations	—
26. Marketing and Salesmanship	Any organisation that has to market and sell its products, services in private/public sectors	Yes
27. Office Secretaryship	Any organisation in public or private sector	Yes
28. Materials Management	National Productivity Course, Local Productivity Council and Local Management Association	Yes

(1)	(2)	(3)
<b>ENGINEERING AND TECHNOLOGY</b>		
29. Building Maintenance	Polytechnics, P. W. D., Corporation of Madras, M.M.D.A., SIDCO, Highways, Housing Board, etc.	Yes
30. Electrical and Domestic appliances-Repairs and maintenance	Film studios, cine theatres, A. I. R., hotels, clubs, etc.	Yes
31. Electrical Motor Rewinding	TANSI, G. E. C., Crompton	Yes
32. General Machinist	Any small or big Engineering Industry, TANSI, Industrial Estates.	Yes
33. Radio and Television-Repairs and Maintenance	Television Manufacturers. P & T Department, Radio Manufacturers, A.I.R. and Doordharshan	Yes
34. Textile Technology	N. T. C., Binny and Co	—
35. Leather Technology	C. L. R. I.	—
36. Domestic Electronic Equipment & Projection Equipment-Servicing and maintenance	Electronic Corporation, theatres, Educational Institutions	Yes
37. Foundry Technology	Private & Public Foundries	—
38. Maintenance and Servicing of Textile Machinery	Textile Mills	Yes
39. Composing and Printing Technology	Printing Presses	Yes
<b>HEALTH</b>		
40. Hospital house keeping	Government and Private Hospitals	—
41. Medical Laboratory Assistant	Government and Private Hospitals	—
42. Nursing Course	-do-	Yes
43. Dental Hygienist	-do-	Yes
44. Ophthalmic Technician <sup>1</sup>	-do-	Yes

(1)	(2)	(3)
<b>MISCELLANEOUS</b>		
45.	Music	A.I.R., Doordarshan Kendra
Yes		
46.	Bharatha Natyam	Fine Arts Clubs, Cultural Associations
Yes		
47.	Photography	Hindustan Photo Films, Institute of Film Technology, Photographic Studios
Yes		
48.	Tourist Guide	Tourism Development Corporation
Yes		
49.	Advocate's Assistant	Advocates
Yes		

## ANNEXURE V

## HIGHER SECONDARY SCHOOLS IN TAMILNADU AS ON 1-1-1983—MANAGEMENT-WISE

Year	Number of Schools upgraded year-wise	Government			Corporation			Aided			Matric			Anglo-Indian			Total			Kendriya Vidyalaya	C.B.S.E.	I.S.C.	Total
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total				
1978—79	912	379	34	413	35	16	51	295	111	406	9	7	16	16	10	26	734	178	912	—	—	—	912
1979—80	182	468	43	511	35	18	53	347	133	480	17	13	30	16	10	26	883	217	1100	9	35	8	1152
1980—81	144	524	63	587	35	22	57	387	156	543	21	10	31	16	10	26	983	261	1244	8	41	8	1301
1981—82	105	576	77	653	36	24	60	414	161	575	25	10	35	16	10	26	1067	282	1349	8	41	9	1407
1982—83	11	580	77	657	36	24	60	414	161	575	32	10	42	16	10	26	1078	282	1360	8	39	8	1415

ANNEXURE VI

Number of schools having vocational courses—1982-83

(District-wise and Vocational Category-wise)

DISTRICTS	XI STANDARD							XII STANDARD							
	Agriculture	Home Science	Commerce	Engineering	Health	Others	Total	Agriculture	Home Science	Commerce	Engineering	Health	Others	Total	
Madras	..	..	17	53	19	3	..	92	1	16	47	17	3	1	85
Chengalpattu	..	2	2	21	9	1	..	35	4	..	22	10	..	..	36
South Arcot	..	7	6	24	21	4	1	63	8	8	30	24	5	1	76
Thanjavur	..	3	2	8	4	3	1	21	3	2	7	4	4	..	20
Madurai	..	2	6	29	7	5	2	51	4	9	21	10	..	..	44
Ramanathapuram	..	..	1	21	11	2	..	35	2	3	25	17	4	..	51
Tirunelveli	..	11	6	25	6	4	..	52	3	4	19	13	9	..	48
Kanyakumari	..	4	3	33	9	16	..	65	8	4	35	25	32	1	105
North Arcot	..	11	3	40	29	1	..	84	9	6	50	38	3	..	106
Salem	..	10	4	18	28	2	2	64	10	8	32	26	2	..	78
Dharmapuri	..	4	..	26	8	3	..	41	4	1	21	9	4	..	39
Tiruchy	..	6	4	32	12	..	1	55	8	3	41	13	1	1	67
Pudukottai	..	1	..	11	5	..	..	17	..	..	12	5	1	..	18
Coimbatore	..	2	6	40	20	4	2	74	2	6	57	20	6	..	91
Periyar	..	6	3	28	8	3	..	48	5	4	30	10	3	1	52
The Nilgiris	..	1	..	12	4	1	..	18	3	..	14	5	1	..	23
<b>TOTAL</b>	..	70	65	421	198	52	9	815	74	74	463	246	78	5	940

