



ORGANISATION OF VOCATIONAL EDUCATION

REPORT OF THE WORKING GROUP

**PROGRAMMES AT PLUS 2 STAGE
IN THE UNION TERRITORY OF DELHI**



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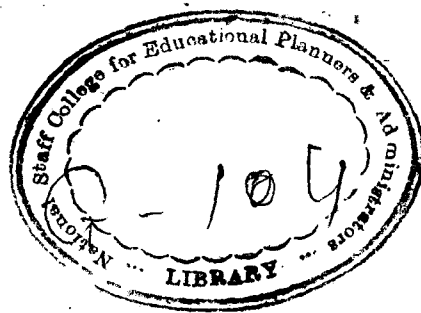
PROGRAMMES AT PLUS 2 STAGE
IN THE UNION TERRITORY OF DELHI

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MINISTRY OF EDUCATION AND SOCIAL WELFARE, GOVERNMENT OF INDIA
NEW DELHI
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1. INTRODUCTION

1.1 The new pattern of Secondary Education 10+2 had been introduced in the Union Territory of Delhi in 1976 as a sequel to the reorganisation of Higher Secondary Education. The first batch of students was admitted to 9th standard in the new pattern in June, 1975. This batch will complete their 10 years of general education in April/May, 1977. Facilities for 2 years of higher secondary education will, therefore, have to be provided in June, 1977 all over the Union Territory.

1.2 Since the characteristic feature of the two year higher secondary education is diversification which aims at offering students opportunities to choose programmes of study in a much wider field of education in keeping with their aptitudes, interests, & abilities with a view to increasing their employability, adequate facilities should be provided not only for the academic stream but also for a large number of vocational streams which would generally be terminal in character. In organising vocational programmes considerable thought has to be given to the vocations for which facilities have to be provided and to selecting the schools where these courses should be offered. Efforts should be made to utilise the available facilities of equipment and teachers in the existing educational and training institutions and other agencies as far as possible.

1.3 In view of the fact that the vocationalization programme should be introduced in Delhi from the academic year beginning from July, 1977 and there is an urgent need for making necessary preparations which include among others identification and organisation of the courses, and asso-

ciating the existing technical and professional institutions, the Ministry of Education & Social Welfare have set up a Working Group with the following members and the terms of reference :

1. Shri V.R. Reddy, *Chairman*
Director (Technical),
Ministry of Education and
Social Welfare,
Government of India, New Delhi.
2. Shri B.K. Singh,
Education Secretary,
Delhi Administration, Delhi.
3. Prof. C.V. Govinda Rao,
Department of Work Experience &
Vocationalisation of Education,
National Council of Educational
Research and Training, New Delhi
4. Dr. R.P. Singhal,
Secretary,
Central Board of Secondary Education,
New Delhi.
5. Shri B.N. Chaturvedi,
Joint Director of Education (Plg.)
Directorate of Education,
Delhi Administration, Delhi.

Terms of Reference

- a) Identification of institutions and industries where the existing facilities can be utilised for developing programmes of vocational education in selected higher secondary schools;

- b) Selection of higher secondary schools to be associated with this project;
- c) Identification of subjects/courses for which such facilities can be utilised;
- d) Determination of the extent to which such facilities could be utilised in terms of student numbers, hours of work, etc.;
- e) Financial implications, if any, of implementing this project;
- f) Suggestions for a suitable administrative and organisational mechanism to ensure maximum co-operation between participating institutions and to develop the project as an essentially collaborative one between the concerned authorities;
- g) Any other matter relevant to the effective implementation of this project.

1.4 The Group was assisted by Shri A S. Ahluwalia, Assistant Education Officer in the Ministry of Education and Social Welfare in its work.

1.5 The Working Group met several times and held discussions with individuals and representatives of organisations concerned with industrial, social and economic activities in the union territory of Delhi and officials of the concerned Ministries of the Government of India and the Delhi Administration.

2. ECONOMIC DEVELOPMENT

— A Background

2.1 Union Territory of Delhi has an area of 1,485 sq. kms. According to 1971 census, it has a population of 40,66,000 (rural 4,19,000 and urban 36,47,000). The density of population per sq. km is 2738. The territory is surrounded by the State of Uttar Pradesh in the East and by Haryana in the North, South and West. Apart from being the Union Territory, Delhi, as the Capital of the country, is the hub of national activity in various spheres.

Agriculture

2.2 The territory covers an area of 1,48,000 hectares of which over 1,00,000 hectares of land is under cultivation. As much as 25 per cent of the area is urbanised. Being primarily an urban area, Delhi has to depend for its food requirements on the adjoining States. The total production in the territory is hardly enough to meet even 1/6th of its food requirements. Bulk of the food, milk, eggs and fish requirements as well as practically the whole of fruits have thus to be imported. The future agricultural development has great potentialities for dairying, poultry, pig-gery and fisheries because of the perishable nature of these commodities on the one hand and higher per capita demand for them on the other. Along with poultry, ancillary industries like poultry feed manufacturing, manufacture of poultry equipment and commercial hatcheries have ample opportunities. The role of agriculture will however be quite insignificant. According to the estimates of State Income of Delhi published by the Bureau

of Economics and Statistics, Delhi Administration (July 1973), the share of agriculture and allied industries in the total income was about 6 per cent as against nearly 50 per cent for the country as a whole. The import of large quantities of dairy, fish and horticulture products, food grains, sugar etc. from different parts of the country creates huge problems of management, transportation and storage. To solve these problems effectively large numbers of trained workers at various levels are essential.

Industry

2.3 There are about 32,000 industrial units employing over 2,52,000 persons in Delhi. Of them 65 to 70 are large-scale industrial establishments and the rest are units under the small-scale industries sector. The total investment in these units is of the order of Rs. 216 crores and the value of their annual production is about Rs. 365 crores. Industries make the single largest contribution to the economy of the union territory of Delhi. Among the industries, textiles group occupies the top position followed by non-metallic products, metal products, transport equipment and miscellaneous manufactures. Together, these five major industry groups employ about 57 per cent of Delhi industrial force.

2.4 The elaboration and diversification of the industries in Delhi is well reflected in the detailed break-up of the manufacturing activity relating especially to the small scale sector. While the

production of items like textiles, articles of food consumption, foot wear, pottery, brass wares and ivory goods etc. has tended to become more and more varied, the addition of newer items has proceeded on a more impressive scale. This is particularly true of chemical, metallic products, electricals, machinery and transport equipment industries. These newer items include a great variety of machine tools, electrical and electronic goods, metal products, auto parts, plastic goods and precision measuring instruments. Particular mention may be made of the role of small scale industries in venturing into new lines of production. They are now engaged in producing modern sophisticated items like precision instruments, machine tools, automobile parts, automatic toys, transformers, tape recorders, transistors, room coolers, air conditioners, refrigerators, electrical gadgets, microscopes, hospital equipment and television sets.

2.5 The relative importance of the industrial sector in Delhi's economy is also reflected by the proportion of workers engaged. According to the industrial classification of workers from 1971 census, 21.5 per cent of the total work force is engaged in industry which is next only to the services sector. The fact of Delhi being the capital of the country and, therefore, of concentration of administrative and other services of Central Government is reflected in the proportion of workers engaged in other services which was as much as nearly 37%. Trade and Commerce occupies the third place employing 20 per cent of the work force.

2.6 Printing and publishing is also a very important category of industries in Delhi with heavy capital investment and employing a large number of workers. Food manufacturing industry is also an equally important category. The industries in Delhi are grouped into the following 21 categories on the basis of investment, production and employment. They are :

1. Textiles
2. Printing and publishing
3. Food manufacturing industries

4. Non-metallic mineral products
5. Metal products
6. Transport equipment
7. Electrical machinery, apparatus and appliances.
8. Other machinery
9. Beverages
10. Tobacco
11. Foot wear and wearing apparel
12. Paper and paper products
13. Wood and cork industries
14. Furniture
15. Leather goods
16. Rubber products
17. Chemical and chemical products
18. Petroleum and coal products
19. Basic material industries
20. Miscellaneous
21. Personal services.

2.7 Delhi is at present in the midst of a remarkable phase of industrial growth. There is a reasonable hope that the process of growth will continue over the foreseeable future, in spite of the fact that the Union Territory of Delhi does not possess any natural resources on which industry could be based. The factors that favour industrial expansion in Delhi are its status and location, the growth in the size and increasing cosmopolitisation of its population, its infra-structure of services and facilities, & the positive role of the official agencies at the Central, State and local levels. Its location is a positive factor promoting growth of industry. Delhi dominates the entire northern India as a transport nodal point in respect of road, rail and air travel and haulage. It is this unique position that has helped to retain its importance as a distributing centre and developing also into a centre of banking, finance and a host of other commercial activities serving the trading community.

Banking, Trade and Commerce

2.8 There are about 44 commercial banks including the Reserve Bank of India in the Delhi Metropolis which comprises the Delhi Municipal Corporation, New Delhi Municipality and Delhi Cantonment. These banks are made up of 30,

scheduled banks, one non-scheduled bank, six co-operative banks and six foreign banks. The total number of their offices and branches is 275 comprising 9 registered offices, 28 pay offices, 40 sub-branch offices and 198 branch offices. All the different localities of the Delhi Metropolis are served by these offices. The importance of Delhi as a trade centre has been progressively increasing because of its important location with a net work of railways and national highways linking it with all parts of the country. It is undoubtedly the largest trading centre in the whole of Northern India. More than 20 per cent of the work force in Delhi is employed in banking trade and commerce.

Communications

2.9 Delhi has fairly good roads and transport system. There are about 69,000 private cars, 4000 other private vehicles, 5000 taxis and 2000 public buses of the Delhi Transport Corporation operating on more than 60 routes. The persons employed in the transport, storage and communications is 9 to 10 per cent of the total work force.