ANNEXURE VII

**(Statistical Tables of the Follow-up Study)**

## Major Area I :

NAME OF THE VOCATION :	1. Farm Mechanics and Post Harvest Technology			2. Agricultural Crop Production		
Year *	1980	1981	1982	1980	1981	1982
	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>
I. No. of Students Appeared	20	Nil	17	44	15	35
No. of Students Passed	15		7	22	13	16
Percentage	75		41	50	87	46

### II. Among Passed

#### (a)

1. No. of Students Joined Arts, Science College	5	33	2	29	5	23	3	23.5	8	50
2. „ „ Medical College										
3. „ „ Engg. College	1	7								
4. „ „ Agri. College							1	8		
5. „ „ Veterinary College										
6. „ „ Polytechnic	2	13	2	29						
7. „ „ Para-Medical										
8. „ „ Any other College							2	15	2	13

#### (b) Employed :

9. Gainful Employment	2	13	2	29	1	4				
10. Under-Employment	1	7			3	13			1	6
11. Other Employment	4	27	1	13	—	—	2	15	1	6
12. Un-Employment					9	41	—	—	1	6
13. Self-Employment Relevant to Vocational Course					3	14	3	23.5	3	19
14. Self-Employment Not Rele- vant to Vocational Course					1	5	2	15	—	—
15. Position Not Known					—	—	—	—	—	—

Total (1 to 15)

15 100

7 100

22 100

13 100

16 100

### III. Among Failed :

1. Employed	2	40	6	60	—	—	1	50	2	10
2. Un-Employed	—	—	2	20	5	23	—	—	6	32
3. Self-employed	1	20	—	—	12	54	1	50	7	37
4. Not known	2	40	2	20	5	23	—	—	4	21

Total

5 100

— —

10 100

22 100

2 100

19 100





## Major Area II :

NAME OF THE VOCATION :	1. Dietetics, Nutrition and Food Preparation			2. Child Care & Nutrition		
Year	1980	1981	1982	1980	1981	1982
	Total %	Total %	Total %	Total %	Total %	Total %
<b>I. No. of Students Appeared</b>	66	29	33	89	37	41
<b>No. of Students Passed</b>	30	13	17	47	17	19
<b>Percentage</b>	45	45	52	53	46	46

### II. Among Passed

(a)

1. No. of Students Joined Arts, Science College	14	46	8	62	12	71	18	38	8	47	6	32
2. „ „ Medical College												
3. „ „ Engg. College												
4. „ „ Agri. College												
5. „ „ Veterinary College												
6. „ „ Polytechnic												
7. „ „ Para-Medical												
8. „ „ Any other College	2	7	2	15			1	2			2	10

(b) Employed :

9. Gainful Employment			1	8			2	4			2	10
10. Under-Employment												
11. Other Employment	6	20	—	—	5	29						
12. Un-Employment	5	17	2	15	—	—	3	7			3	16
13. Self-Employment Relevant to Vocational Course							6	13	1	6	4	22
14. Self-Employment Not Rele- vant to Vocational Course							2	4				
15. Position Not known	3	10	—	—	—	—	15	32	8	47	2	10
<b>Total (1 to 15)</b>	<b>30</b>	<b>100</b>	<b>13</b>	<b>100</b>	<b>17</b>	<b>100</b>	<b>47</b>	<b>100</b>	<b>17</b>	<b>100</b>	<b>19</b>	<b>100</b>

### III. Among Failed :

1. Employed	6	17	—	—	—	—	11	26	1	5	—	—
2. Un-employed	10	28	10	63	3	19	10	24	—	—	14	64
3. Self-employed	—	—	—	—	—	—	9	21	4	20	—	—
4. Not-known	20	55	6	37	13	81	12	29	15	75	8	36
<b>Total</b>	<b>36</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>42</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>22</b>	<b>100</b>