Construction

2.10 This is another activity which employs a

large percentage of work force i.e. between 5 to 6 per cent. Delhi Development Authority is responsible for planning and implementing the Delhi's Master Plan. Under the large scale acquisition, development and disposal of land scheme, over 4856 hectares have been developed for setting up new residential, industrial, commercial and institutional enclaves. So far more than 20,000 residential, 4500 industrial and 6000 commercial plots have been developed. Besides under the special housing scheme over 14,337 house flats have been constructed and about 19,000 more are under construction. About 15 parks and woodlands have also been developed in the area. Construction sector in Delhi will continue to provide good employment opportunities at all levels in view of increasing tempo of construction activity.

Public Health

2.11 There are 55 hospitals, 248 dispensaries and eight primary health centres in Delhi in addition to private nursing homes. The total bed strength is 10352. Hospitals and public health organisations employ large number of para medical personnel besides doctors.

3. EDUCATIONAL FACILITIES

3.1 The Union Territory of Delhi has been divided into four districts; East, West, North and South for the purpose of educational administration and providing educational facilities.

3.2 The literacy rate in Delhi is as high as 56.61 per cent, next only to Kerala which is 60.42 per cent. The all India average is 29.46 per cent. In the urban area of the territory the literacy rate is 58.95 per cent while in the rural area it is 36.23 per cent. The literacy rate among men is 63.71 per cent and among women 47.75 per cent.

3.3 In 1975-76 there were 1629 primary schools, 375 middle schools and 594 higher secondary schools. At the beginning of the academic year 1976-77 the number of higher secondary schools has risen to 607 out of which 73 schools are located in the rural area. Of them 372 schools are for boys and the rest 235 are for girls.

3.4 The total enrolment of girls and boys in the Union Territory of Delhi in higher secondary schools from class 9 onwards was 1,92,000 for the year 1973 out of the population of 2,95,000 children in the age group of 14-17 and 97,000 in the age group 17-18. In 1975-76 the enrolment in the higher secondary classes from 9th to 11th was 2,20,000 comprising 1,28,000 boys and 92,000 girls. Extensive facilities are available for higher education. There are 54 colleges of general education offering courses in humanities, sciences and commerce at the under-graduate, honours and post-graduate levels. All these colleges are either constituent colleges or affiliated

to Delhi University. The enrolment in these colleges in 1975-76 was around 77,500.

3.5 In technical education a big net work of institutions from colleges down to technical higher secondary schools has been established. There are six institutions offering courses in engineering and technology at the first degree level and above. These institutions have an annual intake capacity of nearly 800 students. Of them the Indian Institute of Technology, one of the five higher technological institutions in the country and the School of Architecture and Town Planning, have been established by the Government of India as All-India Institutions. The courses offered by degree institutions include civil, chemical, electrical, electronics and mechanical engineering, textile, technology, architecture pharmacy and applied art.

3.6 There are 14 institutes offering a wide range of diploma courses in engineering and technology for higher secondary passed students. The annual admissions to these institutions is nearly 2500. Among them are three polytechnics for boys, three polytechnics for girls, one Institute of Hotel Management, Catering and Nutrition, two Schools of Pharmacy, one School of Art and one School of Commercial Practice. The courses offered include civil, electrical, mechanical, electronics, communication and automobile engineering, air conditioning and refrigerations, architectural assistantship, secretarial practice, hotel management, commercial art, library science, printing technology, beautician course, marketing

and sales management, and company secretaryship. These institutes offer full time day courses as well as part time evening courses. The total number of courses offered is around 40.

3.7 For providing training in crafts and trades there are eight industrial training institutes in Delhi including one at Kasturba Gandhi Marg exclusively for women. These training institutes offer wide variety of courses numbering 46 in engineering and non-engineering crafts and trades. The number of students admitted is 5700 a year.

3.8 In the early sixties three junior technical schools for providing technical and vocational training at the secondary level were established at Kashmere Gate, Narela and Okhla. For various reasons these schools did not prove to be successful and fulfill the objectives for which they were established. They were, therefore, converted into technical higher secondary schools. The course of study in the three year technical higher secondary programme comprised all the subjects which are prescribed for the science stream of higher secondary education and training in mechanical and electrical workshops. This experiment had also proved to be a failure. A committee appointed by the Delhi Administration to review the performance of the schools and to examine the feasibility/desirability of their continuance had recommended to stop admissions to these schools from May 1975 and convert them into full-fledged vocational schools as and when the vocationalisation programme at the higher secondary level in the new pattern of education is introduced. The Delhi Administration had accepted this recommendation

and discontinued admissions in the technical higher secondary programme since 1975. The last batch of students from these schools in the old programme will pass out in June 1977. One of the schools at Narela was closed down in 1975 and the students were distributed among other schools. Some of the equipment in the school was transferred to an ITI and the rest are kept in Okhla School. These technical schools have facilities for training in sheet metal work, fitting, wood working, heat treatment, foundry, blacksmithy, machine shop and electrical workshop for an annual admission of 180 students each. All these facilities are available now for the vocationalisation programme.

3.9. Extensive facilities are also available for medical education in the Union Territory of Delhi. There are four medical colleges including the All India Institute of Medical Sciences, 11 nursing schools, and three para medical schools for training doctors, nurses and para medical personnel. All these institutions are attached to hospitals. Among the para medical personnel, radiographers are trained in Irwin Hospital and Holy Family Hospital, Dental mechanics in Safdarjung Hospital, Pharmacists (compounders) in the Colleges of Pharmacy, Laboratory Technicians in V.P. Chest Institute and Holy Family Hospital and O.T. Assistants in Safdarjung Hospital.

3.10 A list of technical, vocational, medical, para medical and other professional institutions in the Union Territory of Delhi with the courses offered by them is given at Annexure-I.

4. IDENTIFICATION OF VOCATIONAL COURSES

4.1 The aim of vocational education at the higher secondary level is to provide education and training for acquiring practical skills, attitudes, understanding and knowledge relating to occupations in the various sectors of economic and social life. The education should enable the students to contribute their best to the economic development of the country and to employ their skills to earn their living. It is, therefore, necessary to select those vocations which provide employment opportunities including self-employment either at present or in the near future. The courses should be based on the vocational needs of the community.

4.2 To identify the vocational needs of an area or state and to prepare a plan for education and training in vocations relevant to the needs, socio-economic and vocational survey of the area or state should be carried out. In such a survey, the present industrial, commercial, agricultural, trade, transport, health, construction, educational, social and other activities have to be taken into account. In addition to the existing activities, it is also necessary to identify the emerging industrial and commercial development trends to assess the employment opportunities responsive to these trends in the near future.

4.3 It has not been possible for the working group to undertake a survey of this type to identify the vocations and to estimate the numbers that are needed for various occupations, because of the very short time at its disposal. The group, however, examined several available reports of a similar nature relevant to the task, and interviewed

representatives of organisations and individuals involved in the social and economic activities in the Union Territory of Delhi.

4.4 In order to identify the vocations/occupations that are currently in demand in the Union Territory, the following information was obtained from the Directorate of Employment, Delhi Administration :

- (1) Requisition received by the Employment Exchanges, occupation-wise, during the last one year.
- (2) Number of placements made, occupation-wise during the same period.
- (3) Occupations for which no objection certificates were issued by the Employment Exchanges because suitably qualified candidates were not available on the live registers maintained by the Employment Exchanges.
- (4) Occupations for which there was large turn over.

4.5 The information supplied by the Directorate of Employment for the period 1.7.1975 to 30.6.1976 in respect of Employment Exchanges at Pusa, Daryaganj and Arab Ki Sarai may be seen at Annexure-II. It covered technical, clerical and para-medical occupations. Among the technical category, occupations for which no objection certificates were issued, include Surveyor, Architectural Draughtsmen, Draughtsmen Civil, Draughtsmen Mechanical, Electronics, Cutting and Tailoring, Interior Decoration, Photography, Instrument Mechanic, Refrigeration & Air-conditioning

Mechanic, Electrician, Glass Blowing, Printing Occupations, Wireless Operators, Business Machine Repairers and Textile Designers. In the Para-Medical and Clerical Categories, Laboratory Assistants, Office Assistants, Catering Managers, Accounts Assistants, Receptionists and Social Workers figured prominently.

4.6 From the data furnished on requisitions received by the Employment Exchanges and the placements made occupations-wise during the last one year, it was observed that there had been a great demand for draughtsmen of all categories, cutting and tailoring, wireless operators, electricians, electronic technicians, motor mechanics, refrigeration and air-conditioning mechanics, sheet metal workers, instrument mechanics, pump operators, pharmacists, nurses, primary teachers, PGTs and trained graduate teachers, laboratory assistants, librarians, office assistants, accounts clerks, retail salesmen and agricultural field men. The Directorate of Employment has also furnished a list of shortage occupations as noticed through the Employment Exchanges, statistics as well as those indicated by various employers in the returns rendered by them periodically under the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1969. The shortage occupations include stenographers, electricians, computer programmers, laboratory assistants, accountants, receptionists, boiler attendants, etc. Details of these occupations are given at Annexure III.

4.7 It is reasonable to assume that jobs in large and organised industry and services will not increase fast enough to employ appreciable number of trained workforce. On the other hand, small scale industries sector including handicrafts, cottage industries and village industries; agriculture sector; cooperative marketing; servicing; repairs and maintenance of tools, implements, household gadgets and machinery provide not only more employment opportunities but also scope for self-employment and entrepreneurship. Sufficient motivation should therefore be developed in boys and girls for self-employment and entrepreneurship in the vocationalisation programmes. Entrepreneurship requires imagination, enterprise and ability to take risks and, therefore,

is difficult to achieve from the beginning. It is not always we find many people possessing the requisite qualities for entrepreneurship much less among the students at higher secondary level. However, a systematic and organised training in self-employment and entrepreneurship, right from the beginning will go a long way in changing their outlook and building confidence in them to be self-reliant.