# HOME SCIENCE

3. Home Science			4. Dress Designing & Making			5. Food Preservation			6. Catering		
1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
8 2 25	Nil	Nil	Nil	56 35 63	47 35 74	Nil	26 13 50	Nil	Nil	Nil	11 9 82
1 50				13 37	9 26		11 85				7 78
				3 9	2 6						
1 50											
				4 11	3 9						
				5 14	4 11		2 15				
				2 6							
				8 23	17 48						2 22
2 100				35 100	35 100		13 100				9 100
				1 5	— —						— —
3 50				4 19	2 17		— —				— —
3 50				10 48	3 25		13 100				2 100
				6 28	7 58		— —				— —
6 100	Nil	Nil	Nil	21 100	12 100	Nil	13 100	Nil	Nil	Nil	2 100

## Major Area III :

NAME OF THE VOCATION :	1. Accountancy & Auditing			2. Banking Assistant		
Year :	1980	1981	1982	1980	1981	1982
	Total %	Total %	Total %	Total %	Total %	Total %
I. No. of Students Appeared	497	675	1003	232	181	190
No. of Students Passed	364	498	757	181	117	151
Percentage	73	74	75	78	65	79

### II. Among Passed

#### (a)

1. No. of Students Joined Arts, Science College	201	55	267	54	330	44	71	39	45	38	65	43
2. „ „ Medical College												
3. „ „ Engg. College												
4. „ „ Agri. College												
5. „ „ Veterinary College												
6. „ „ Polytechnic			1	0	8	1	1	0.5				
7. „ „ Para-Medical												
8. „ „ Any other College	2	0.5	13	3	29	4	1	0.5	1	1	2	1

#### (b) Employed

9. Gainful Employment	20	5	34	7	33	4	7	4	6	5	5	3
10. Under-Employment	13	4	18	4	17	2	11	6	12	10	8	5
11. Other Employment	16	4	32	6	47	6	34	19	18	15	25	17
12. Un-Employment	26	7	37	7	98	13	14	8	10	9	7	5
13. Self-Employment Relevant to Vocational Course	12	4	9	2	41	6	4	2	3	3	—	—
14. Self-Employment Not Relevant to Vocational Course	6	1.5	9	2	17	2	12	7	13	11	19	13
15. Position Not Known	68	19	78	15	137	18	26	14	9	8	20	13

Total (1 to 15)

364 100 498 100 757 100 181 100 117 100 151 100

### III. Among Failed

1. Employed	19	14	29	16	32	13	7	14	13	20	6	15
2. Un-Employed	64	48	43	24	96	39	10	19	18	28	14	36
3. Self-employed	12	9	23	13	34	14	7	14	11	17	5	13
4. Not-known	38	29	82	47	84	34	27	53	22	35	14	36

Total

133 100 177 100 246 100 51 100 64 100 39 100

# COMMERCE AND BUSINESS

3. Office Secretaryship			4. Materials Management			5. Business Management for Small Scale Industries			6. Marketing Salesmanship		
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1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
383	350	461		24		47	18	Nil	Nil	Nil	19
277	280	347	Nil	16	Nil	30	2				14
<b>72</b>	<b>80</b>	<b>75</b>		<b>67</b>		<b>64</b>	<b>11</b>				<b>74</b>

128	46	122	44	163	47		5	31		12	40	1	50					6	43
		1	—	3	1														
6	2	3	1	11	3		2	13											
32	12	22	8	30	9		8	50		6	20							1	7
11	4	18	6	18	5					3	10								
25	9	20	7	25	7		1	6		7	24							1	7
40	7	33	12	28	8													1	7
6	2	9	3	21	6					1	3								
3	1	—	—	4	1														
46	17	52	19	44	13					1	3	1	50					5	36
<b>277</b>	<b>100</b>	<b>280</b>	<b>100</b>	<b>347</b>	<b>100</b>		<b>16</b>	<b>100</b>		<b>30</b>	<b>100</b>	<b>2</b>	<b>100</b>					<b>14</b>	<b>100</b>

27	26	13	19	16	14		7	88		11	65	5	31					1	20	
18	17	18	26	34	30					4	23	7	44					—	—	
10	9	3	4	16	14		1	12		—	—	1	6					—	—	
51	48	36	51	48	42		—	—		2	12	3	19					4	80	
<b>106</b>	<b>100</b>	<b>70</b>	<b>100</b>	<b>114</b>	<b>100</b>		<b>8</b>	<b>100</b>		<b>17</b>	<b>100</b>	<b>16</b>	<b>100</b>		<b>12</b>	<b>100</b>	<b>—</b>	<b>—</b>	<b>5</b>	<b>100</b>