4.8 National Alliance of Young Entrepreneurs (NAYE), an organisation financed by industries for their own future development and for training suitable personnel, during the discussions the group had with their representatives, laid greater emphasis on this aspect of training to every student taking up vocational studies. NAYE is prepared to organise short term training courses in this area and conduct tests to select prospective entrepreneurs who may be given later an intensive training for about a year or so during which period, selection of trades or industries, arrangement for financial resources and various other things can be worked out. This appears to be a positive approach to train entrepreneurs in the country, however, small the number may be. NAYE is also willing to train teachers in batches by organising orientation courses.

4.9 The All India Handicrafts Board and the All India Khadi and Village Industries Commission are also eager to coordinate their training programmes with the vocationalisation scheme. A variety of activities such as carpet making, wood carving, leather work, soap making, hand made paper, toy making, spinning and weaving, textile printing, block making require to be integrated with the scheme.

4.10 The toy industry in the country has plans to raise its output to about 10 crores within the next few years, and to increase export earnings from the present Rs. 30 lakhs a year to Rs. 3 crores a year. There are proposals to form a Toy Development Board and a Toy Design Centre. Manufacturers of mechanical and educational toys have a great potential. The Union Territory of Delhi is one of the few centres in India, which has already developed this activity to a significant extent. Future plans being under-

taken for the development of this industry will create ample opportunities for self-employment as well as for jobs.

4.11 Another very important area which will provide vast avenues for employment at all levels is export and international trade. The country is poised for a great break-through in the international trade. By the end of the 5th Plan period the trade is expected to reach the target of Rs. 10,000 crores per annum. The operations involved at various stages require people in large numbers with different skills and competences particularly at the middle level. Representatives of several agencies, whom the group met, indicated a great need for properly trained export and import assistants.

4.12 Tourism and Hotel Industry is yet another activity which is fast developing. Along with its development, the need for trained persons in occupations such as reception and book keeping, bakery and confectionery, cookery, restaurant counter service and tourist services will also be on the increase. Delhi being the capital of the country, has become a very important centre for internal as well as international tourism. The hotel and restaurant industry is also fast growing. Facilities for training middle level work force for this activity have been, so far, very limited.

4.13 In the recent past, another economic activity which has made rapid strides in terms of production, distribution and export, is the garment and wear apparel industry. India has great potentialities to compete in the International market in this area which is labour intensive because of the availability of cheap labour and the raw material. Printing industry is another one which falls in this category. Therefore, occupations like cutting and tailoring, costume design and garment making, printing, composing, type setting, proof reading, litho press operators, block making will need trained personnel.

4.14 Electronics and electrical appliances, radio and television, airconditioning and refrigeration are some of the areas of activity which need trained manpower not only for production but also in equal numbers if not more, for main-

tenance, repairs and servicing. As communications develop and the standard of living improves, these industries grow providing more employment. The growth of electronics industry has been very impressive and the future for this industry is very bright.

4.15 All the production activities discussed above, have distributive functions like distribution, sales and retailing etc. which need personnel trained in these occupations. Whether we talk of industry, trade, commerce, transport, health, public service, education or any other economic or social activity, there are certain occupations common to all which are normally referred to as business and office occupations. These are stenography and typing, book keeping and accounts, business machine operation, computer operation, programming, data processing, system analysis; materials management involving receiving, storing, issuing and requisitioning of materials, inspection and identification, inventory control and administrative occupations like office assistants, receptionists, secretaries to the executives etc. All these and many more allied occupations need trained personnel.

4.16 Education and health sectors require a large work force that can be trained at the +2 level of education. Kindergarten teachers, primary school teachers, health workers, radiographers, dental mechanics, opticians, anaesthesia mechanics, X-ray technicians, nursing attendants and laboratory assistants are a few among several categories of personnel required.

4.17 Individuals, officials and representatives of the agencies and organisations actively involved in the socio-economic development activities in the Union Territory with whom the group individually or collectively had discussions on vocationalisation of higher secondary education, have evinced great interest and welcomed the programme. They suggested several courses from their experience and perception which in their opinion would be relevant and responsive to the needs of the Union Territory. The names of persons, the group met, are given in Annexure IV.

4.18 The Central Board of Secondary Education, Delhi, has, with the help of academics and

others, identified several vocational courses in a large number of fields such as agriculture, industry, trade and commerce, arts and crafts, medicine and public health, home management, and secretarial training etc. and prepared syllabuses for the same. While suggesting the courses, the Board said that great care should be taken by the individual schools in the selection of courses. It will not be appropriate to introduce any course in any school unless it is relevant to local needs, and employment potential, and unless the school possess adequate resources and training potential. The Board also said that it would be better if the selection is based on employment demand surveys.

4.19 Similarly, the NCERT through its various committees such as Vocational Education Implementation Committee and the Curriculum Committee has also identified several courses under broad areas of human activity such as agriculture, distribution, health, home economics, business and office, technical education, industrial, and special needs on All India level.

4.20 The group is of the opinion that the proper and correct way of approaching this problem is to identify the occupations which are in demand in various sectors of economic and social activity. This should be done by carrying out scientific, social economic survey and area skill survey of the Union Territory in cooperation with the industry, trade and commerce. Such surveys will not only identify the occupations in demand but also estimate quantitatively the numbers required. These surveys are not one time exercise.

As technology changes the nature and pattern of occupations change. It is, therefore, necessary that these surveys should be updated continuously.

4.21 The next step is to delineate the precise functions; to determine the knowledge, skills and competencies needed to perform the functions; and to design courses which will best serve the purpose. This demands job analysis or activity analysis of occupations. It is neither possible nor is it necessary for any educational system to provide education and training to persons to occupy particular positions or jobs. But the system should be responsive to the training of people for clusters of occupations.

4.22 On the basis of job analysis, occupations of allied nature may be grouped together to form clusters, according to well defined common characteristics and a clear understanding of the functional requirements of each cluster developed. The understanding must be expressed in terms of knowledge, skills and competencies for different clusters of occupations. It is advisable to undertake this analysis in cooperation with employers wherever possible. The curriculum should be designed after carefully defining the objectives of the courses.

4.23 While recommending the above approach for identifying courses and designing curriculum for them, as an expedient measure for the present, the group, on the basis of the analysis of available data and discussions with several people, identified some courses for introducing in the schools in the Union Territory. They are given at Annexure V.

5. SELECTION OF SCHOOLS

5.1 From the 606 higher secondary schools in the Union Territory of Delhi, according to the Directorate of Education, about 70,000 students are expected to appear for the 10th standard examination in the new pattern of education in March/April, 1977 although the Central Board of Secondary Education estimates the number around 60,000. On the basis of the performance of students the previous years, it is estimated that 45,000 to 50,000 students would be eligible for further education. Many of them may join higher secondary schools with academic stream at +2 level with the idea of joining universities and other institutions for the tertiary level education in Humanities, Sciences, Commerce and professional courses like Agriculture, Engineering and Technology, Medicine and Veterinary Sciences. Some of them may join polytechnics and some others may join industrial training institutes, para medical schools and institutions offering job-oriented courses. Of the total number of successful students in the 10th grade examination, those going for academic studies at the +2 level will undoubtedly be the largest in number. It is estimated that nearly 25,000 to 30,000 students would join academic stream. Polytechnics and other technical institutions will take nearly 2,500 students. Industrial Training Institutions admit about 6,000 students. Para-Medical and other Institutions may provide facilities for over 1,500 students. A substantial number may drop out from the educational system for some reason or the other.

5.2 At the suggestion of NCERT a sample survey was conducted by the Directorate of Edu-

cation, Delhi Administration in October, 1976 to assess the views, interests, choices and aptitudes of students in regard to their further education. The students of Class X were asked to fill in questionnaire which was prepared in consultation with the NCERT. The sample consisted of about 9,079 boys and girls in urban as well as rural schools (1201 i.e. 13.2% from 15 rural schools and 7878 i.e. 86.8% from 95 urban schools). The survey covered among others, the socio-economic and educational background of the parents of the pupils from rural as well as urban schools. Apart from the opinion of the pupils regarding their preferences for job, higher studies or training, information has also been obtained about their preference for part time vocational training in case they opt for job or higher studies.

5.3 Of the 9079 pupils, an overwhelming majority have opted for higher education while fairly large proportion is still undecided. The pupils opting for higher education account for 6691 (73.7%) and those undecided are 1402 (15.4%). Only 522 pupils (5.81%) have expressed their option for vocational courses. Pupils preferring vocational courses are more from the lower income group. The maximum number of pupils offering vocational courses are in the income range below Rs. 1000 per month both in rural (60%) and urban (90.5%) areas. There is better understanding of the utility of the vocational courses amongst urban parents in that around 17 per cent wards whose fathers are either graduates or post graduates have opted for vocational courses whereas it is only 5.2% in the case of pupils from rural area. Both in rural and urban

areas pupils whose parents are in clerical and other occupations have opted for vocational courses.

5.4 About 71.1% (6457) out of 9079 pupils have shown positive inclination in undergoing part-time training at some stage or the other. Of these pupils 3835 (59.5%) have opted for part-time courses after 10th class and another 1941 (30%) pupils prefer to have part-time training after graduation and the remaining 681 pupils have expressed their desire to undergo part-time training at any other time.

5.5 The result of the sample survey should not be taken as the sole guide in as much as the students were not aware of the benefits of the vocational education at the secondary level. Proper vocational guidance and career counselling to students from the age of 11 would go a long way to enable them as well as their parents to make a choice regarding the type of education they should obtain. The counselling should be organised in the schools by training teachers in counselling, by organising careers talks by industrialists, bankers, technical teachers, and educators, and also by organising open days and exhibitions in schools, technical institutions and industry. Notwithstanding the finding of the survey, the Group estimates that about 5000 students would join vocational stream in 1977-78.

5.6 The Group considered at great length the criteria for selecting schools for offering vocational courses. The Group also considered the optimum number of courses to be introduced in each school and the number of students to be admitted in each course. The Group is of the view that it would not be economical to start vocational courses in any school if the number is less than 60. The optimum number is 100. At

Group of four allied courses with 25 students in each course may be introduced in each school. Keeping in view that facilities for vocational education should be spread all over the Union Territory, the Group laid down the following criteria for the selection of schools :

1. Industrial, commercial and related occupational developmental and economic activities in the area.
2. Availability of training facilities in the vicinity in existing technical, vocational, medical and para-medical institutions, hospitals, industry and commercial agencies for providing training to the students wherever required to the extent possible.
3. Possibility of a large number of students opting for vocational courses in the locality.
4. Availability of class room accommodation, laboratory and library facilities and equipment, if any, useful for vocational programmes.
5. Past academic record of the school.
6. Availability of enlightened, motivated, articulated and enthusiastic group of teachers with a strong commitment to vocationalism.
7. Financial resources of the management in the case of private schools.
8. Capacity to secure the support and assistance of the community and industry around.

On the basis of the above criteria, 50 schools were selected for offering vocational programmes.

The list of selected schools along with the justification is given at Annexure VI.

6. ORGANISATION OF COURSES

6.1 The Union Territory of Delhi, in the present state of industrial development, trade, commerce and services, and with a big net work of technical, vocational, medical, para medical, and other institutions and also with an increasing potential for further economic activity, is ideally situated for organising vocational education programmes at the +2 level. The courses identified by the Group should be introduced in the proposed schools on the basis of the following considerations :

- i) Courses in the field of agriculture should be offered in the schools around which the corresponding production or trade activity exists, e.g. a course in dairy farming may be offered in a school near the Delhi Milk Factory or in a rural area. Similarly courses in Poultry, Floriculture, Olericulture and Ancillary Industries may be offered again in schools situated in rural surroundings.
- ii) Courses in the field of medical and public health should be offered in schools in the vicinity of hospitals and medical colleges.
- iii) Courses for hotel and restaurant industry may be offered in schools situated near Institute of Hotel Management, Catering and Nutrition, Pusa and hotels.
- iv) Electronics, electrical equipments, air conditioning and refrigeration, T.V. and radio courses may be offered in schools nearby polytechnics and I.T.Is. which are offering courses in these fields.

- v) Courses for business, commerce and services occupations, which do not require substantial hardware, may be offered in as many schools as possible where commerce subjects in the academic stream are taught since the corresponding activities are spread all over the Urban area of the Territory.
- vi) Teachers in the existing institutions and people from industry should be utilised for teaching on part time basis.

6.2 Keeping in view the principles stated above, courses to be offered in each of the fifty selected schools have been decided. They are given at annexure VII. Four courses out of those recommended against each school may be introduced on the basis of the demand from the students.

6.3 The technical higher secondary schools at Kashmere Gate and Okhla, mentioned earlier in the Report, although possess equipment and staff do not have proper buildings of their own. Okhla School is functioning in the hostel building of the polytechnic. The other school is housed in an old building in the Kashmere Gate Polytechnic Campus. The Group was informed that action had already been initiated to provide permanent buildings to these schools. The Group recommends that these two schools may be converted into vocational schools in technical, industrial and other allied areas for which some equipment and staff are available in the schools. When proper buildings are constructed, the possibility of introducing academic stream in these schools at +2 level may be considered.

6.4 Coordination of available facilities namely equipment and instructors in industry, educational and training institutions involves a great deal of work. Persons actively engaged in socio-economic activities in Delhi should be closely associated in this effort. The Group, therefore, recommends that a State Vocational Education Board be constituted to advise Delhi Administration on the planning, organisation, coordination, and development of vocational education in the Union Territory of Delhi. The Chairman of the Board should be no less a person than the Chief Executive Councillor. The Board may consist of 25 members which should include, among others, the representatives of production activities and services, trade and commerce, administration planning and educational institutions. The Board should not only conduct a survey of economic activities and potentialities and consequent opportunities of work from time to time but also assess manpower needs. It will identify courses to be organised, select schools and recommend facilities to be provided for them. The Board should meet at least four times in a year. The Group suggests the following composition and functions for the Board

1. Chief Executive Councillor	<i>Chairman</i>
2. Education Secretary	<i>Member</i>
3. Finance Secretary	„
4. Planning Secretary	„
5. Director of Education	„
6. Director of Technical Education	„
7. Director of Employment	„
8. Director of Industries	„
9. Director of Agriculture	„
10. Representative of Ministry of Education	„
11. Representative of Directorate General of Health Services/Health Ministry	„
12. Representative of Ministry of Industrial Development/Development Commissioner of Small Scale Industries	„

13. Representative of National Alliance of Young Entrepreneurs	<i>Member</i>
14. Chairman of Delhi State Development Corporation	„
15. Representative of the Federation of Association of Small Scale Industries	„
16. Representative of Banks/Insurance Companies	„
17. Representative of Small Scale Services Institute, Delhi	„
18. Representative from Industry	„
19. Representative of Delhi Chamber of Commerce	„
20. Representative of NCERT	„
21. Representative of Central Board of Secondary Education	„
22. [Representatives from schools	„
23. [offering vocational courses	„
24. Representative of All India Women's Conference	„
25. Joint Director of Vocational Education	<i>Member-Secretary</i>

Functions

1. To make a survey of economic activities and potentialities and to prepare a 'Vocational Profile'.
2. To assess the manpower requirements at the middle level in different clusters of skills, vocations and occupational areas.
3. To project future manpower needs and estimate demands for various sectors and occupations.
4. To identify and formulate vocational education programmes to meet the manpower needs.
5. To design and develop, curriculum for courses on the basis of job requirements.
6. To modify the existing courses and introduce courses wherever and whenever necessary in the light of the shifting pattern of vocations.

7. To select schools for organising such programmes and courses.

8. To coordinate the use of available facilities for training in all establishments.

9. To establish links between productive activities and services, trade and commerce on the one side and administration, planning and educational institutions on the other.

6.5 For the implementation of the recommendations of the Board a Vocational Education Unit should be set up in the Directorate of Education, Delhi, which will act as a Secretariat to the Board. The Unit may be headed by an officer of the rank of Joint Director of Education who will also be the Member-Secretary of the Board. He may be assisted by one officer at the level of Deputy Director of Education and two of the rank of Assistant Directors of Education and

necessary secretariat staff. The officers appointed for the Unit should possess professional qualifications, with field experience.

6.6 The Unit should be responsible to monitor the vocational education programme. It will carry out the functions of the Board, collect data, conduct surveys, assess manpower requirements with the help of experts and place the material before the Board for its consideration and advice. It should organise vocational guidance and career counselling to the students in the classes 9 to 10. One of the most important functions of the unit is the follow up action, i.e., placement of students in the industry in cooperation with the employment exchanges and to obtain cooperation with the employment exchanges and to obtain feedback from the employers regarding the quality of training. In addition, the Unit should also organise pre-service and in-service training of teachers, and apprenticeship training for students.

7. FINANCIAL IMPLICATIONS

7.1 As stated earlier in the Report, it is proposed to organise vocational courses for 5000 students in 50 schools with an annual admission of 100 students in each school. Thus the facilities to be provided should be for an enrolment of 10,000 students. Each school will offer four vocational courses with 25 students in each course. In selecting courses to be offered in each school, care has been taken to see that the courses are allied in nature as far as possible. The selection of courses was also influenced by location of the school and the instructional facilities available in the existing institutions in the vicinity and the availability of facilities in terms of class rooms, laboratories, library and staff for teaching languages, basic sciences and other common subjects in the school. The main reason for offering vocational courses in schools located near the existing professional and technical institutions industry, trade, commerce and other related economic activities was to utilise the equipment and staff available in them for the vocational courses to the maximum possible extent.

7.2 According to the frame work of vocational education suggested by the NCERT, 25 per cent of the time in the vocational stream will be devoted to the study of languages and the general studies (social, economic, scientific etc) and 25 per cent of the time will be spent on the study of science, social sciences and humanities courses designed to understand the basis and scope of various vocations and the remaining 50 per cent on vocational and practical work. Approximately 50 per cent of the education is common between

vocational and academic streams. It should, therefore, be possible for the staff appointed for the academic stream to handle 50 per cent of the work load of the vocational stream also.

7.3 It may not be easy to recruit teachers who are qualified as well as possessing relevant occupational experience, on a full-time basis for the salaries offered in the higher secondary schools. In view of this, all possible efforts should be made to obtain the services of experts, technicians and skilled craftsmen from industry and teachers and instructors from professional institutions on part-time basis. It is always easier to train a master craftsman or a technician in vocational education to provide him with necessary teaching skills than to train a vocational teacher to acquire occupational skills and competences. Teachers should, therefore, be recruited as far as possible from the industry or the relevant occupational activity on the basis of their proven ability in their occupational field. Their occupational experience and training provide the technical content for their teaching. However, before the skilled craftsmen or technicians can translate their skills and knowledge to others, certain essential teaching skills and competences must be acquired through pre-service or in-service teacher training programmes. These training programmes are an integral part of the professional development process. Provision should, therefore be made for the continuous training of teachers to update and upgrade their teaching as well as occupational competences.

7.4 Until the curriculum for the vocational courses proposed to be introduced is designed

and the syllabus framed, it is not possible to precisely estimate the time spent in class rooms, laboratories as well as in workshops or industry. However, for the purpose of calculating staff requirements at this stage it is assumed that 50 per cent of the time will be spent by the students on vocational education which includes theory and practice.