**Major Area IV :**

NAME OF THE VOCATION :	1. General Machinist			2. Maintenance and Servicing of Textile Machinery		
	Year	1980	1981	1982	1980	1981
	Total %	Total %	Total %	Total %	Total %	Total %
I. No. of Students Appeared	193	178	243	42	36	32
No. of Students Passed	94	62	125	38	31	28
Percentage	49	35	51	90	86	87

**II. Among Passed**

(a)

1. No. of Students Joined Arts, Science College	15	16	19	30	37	29	1	3	6	19	6	21
2. „ „ Medical College												
3. „ „ Engg. College	8	9	2	3	11	9						
4. „ „ Agri. College												
5. „ „ Veterinary College												
6. „ „ Polytechnic	16	17	12	19	18	14	12	33	9	30	8	28
7. „ „ Para-Medical												
8. „ „ Any other College	2	2			3	2						

(b) Employed

9. Gainful Employment	26	28	5	8	18	14	4	11	3	10	1	4
10. Under-Employment	2	2	1	2	2	2	15	39	7	23	8	28
11. Other Employment	10	11	3	5	4	3	3	8	2	6		
12. Un-Employment			6	10	5	4	—	—	—	—	1	4
13. Self-Employment Relevant to Vocational Course	6	6	—	—	2	2			2	6	1	4
14. Self-Employment Not Relevant to Vocational Course	2	2	1	2	13	11	—	—	—	—	—	—
15. Position Not known	7	7	13	21	12	10	3	8	2	6	3	11
Total (1 to 15)	94	100	62	100	125	100	38	100	31	100	28	100

**III. Among Failed**

1. Employed	29	29	36	31	36	31	3	75	3	60	2	50
2. Un-employed	18	18	35	30	31	26	—	—	—	—	—	—
3. Self-employed	15	15	19	16	22	19	1	25	—	—	1	25
4. Not known	37	38	26	23	29	24	—	—	2	40	1	25
Total	99	100	116	100	118	100	4	100	5	100	4	100

## ENGINEERING AND TECHNOLOGY

3. Electrical Motor Rewinding			4. Electrical Home Appliances		
1980	1981	1982	1980	1981	1982
Total %	Total %	Total %	Total %	Total %	Total %
136	88	83	24	20	25
62	42	40	11	5	19
45	48	48	46	25	76

22 36 5 12 5 12 3 28 3 60 3 16

3 5 3 8

9 5 8 19 11 27 5 26

2 5 2 5 4 21

7 11 9 21 4 10 2 18

5 8 3 7 6 15 4 36

4 6 4 10 — — 1 5

3 5 — — — —

4 6 2 5 3 8

1 2 1 2 — —

4 6 8 19 6 15 2 18 2 40 6 32

62 100 42 100 40 100 11 100 5 100 19 100

16 22 16 35 9 21 2 15 6 40 4 67

10 13 5 11 2 5 4 31 — — — —

11 15 12 26 14 32 — — — —

37 50 13 28 18 42 7 54 9 60 2 33

74 100 46 100 43 100 13 100 15 100 6 100

**Major Area : IV ENGINEERING**

NAME OF THE VOCATION	5. Textile Technology			6. Foundry Technology		
	Year	1980	1981	1982	1980	1981
	Total %	Total %	Total %	Total %	Total %	Total %
I. No. of Students Appeared	48	41	39	NIL	17	14
No. of Students Passed	11	21	20		5	6
Percentage	23	51	51		29	43

**II. Among Passed**

(a)

1. No. of Students Joined Arts, Science College	2	19	9	44	7	35		
2. „ „ Medical College								
3. „ „ Engg. College			1	5	2	10		
4. „ „ Agri. College								
5. „ „ Veterinary College								
6. „ „ Polytechnic	1	9	7	33	4	20	2	40
7. „ „ Para-Medical								
8. „ „ Any other College								2 33

(b) Employed

9. Gainful Employment	4	36						1 17
10. Under-Employment							3	60 1 17
11. Other Employment	4	36	2	9				
12. Un-Employment								
13. Self-Employment Relevant to Vocational Course					2	10		2 33
14. Self-Employment Not Relevant to Vocational Course								
15. Position not known			2	9	5	25		

Total (1 to 15)	11	100	21	100	20	100	5	100	6	100
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**III. Among Failed**