7.5 Keeping in view the above points, the financial estimates for introducing vocational courses in the Union Territory of Delhi are calculated as follows:

Annual intake of students for vocational stream in Delhi	5000
Number of schools	50
Number of students in each school	100
Number of teachers required for each course	two full-time or one full-time and three part-time
Number of teachers required for courses in each school	Eight full-time or four full-time & Twelve part-time
Expenditure on salaries for the staff in each school at the rate of Rs. 1000 p.m. for full-time and Rs. 300 p.m. for part-time.	Rs. 96,000 per annum
Non-teaching technical staff	Rs. 8,000
Materials and contingencies	Rs. 14,000
Recurring expenditure in each school	Rs. 1,18,000
Total recurring expenditure in fifty (50) schools	Rs. 59,00,000 per annum

7.6 Although efforts will be made to provide training and laboratory practice to the vocational students in the existing professional institutions and industry, it may be necessary to provide facilities in certain areas and courses in the school

itself. At this stage, in the absence of the curriculum of studies for various courses and information about the facilities available in the existing institutions for these courses, it is not possible for the Group to work out the precise requirements of equipment and instruments to be provided in each school. The Group, therefore, recommends that a lumpsum provision of Rs. 60,000 per school (i.e. Rs. 50,000 for equipment and Rs. 10,000 for library) for non-recurring expenditure be made for buying equipment and books that are considered necessary. The requirements will differ from course to course and from school to school and will have to be worked out later. The total non-recurring expenditure for all the fifty schools will be Rs. 30,00,000.

7.7 The annual expenditure on the staff for the unit to be set-up in the Directorate of Education is estimated to be of the order of Rs. 1,00,000 per annum

7.8 Estimates of Cost	
<i>Non-Recurring</i>	
Equipment	Rs. 25,00,000
Library	Rs. 5,00,000
	<hr/>
	Rs. 30,00,000
<i>Recurring</i>	
Salaries for teaching staff	Rs. 48,00,000 per annum
Salaries for technical, non-teaching staff	Rs. 4,00,000
Materials and contingencies	Rs. 7,00,000
	<hr/>
	Rs. 59,00,000
Expenditure on the staff for vocational education unit in the Directorate of Education	Rs. 1,00,000
	<hr/>
	Rs. 60,00,000 per annum

8. SUMMARY OF RECOMMENDATIONS

1. Scientific socio-economic survey and area skill survey of the Union Territory in cooperation with industry, trade and commerce should be carried out periodically to identify the occupations in demand and to estimate the numbers required. Such surveys should be updated continuously. 4.20
2. Job analysis or activity analysis of occupations in demand should also be carried out to delineate the precise functions, to determine the knowledge, skills and competences needed to perform the functions and to design the courses which will best serve the purpose. 4.21
3. Students in vocational education should be motivated for self-employment and entrepreneurship. A course of training in this aspect should be made compulsory to all the students taking up vocational education. A systematic and organised training in self-employment and entrepreneurship right from the beginning will go a long way in changing their outlook and building confidence in them to be self-reliant. 6.2
4. Vocational guidance and career counselling should be given to all children from the age of 14 in the schools by organising career talks by people from industry, professional institutions and other experts. 5.5
5. Vocational education facilities should be provided for 5000 students at +2 level in 1977-78 in the Union Territory of Delhi. 5.5
6. The vocational programmes should be organised in 50 schools selected by the Group at the rate of 100 students in each school. 5.6
7. The selection of schools in future, should be based on industrial and other economic activities in the area and the availability of training facilities in the existing industry and educational institutions. 5.6
8. Four vocational courses out of those recommended against each selected school may be offered in 1977-78 depending upon the demand from the students. 6.2
9. The technical higher secondary schools at Okhla and Kashmere Gate should be converted into vocational schools. 6.3
10. The State Vocational Education Board should be set up under the Chairmanship of the Chief Executive Councillor with 25 members representing various production activities and services, trade and commerce, administration, planning and educational institutions to advise the Delhi Administration on the planning, organisation, coordination and development of vocational education in the Territory. 6.4
11. A vocational education unit should be set up in the Directorate of Education with full-time officers and supporting staff to work as the

secretariat to the Board and to monitor and administer the vocational education programmes.

6.5 & 6.6

12. As soon as the syllabus and the curriculum for the courses proposed are ready, arrangements should be worked out for the staff and training facilities on a part-time basis from the existing institutions and industry.

7.6

13. Pre-service and in-service training for

teachers of vocational education should be organised.

7.3

14. The total non-recurring provision required for equipment and library for all the 50 schools put together is Rs. 30 lakhs. The recurring expenditure on salaries, materials and contingencies including the staff required for the unit in the Directorate of Education is estimated to be Rs. 60 lakhs per annum.

7.3

ACKNOWLEDGEMENT

The Working Group wish to express their appreciation and thanks to Shri S.R. Kapur, Education Officer, Directorate of Education, Delhi Administration and Shri Harpal Singh, Assistant Director of Technical Education, Directorate of Technical Education, Delhi Administration for their help in providing information and material required for the work of the Committee and to Shri N.L. Vyas, Artist, College of Pharmacy, for his assistance.

ANNEXURES

**List of Technical, Vocational, Medical, Para-Medical and other Professional Institutions in the
Union Territory of Delhi with the courses offered by them**

Sl. No. 1	Name of the Institution 2	Courses offered 3
	Technical Institutions	B. Tech. Courses
1.	Indian Institute of Technology, Hauz Khas	1. Civil Engineering 2. Mechanical Engineering 3. Electrical Engineering 4. Chemical Engineering 5. Textile Technology Postgraduate courses in several fields of Engineering and Technology.
2.	Delhi College of Engineering, Kashmere Gate	B. Tech. Courses 1. Civil Engineering 2. Mechanical Engineering 3. Electrical Engineering 4. Electrical Engineering with specialisation in Electronics 5. Postgraduate courses in the above fields of Engineering Part-time Courses 1. Civil Engineering 2. Mechanical Engineering 3. Electrical Engineering
3.	School of Planning and Architecture, Indraprastha Estate	1. Architecture (B. Arch) 2. Postgraduate Diploma in Town Planning

1	2	3
		Part-time 1. Architecture (B. Arch) 2. Postgraduate Diploma in Town Planning
		First Degree Courses in 1. Commercial Art 2. Sculpture 3. Painting
4.	College of Art, Tilak Marg	1. Diploma in Pharmacy (D. Pharm) 2. Bachelor of Pharmacy (B. Pharm)
5.	College of Pharmacy, Pusa	1. Diploma in Pharmacy (D. Pharm) 2. Bachelor of Pharmacy (B. Pharm)
6.	Hamdard College of Pharmacy, Tughlakabad	1. Diploma in Pharmacy (D. Pharm) 2. Bachelor of Pharmacy (B. Pharm) 3. Pharmacist (Compounder)
7.	Department of Civil and Rural Engineering, Jamia Milia, Okhla	1. Diploma in Civil & Rural Engineering
8.	G. B. Pant Polytechnic, Okhla	1. Diploma in Civil Engineering 2. Diploma in Electrical Engineering 3. Diploma in Mechanical Engineering 4. Diploma in Auto mobile Engineering 5. Post Diploma Course in Air-Conditioning and Refrigeration
9.	Kashmere Gate Polytechnic, Kashmere Gate	1. Diploma in Civil Engineering 2. Diploma in Electrical Engineering 3. Diploma in Mechanical Engineering 4. Diploma in Architectural Assistantship
		Part-time Courses 1. Diploma in Civil Engineering 2. Diploma in Electrical Engineering 3. Diploma in Mechanical Engineering
10.	Pusa Polytechnic, Pusa	1. Diploma in Civil Engineering 2. Diploma in Electrical Engineering 3. Diploma in Mechanical Engineering 4. Diploma in Electrical Comm. Engineering 5. Sandwich course in Auto mobile Engineering 6. Conversion course in Electrical Comm. Engineering 7. Printing Technology 8. Post Diploma course in Applied Electronics & Microwave Technology

1	2	3	4
11. Women's Polytechnic, Maharani Bagh		<ol style="list-style-type: none"> 1. Architectural Assistantship 2. Electronics 3. Interior Decoration & Display 4. Commercial Art 5. Library Science 6. Secretarial Practice 7. Medical Laboratory Technology 8. Beautician 	
12. New Delhi Polytechnic for Women, South Extension		<ol style="list-style-type: none"> 1. Interior Decoration & Display 2. Commercial Art 3. Secretarial Practice 	
13. Women's Technical Training Institute, (YWCA) Ashoka Road		<ol style="list-style-type: none"> 1. Secretarial Practice 2. Medical Laboratory Technology 3. Electronics 	
14. Institute of Commercial Practice, Mori Gate		<ol style="list-style-type: none"> 1. Diploma in Commercial Practice 2. Certificate in English Stenography 3. Certificate in Hindi Stenography 	
		Part-time (Evening courses)	
		<ol style="list-style-type: none"> 1. Post Diploma in Company Secretaryship 2. Post Diploma in Marketing and Sales Management 3. Certificate in English Stenography 4. Certificate in Hindi Stenography 5. Diploma in Purchase & Materials Management 	
15. Institute of Hotel Management, Catering and Nutrition, Pusa		<ol style="list-style-type: none"> 1. Diploma in Hotel Management & Nutrition 2. Diploma in Specialised Hotel Management 3. Diploma in Canning and Food Preservation 4. Trade Diploma in Cookery 5. Trade Diploma in Bakery and Confectionery 6. Trade Diploma in Restaurant and Counter service 7. Trade Diploma in Hotel Reception and Book keeping 8. Trade Diploma in House keeping 	

1	2	3
16. Sarda Ukil School of Art, Janpath		1. Diploma in Art for Drawing teachers 2. Part-time Diploma in Commercial Art (Hobby Course)
17. Border Security Force Signal Training School, Ramakrishna Puram		1. Diploma in Electronics
18. Delhi Institute of Management Studies, Barakhamba Road		1. Diploma in Computer Programming

Vocational Training Centres/Courses

19. Industrial Training Institute, Arabki Sarai		1. Blacksmith 2. Carpenter 3. Mech. Motor 4. Mech. Ref and Air Conditioning 5. Moulder 6. Painter and Decorator 7. Sheet Metal 8. Welder 9. Fabricator 10. Building construction 11. Draughtsman (Civil) 12. Draughtsman (Mech) 13. Electrician 14. Electroplator 15. Fitter 16. Machinist (Composite) 17. Electronics 18. Mech. Instrument 19. Pattern Maker 20. Turner 21. Wireman 22. Mech. Radio & T V 23. Tool and die maker 24. Machinist (Grinder) 25. Book Binding 26. Cutting and Tailoring 27. H. C. P. R. 28. P. M. O. 29. Stenography (English)
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1	2	3
20. Industrial Training Institute for Women, Kasturba Gandhi Marg	30. Lino Operator	31. Process Cameraman.
	<ol style="list-style-type: none"> 1. Electronics 2. Dress Designing and Dress Making 3. Cutting and Tailoring 4. Embroidery 5. Cookery, Catering and Fruit Preservation 6. Stenography (Hindi) 7. Stenography (English) 8. Knitting 9. Beautician and Hair Dressing 10. Fabric decoration. 	
21. Industrial Training Institute, Malviya Nagar	<ol style="list-style-type: none"> 1. Blacksmith 2. Carpenter 3. Mech. Ref. and Air Conditioning 4. Painter and Decorator 5. Plumber 6. Welder 7. Electrician 8. Fitter 9. Machinist (Composite) 10. Mech. Instrument 11. Turner 12. Wireman 13. Cutting and Tailoring 14. Stenography (English). 	
22. Industrial Training Institute, Pusa	<ol style="list-style-type: none"> 1. Blacksmith 2. Carpenter 3. Mech. Motor 4. Mech. Diesel 5. Mech. Ref. and Air Conditioning 6. Moulder 7. Painter and Decorator 8. Sheet Metal 9. Welder 10. Tractor Mech. 11. Draughtsman (Civil) 	

1	2	3
		12. Draughtsman (Mech)
		13. Electrician
		14. Mech. Instrument
		15. Fitter
		16. Machinist (Composite)
		17. Electronics
		18. Pattern Maker
		19. Surveyor
		20. Turner
		21. Wireman
		22. Mech. Radio and TV
		23. Tool and Die Maker
		24. Cutting and Tailoring
		25. Stenography (English)
		26. Stenography (Hindi).
23. Industrial Training Institute, Shāhdra		1. Blacksmith
		2. Carpenter
		3. Mech. Motor
		4. Mech. Diesel
		5. Mech. Ref. and Air Conditioning
		6. Moulder
		7. Painter and Decorator
		8. Welder
		9. Tractor Mech.
		10. Auto Electrician
		11. Mech. Scooter and Auto Cycle
		12. Draughtsman (Civil)
		13. Draughtsman (Mech)
		14. Electrician
		15. Fitter
		16. Machinist (Composite)
		17. Electronics
		18. Mech. Instrument
		19. Pattern Maker
		20. Turner
		21. Wireman
		22. Mech. Radio and TV

1	2	3
		<ul style="list-style-type: none"> 23. Tool and Die Maker 24. Machinist (Grinder) 25. Business Machine Repairer 26. Cutting and Tailoring 27. Embroidery 28. Stenography (English) 29. Stenography (Hindi)
24. Industrial Training Institute, Subzi Mandi		<ul style="list-style-type: none"> 1. Carpenter 2. Mech. Motor 3. Mech. Ref and Air Conditioning 4. Painter and Decorator 5. Welder 6. Auto Electrician 7. Fitter 8. Electrician 9. Mech Instrument 10. Turner 11. Wireman 12. Mech. Radio and TV 13. Tool and Die Maker 14. Dress designing and Dress making 15. Leather Goods 16. Cutting and Tailoring 17. Embroidery 18. Stenography (English)
25. Industrial Training Institute, Tilak Nagar		<ul style="list-style-type: none"> 1. Carpenter 2. Welder 3. Mech. Scooter and Auto Cycle 4. Electrician 5. Fitter 6. Machinist (Composite) 7. Turner 8. Business Machine Repairer 9. Cutting and Tailoring 10. Stenography (English)

1	2	3
26.	Industrial Training Institute, Narela	1. Cutting and Tailoring 2. Stenography
27.	Technical Higher Secondary School, Kashmere Gate	Subjects taught at Higher Secondary level Maths, Chemistry, Physics, Training in metal cutting, metal formation and electrical workshop.
28.	Technical Higher Secondary School, Okhla	Subjects taught at Higher Secondary level Maths, Chemistry, Physics, Training in metal cutting, metal formation and electrical workshop.

Medical Colleges/Para-Medical Institutions

29.	Lady Hardinge Medical College for Women, New Delhi	1. M.B.B.S. 2. Staff Nurse/General Nursing
30.	Maulana Azad Medical College, New Delhi	1. M.B.B.S. 2. Several Postgraduate courses in other areas
31.	All India Institute of Medical Sciences, New Delhi	1. M.B.B.S. 2. Several Postgraduate and Doctoral Courses in other areas
32.	University College of Medical Sciences, Ring Road, New Delhi	M.B.B.S.
33.	Safdarjung Hospital, New Delhi	1. Staff Nurse/General Nursing 2. Dental Mechanic 3. O.T. Assistant
34.	Irwin Hospital, New Delhi	1. Staff Nurse/General Nursing 2. Radiographer 3. Junior Radiographer
35.	Holy Family Hospital, New Delhi	1. Staff Nurse/General Nursing 2. Laboratory Technician 3. Radiographer 4. Junior Radiographer
36.	Physio-Occupational Therapy Institute, New Delhi	1. Occupational Therapist or Physio-Therapist
37.	V. P. C. Institute, Delhi University, Delhi	Laboratory Technician
38.	Technical Institute, Pusa Campus	Pharmacist (Compounder)

1	2	3
39.	Dr. B. L. Kapoor, Memorial Hospital, Pusa Road	Staff Nurse/General Nursing, A&M
40.	Sir Ganga Ram Hospital, New Delhi	Staff Nurse/General Nursing, A&M
41.	Hindu Rao Hospital, Delhi	Staff Nurse/General Nursing, A&M
42.	Kasturba Hospital, New Delhi	Staff Nurse/General Nursing, A&M
43.	St. Stephen's Hospital, Tis Hazari, Delhi	Staff Nurse/General Nursing, A&M
44.	Tirath Ram Hospital, Delhi	Staff Nurse/General Nursing, A&M
45.	Willingdon Hospital, New Delhi	Staff Nurse/General Nursing, A&M

ANNEXURE II

List of occupations for which suitably qualified personnel were not available on "Live Register" of Employment Exchanges in Delhi (During 1975-76) because of which "No Objection" Certificates were issued

Sl. No.	Occupations	Total number of "No objection Certificates" issued
1	2	3
1.	Electrical Engineering	12
2.	Mechanical Engineering	31
3.	Surveyor	2
4.	Draughtsman (Arch)	11
5.	Draughtsman (Civil)	4
6.	Draughts/Man (Mech)	17
7.	Civil Engineering	53
8.	Electronics	16
9.	Cutting and Tailoring	24
10.	Moulder	5
11.	Commercial Artist	2
12.	Tracer	28
13.	Interior Decorator	6
14.	Photographer	1
15.	Hotel Management	20
16.	Despatch iRder	1
17.	Loco Operator	2
18.	Textile designer	4
19.	Weaver	31
20.	Shoemaker	2

1	2	3
21.	Leather workers	3
22.	Carpenter	2
23.	Oilman	1
24.	Blacksmith	2
25.	Grinder	6
26.	Crusher Operator	3
27.	Die Maker	5
28.	Machinist	4
29.	Turner	3
30.	Instrument Mech.	5
31.	Fitter	39
32.	Mono Caster	1
33.	Motor Mech.	15
34.	Diesel Mech.	7
35.	Ref. and Air Conditioning Mech.	2
36.	Electrician	49
37.	Radio Mech.	3
38.	Wireman	7
39.	Cinematographer	5
40.	Sheet Metal Worker	4
41.	E & M Cleaner	1
42.	Glass Blower	8
43.	Compositor	1
44.	Photostat Operator	3
45.	Book Binder	2
46.	Dark Room Assst.	4
47.	Pump Operator	7
48.	Cleaner	2
49.	Bulldozer Operator	4
50.	Crane Operator	20
51.	LMV Driver	19
52.	HMV Driver	23
53.	Auto Engg.	5
54.	Metallurgist	1
55.	Draughtsman (Elect.)	2
56.	Cipher Operator	1
57.	B. M. O.	1

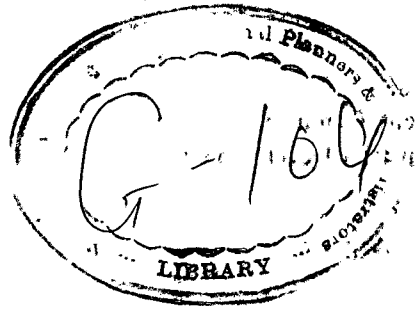
1	2	3
58.	Canning and Food Preservation	1
59.	Proof Reader	2
60.	Telephone Mech.	1
61.	Business Machine Repair Operator	4
62.	Limb Fitter	1
63.	Aircraft Tech.	3
64.	Plumber	2
65.	Boiler Attendant	2
66.	Scooter Driver	11
67.	Cartographer	1
68.	Gestetner Operator	1
69.	Wireless Operator	81
70.	Auto Electrician	3
71.	Tyre Retreader	2
72.	Electrical Communication Engineering	2
73.	Pattern Maker	3
74.	Dyeing Master	3
75.	Weaving Master	3
76.	Spinning Assistant	3
77.	Glass Press Man	1
78.	Ferro Printer	1
79.	Bakery & Confectionery	4
80.	Mason	1
81.	Rigger	1
82.	Lift Operator	1
83.	Valbman	4
84.	Millwrightman	5
85.	Printing Machine Mech.	1
86.	Cycle Fitter	1
87.	Cable Jointer	1
88.	Laboratory Assistant	13
89.	Accountant	4
90.	Social Worker	7
91.	Manager	1
92.	Catering Manager	22
93.	Office Assistant	116
94.	Patwari	1