1. Employed	13	35	10	50	4	21	8	67	3	37
2. Un-employed	5	13	4	20	12	63	—	—	2	26
3. Self-employed	6	17	4	20	—	—	4	33	3	37
4. Not known	13	35	2	10	3	16	—	—	—	—

Total	37	100	20	100	19	100	—	—	12	100	8	100
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# AND TECHNOLOGY

7. Auto Mechanics			8. Refrigerator and Air Conditioning			9. Radio and Television			10. Building Maintenance		
1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %
Nil	15 6	32 16	Nil	Nil	11 5	20 4	19 1	13 1	Nil	Nil	12 7
	40	50			45	20	5	8			58
		3 19			1 20						
1 17	1 6				1 20						
2 33	3 19										3 43
					1 20						
		1 6			2 40						
						2 50					
1 17	1 6					1 25		1 100			
	2 13					1 25					
2 33	5 31						1 100				4 57
6 100	16 100				5 100	4 100	1 100	1 100			7 100
2 22	3 19				4 67	—	4 22	4 33			— —
— —	1 6				— —	—	— —	— —			— —
2 22	1 6				— —						3 60
5 56	11 69				2 33	16 100	14 78	8 67			2 40
9 100	16 100				6 100	16 100	18 100	12 100	— —	— —	5 100



## Major Area V : HEALTH

NAME OF THE VOCATION :	1. Nursing			2. Medical Laboratory Assistant			
	Year	1980	1981	1982	1980	1981	1982
	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>	<i>Total %</i>
I. No. of Students Appeared	142	101	76	23	Nil	Nil	
No. of Students Passed	77	57	42	15			
Percentage	54	56	55	65			

### II. (a) Among Passed

1. No. of Students Joined Arts, Science College	12	16	14	25	2	5	8	54
2. „ „ Medical College	2	3						
3. „ „ Engg. College								
4. „ „ Agri. College								
5. „ „ Veterinary College								
6. „ „ Polytechnic	1	1						
7. „ „ Para-Medical	7	9	2	3	1	2		
8. „ „ Any other College	2	3						

### (b) Employed

9. Gainful Employment	5	7	20	35	10	24	2	13
10. Under-Employment	3	4			10	24	1	7
11. Other Employment	15	19					2	13
12. Un-Employment	9	12	5	9	6	14		
13. Self-Employment Relevant to Vocational Course					6	14		
14. Self-Employment Not Relevant to Vocational Course			11	19	—	—		
15. Position Not Known	21	26	5	9	7	17	2	13

Total (1 to 15)	77	100	57	100	42	100	15	100
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### III. Among Failed :

1. Employed	11	17	17	39	9	27	3	37
2. Un-Employed	9	14	3	7	10	29	4	50
3. Self-employed	10	15	4	9	—	—	—	—
4. Not-known	35	54	20	45	15	44	1	13

Total	65	100	44	100	34	100	8	100
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## Major Area VI: FINE ARTS

NAME OF THE VOCATION :	Music		
Year	1980	1981	1982
	Total %	Total %	Total %
I. No. of Students Appeared	4	Nil	Nil
No. of Students Passed	4		
Percentage	100		

### II. Among Passed

(a)

- |   |   |    |
|---|---|----|
| 1. No. of Students Joined Arts, Science College | 1 | 25 |
| 2. „ „ Medical College                          |   |    |
| 3. „ „ Engg. College                            |   |    |
| 4. „ „ Agri. College                            |   |    |
| 5. „ „ Veterinary College                       |   |    |
| 6. „ „ Polytechnic                              |   |    |
| 7. „ „ Para-Medical                             |   |    |
| 8. „ „ Any other College                        |   |    |

**Sub. National Systems Unit,**  
**National Institute of Educational**  
**Planning and Administration**  
 17-B, SriAurobindo Marg, New Delhi-110016  
 DOC. No. .... 3018 .....  
 Date. 27/3/86 .....

(b) Employed

- |   |   |    |
|---|---|----|
| 9. Gainful Employment                                 |   |    |
| 10. Under-Employment                                  |   |    |
| 11. Other Employment                                  |   |    |
| 12. Un-Employment                                     |   |    |
| 13. Self-Employment Relevant to Vocational Course     | 3 | 75 |
| 14. Self-Employment Not Relevant to Vocational Course |   |    |
| 15. Position Not known                                |   |    |

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Total (1 to 15)	4	100
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### III. Among Failed

1. Employed
2. Un-employed
3. Self-employed
4. Not known

Total	—	—
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