1	2	3
95.	Steno (English)	291
96.	Steno (Hindi)	2
97.	Typists (English)	373
98.	Typists (Hindi)	1
99.	Telex Operator	9
100.	Key Punch Operator	2
101.	Accounts Assistants	18
102.	Computers	4
103.	Receptionists	5
104.	Store Keeper	9
105.	Time Keeper	2
106.	Telephone Operator	19
107.	Sales Supervisor	4
108.	Sales Assistant	5
109.	Caretaker	1
110.	Fieldman	3
111.	Translator (Hindi)	1

List of Shortage Occupations as noticed through the statistics of Employment Exchanges in Delhi as well as those indicated by Employers in the returns, rendered by them under the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959

1. Stenographer (with minimum speed of 100 w.p. m.)
2. Continental Cook
3. Washing/Dry Cleaning Machine Operator
4. Core Maker
5. Die Fitter
6. Turner
7. Electrician
8. Comptor
9. Laundry Supervisor
10. Plumber
11. Salesman
12. Wireman/lineman
13. Electrician (Aircraft)
14. Nurse
15. Lab. Assistant
16. Accountant
17. Receptionist
18. Proof Reader
19. Compositor
20. Hotel Steward
21. Welder
22. Boiler Attendant
23. Telex Operator
24. Machine Man

- 25. Service Engineer
- 26. Tool Maker
- 27. Fibre Preparation Operatives
- 28. Drill Man
- 29. Wireless Operator
- 30. Die Maker
- 31. Lift Mech.
- 32. Switchboard Attendant
- 33. Licensed Wireless Operator.



List of Persons Interviewed/Consulted

1. Shri I. C. Puri,
Development Commissioner,
Small Scale Industries,
Ministry of Industrial Development,
New Delhi.
2. Shri G. P. Shrivastava,
Chairman,
Delhi State Industrial Development Corpn,
New Delhi.
3. Shri Kamal Pande,
Joint Development Commissioner,
Ministry of Industrial Development,
New Delhi.
4. Shri Chakradhari Aggarwal,
Secretary General,
National Alliance of Young Entrepreneurs,
New Delhi.
5. Shri Chhaju Ram,
Secretary,
National Alliance of Young Entrepreneurs,
New Delhi.
6. Shri A. Ramarao,
Director,
All India Khadi and Village Industries
Commission, New Delhi.
7. Shri J. N. Gupta,
Director of Industries,
Delhi Administration,
Delhi.

8. Shri Sultan Singh,
Joint Director (Agriculture)
Delhi Administration,
Delhi.
9. Shri Hem Chand Jain,
Chairman,
Small Scale Wing of All India Manufacturers,
New Delhi.
10. Shri S. S. Aggarwal,
Vice President,
Federation of Association of Small Industries,
of India, New Delhi.
11. Shri B. Majumdar,
Industrial Adviser,
Ministry of Industrial Development,
New Delhi.
12. Shri M. Sahney,
Industrial Adviser,
Ministry of Industrial Development,
New Delhi.
13. Shri G. Raman,
Industrial Adviser,
Ministry of Industrial Development,
New Delhi.
14. Dr. W. B. Dende,
Economic Adviser,
Ministry of Industrial Development,
New Delhi.
15. Shri J. B. Bapuraj,
Director,
Small Scale Industries,
Ministry of Industrial Development,
New Delhi.
16. Shri P. R. Malhan,
Director,
Small Scale Industries
Ministry of Industrial Development,
New Delhi.
17. Shri G. G. Sutoane,
Small Scale Industries,
Ministry of Industrial Development,
New Delhi.

18. Shri Swarajya Prakash,
Director,
Small Scale Industries,
Ministry of Industrial Development,
New Delhi.
 19. Shri Sharad Kumar,
Deputy Director General
of Health Services,
Ministry of Health and Family Planning,
New Delhi.
 20. Shri K. D. Gupta,
Director,
Directorate of Employment,
Delhi Administration,
Delhi.
 21. Prof. Rais Ahmed,
Director,
National Council of Educational Research
and Training,
New Delhi.
 22. Smt. Pupul Jayakar,
All India Handicrafts Board,
New Delhi.
 23. Dr. Sukhdev Singh,
Deputy Director General,
Indian Council of Agricultural Research,
New Delhi.
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ANNEXURE V

List of Vocational Courses to be Offered in Delhi

I. Agriculture

1. Olericulture
2. Pomology and Floriculture
3. Mushroom Cultivation
4. Dairy Farming
5. Poultry and Duck Farming
6. Fisheries
7. Feed Manufacturing and Processing
(Cattle and Poultry)
8. Manure, Pesticides and Plant Protection Services
9. Food Processing and Preservation

II. Business, Commerce and Office

1. Advertising and Salesmanship
2. Marketing and Sales Management
3. Book-Keeping and Accountancy
4. Business Management
5. International Trade (Assistants)
6. Insurance and Banking Assistants
7. Materials Management (Purchasing, Storing, Shipping and Issuing)
8. Income-Tax and Sales Tax Assistants
9. Auditing
10. Stenography
11. Personal Assistants
12. Office Management and Secretarial Practice
13. Receptionist and PBX Operators
14. Computer Programming and Data Processing
15. Administrative Management

III. Health

1. Nursing
2. Health worker
3. Pharmacist
4. Dietician
5. Medical Laboratory Assistant
6. Radiographer
7. Dental Hygienist/Technician
8. E.C.G. Technician
9. Hospital House-Keeping
10. Optometry
11. A&M Course
12. Occupational Therapy
13. Child care and Nutrition

IV. Home Economics

1. Costume Designing and Tailoring
2. Interior Decoration
3. Beautician
4. Textile Designing and Block Printing
5. Hotel Reception and Book-Keeping
6. Bakery and Confectionery
7. Restaurant and Canteen Management
8. Nutrition and Food Preparation
9. Institutional Catering
10. Furniture Design and Upholstery
11. Cosmetology

V. Technical and Industry

1. Electronics Industrial/Communication
2. Electrical Equipment and Home Appliances
3. Air conditioning and Refrigeration
4. Radio and TV
5. Machine Tool Technology
6. Printing Occupations
7. Building construction and Maintenance
8. Plumbing and Sanitary Fittings
9. Scooter and Automobile Services
10. Commercial Photography
11. Fabrication and Welding
12. Tool and Die Making

13. Architectural Assistant Draughtsman
14. Leather working
15. Draughtsman (Civil)
16. Draughtsman (Mech)
17. Draughtsman (Elec)
18. Metal finishing and Treatment
19. Surveyors—Quantity surveying and specialisation
20. Packaging Technology
21. Blue Prints and Drafting Designs, including Graphics
22. Toy Making
23. Plastics
24. Paints and Pigments and Varnishes
25. Watch and Clock Mechanics

VI. Art and Culture

1. Painting
2. Sculpture
3. Commercial Art
4. Music
5. Brass Metal Work and Handicrafts

VII. Miscellaneous

1. Kindergarten/Primary Teachers
 2. Art and Craft Teachers
 3. Librarian/Documentation
-

**List of Schools in the Union Territory of Delhi
Selected for Introducing Vocational Courses**

S. No. 1	Name of the School 2	Justification 3
North District		
Boys		
1.	Ashok Vihar Phase II	Middle income area. Industries exist in Lawrence Road, nearby Wazirpur industrial complex.
2.	Shakurpur No. 1	Middle income area. Vocational courses needed to benefit the weaker sections.
3.	Rana Pratap Bagh	Facilities available. Majority of students belong to families of low income group.
4.	M.L. Narela	Sufficient space available. Vocational, relevant to farm development, could be started, facilities of ITI to be started at the premises of Technical School (closed recently) can be made use of.
5.	Roop Nagar I	Suitable place to provide vocational training facilities to students of Kamla Nagar, Shakti Nagar and Roop Nagar.
6.	Ludlow Castle No. 1	Space available to provide vocational facilities to students in schools of nearby area
7.	D.C.M. Kishanganj	Facilities available. Management prepared to introduce courses such as food preservation, costume designing and tailoring, electronics etc.
8.	Birla Higher Secondary School, Kamla Nagar	Management can provide facilities for Vocational courses in Birla/Ganesh Mill. Accommodation facilities available. Management financially sound.

1	2	3	4
Girls			
9.	Mangolpuri (Co-educational)	Resettlement colony. Vocational courses needed to benefit weaker sections of the society.	
10.	Dhaka	Accommodation available. School would cater to the needs of the area constituting GTB Nagar, Mukherjee Nagar etc.	
14.	Malkaganj	Space available. Girls from Roop Nagar, Shakti Nagar, Kamla Nagar would take advantage.	
12.	D.C.M. Kishanganj	Facilities available. Management prepared to introduce courses such as food preservation and tailoring, electronics etc.	
District East			
Boys			
13.	Nand Nagar (Co-educational)	Resettlement colony. Industries exist in nearby complex, Vivek Vihar; facilities at ITI Shahdra can also be made use of.	
14.	Jheel Kuranja No. 1	Space available. This centre can provide facilities to the children coming from Gandhi Nagar, Geeta Colony, Krishna Nagar etc.	
15.	Vivek Vihar (Co-educational)	Space available for workshop facilities. School adjoining industrial area. Vocational facilities shall be provided to the students of area of Shahdra and Jhilmil Colony etc.	
16.	Kalyan Puri (Co-educational)	Resettlement colony. Vocational courses needed for children from low income group of Khichripur, Himatpuri, Patparganj and Shakarpur Extension etc.	
17.	Commercial, Daryaganj	Management indicated that, facilities for vocational courses such as office management, record management, electronics and commercial and decorative designing are available.	
18.	Anglo-Arabic, Ajmeri Gate	School has accommodation facilities. Management willing to start courses such as shorthand and typewriting and book-keeping etc.	

1	2	3	4
Girls			
19. S.S. Khalsa, Daryaganj		The Only girls school in Daryaganj area for vocational courses. Management financially sound to introduce courses such as music, shorthand and typewriting and electric gadgets etc.	
20. Nav Shakti, Rouse Avenue		The Only girls school selected for vocational courses in this area. Facilities available in G.B. Pant Hospital, Irwin Hospital, Sen's Nursing Home, for nursing and midwifery courses can be made use of.	
21. S.G.H.K. Bangla Sahib, Ashoka Road.		Facilities available. Management financially sound and propose courses such as Sectt practice, decoration, painting, designing, music and graphics etc.	
District South			
Boys			
22. Lajpat Nagar No. 1		The School will provide benefits to students, coming from Lajpat Nagar, Jangpura, Andrews Ganj and Srinivaspuri, para-medical courses can be started; advantage can be taken of Mool Chand Hospital.	
23. Lodhi Road No. 2		Courses suitable for self-employment, would be welcome in this area.	
24. Kalkaji No. 2		Facilities available in the school for vocational courses, number of industries and G.B. Poly; Okhla in nearby area.	
25. Madangir No. 1		Resettlement colony. Vocational courses would be welcomed by the residents mostly from low income group.	
26. Mehrauli No. 1		People belonging to middle income group. Certain vocational courses such as handicrafts would be most welcome; special courses for tourism would be started.	
27. Sarojini Nagar No. 4		Facilities available. This Centre would meet the requirements of Sarojini Nagar, Laxmibai Nagar and Netaji Nagar.	
28. Balwantai Mehta (Co-educational) Lajpat Nagar		The Society running the school is imparting training in few vocational courses; advantage could be taken in introducing vocational courses such as costume designing and tailoring, art and craft and photography.	

1	2	3
Girls		
29. Sarojini Nagar No. 1	Facilities available. Centre would meet the requirements of Sarojini Nagar, Laxmibai Nagar and Netaji Nagar.	
30. Lady Irwin, Canning Road	Facilities available. Courses of students' choice can be provided.	
District West		
31. Najafgarh No. 1	Rural Central Place. Vocations relating to rural development would be welcomed.	
32. Janakpuri 'B' Block	Facilities available. Number of industries running in nearby complex Mayapuri; services of instructors imparting vocational training in Tihar Jail could also be utilised.	
33. Tilak Nagar No. 1	Facilities available. Majority of the residents belong to middle income group. Facilities available in ITI Tilak Nagar could be made use of to start Vocational courses.	
34. Karampura	School located in industrial complex and can meet requirements of students residing in Moti Nagar, Karampura and Punjabi Bagh.	
35. Chand Nagar	This centre would cater to the needs of persons of Chand Nagar, Tagore Garden and Khayala, a resettlement colony.	
36. I.A.R.I. Pusa	Facilities available. Number of vocational courses running in Pusa Institute, Institute of Hotel Management, Catering & Nutrition, Pusa Polytechnic and Pharmacy College.	
37. Naraina	Number of industries running in this Complex, Accommodation facilities available in the school.	
38. Dev. Nagar	An underprivileged area. People running leather industries; a few more vocational courses could be added besides leather work.	
39. S.B. Mills, 'Shivaji Nagar' (Coeducational)	Management financially sound. Children of Employees of S.B. Mills mostly studying in this school; school has requisite facilities for imparting vocational courses such as Sectt practice, purchasing and store keeping, textile designing, block printing etc.	

1	2	3
40. Salwan, Rajinder Nagar		The only boys' school in Rajinder Nagar area proposing for vocational courses. Management financially sound to introduce vocational courses as per the choice of the students.
	Girls	
41. Najafgarh No. 1		Rural central place. Vocational courses particularly relating to Home Science would be welcomed.
42. Surehra (Coeducational)		Coeducational School. Vocational courses can be arranged wherein the villagers are interested.
43. Janakpuri 'B' Block		Facilities available. Number of industries running in nearby industrial complex Mayapuri; services of instructors imparting vocational training in Tihar Jail could also be utilised.
44. Tilak Nagar No. 1		Facilities available. Majority of residents belong to middle income group. Facilities available in ITI Tilak Nagar could be used to start vocational courses.
45. Karampura		School located in industrial complex and can meet the requirements of the students residing in Moti Nagar, Karampura and Punjabi Bagh.
46. Ramesh Nagar		Residents mostly belong to Middle income group. Vocational courses for girls can be so chosen as to take advantage of facilities available in training cum production centre in Ramesh Nagar.
47. Punjabi Bagh		Residents mostly belong to Middle income group. The centre can meet the requirements of students residing in Punjabi Bagh, Karampura and other adjacent colonies; industrial facilities are available both at Karampura and Mayapuri industrial complex.
48. I.A.R.I., Pusa		Facilities available. Number of vocational courses running in Pusa Institute, Institute of Hotel Management, Catering & Nutrition, Pusa Polytechnic, College of Pharmacy. Besides, B. K. Kapoor Memorial Hospital at Pusa Road provides para-medical courses for nursing and mid-wifery, other para-medical courses could be arranged.

1	2	3
49. Naraina	/ ' ' ,	Number of industries are running in this complex. Accommodation facilities available in the school.
50. Salwan, Rajinder Nagar		Accommodation facilities available. Management financially sound to start vocational courses, such as Food Preservation, Typewriting and Shorthand, Interior decoration, etc.

ANNEXURE VII

List of Vocational Courses suggested for introduction in each of the Fifty Schools selected in Delhi

Sl. No.	Name of the School	Courses Suggested
1	2	3
1.	Ashok Vihar (Phase II) (Boys)	1. Food Processing & Preservation 2. Advertising and Salesmanship 3. Book-Keeping and Accountancy 4. Packing Technology 5. Material Management 6. Income-Tax and Sales Tax Assistants.
2.	Shakurpur (No. 1) (Boys)	1. Stenography 2. Office Management & Secretarial Practice 3. Bakery and Confectionery 4. Advertising and Salesmanship 5. Marketing and Sales management 6. Material Management.
3.	Rana Pratap Bagh (Boys)	1. Poultry and Duck Farming 2. Book-Keeping and Accountancy 3. Tool and Die Making 4. Scooter and Automobile 5. Auditing 6. Furniture Design and Upholstery.
4.	M.L. Narela (Boys)	1. Feed Manufacturing or Processing (Cattle, Poultry) 2. Manure, Pesticides and Plant Protection Services

1	2	3
5. Roop Nagar I (Boys)	3. Marketing and Sales Management 4. Book-Keeping and Accountancy 5. Poultry and Duck Farming 6. Olericulture.	1. Income-Tax and Sales Tax Assistants 2. Insurance and Banking Assistants 3. Book-Keeping and Accountancy 4. Auditing 5. Electrical Equipment and Home Appliances 6. Radio and T.V.
6. Ludlow Castle No. 1 (Boys)	1. Income-Tax and Sales Tax Assistants 2. Book-Keeping and Accountancy 3. Machine Tool Technology 4. Metal Finishing and Treatment 5. Fabrication and Welding 6. Draughtsman (Electrical).	1. Income-Tax and Sales Tax Assistants 2. Book-Keeping and Accountancy 3. Machine Tool Technology 4. Metal Finishing and Treatment 5. Fabrication and Welding 6. Draughtsman (Electrical).
7. D.C.M. Kishanganj (Boys)	1. Food Processing & Preservation 2. Marketing and Salesmanship 3. Book-Keeping and Accountancy 4. Costume Designing and Tailoring 5. Textile Designing and Block Printing 6. Electronics	1. Food Processing & Preservation 2. Marketing and Salesmanship 3. Book-Keeping and Accountancy 4. Costume Designing and Tailoring 5. Textile Designing and Block Printing 6. Electronics
8. Birla H.S. School Kamla Nagar (Boys)	1. Book-Keeping and Accountancy 2. Stenography 3. Textile Designing and Block Printing 4. Blue Prints, Drafting Designs and Graphics 5. Advertising and Salesmanship 6. Administrative Management.	1. Book-Keeping and Accountancy 2. Stenography 3. Textile Designing and Block Printing 4. Blue Prints, Drafting Designs and Graphics 5. Advertising and Salesmanship 6. Administrative Management.
9. Mangolpuri (Co-educational)	1. Book-Keeping and Accountancy 2. Office Management and Secretarial Practice 3. Income-Tax and Sales Tax Assistants 4. Costume Designing and Tailoring 5. Nutrition and Food Preparation 6. Plumbing and Sanitary fitting	1. Book-Keeping and Accountancy 2. Office Management and Secretarial Practice 3. Income-Tax and Sales Tax Assistants 4. Costume Designing and Tailoring 5. Nutrition and Food Preparation 6. Plumbing and Sanitary fitting

1	2	3
10. Dhaka (Girls)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Stenography 3. Costume Designing and Tailoring 4. Commercial Art 5. Nutrition & Food Preparation 6. Book-Keeping and Accountancy.
11. Malka Ganj (Girls)		<ol style="list-style-type: none"> 1. Nursing CNM/ANM 2. Health worker 3. O.T. Assistant 4. Costume Designing and Tailoring 5. Nutrition and Food Preparation 6. Commercial Art.
12. D.C.M. (Kishanganj) (Girls)		<ol style="list-style-type: none"> 1. Food Processing and Preservation 2. Stenography 3. Health worker 4. Costume Designing and Tailoring 5. Interior Decoration 6. Textile Designing and Block Printing
13. Nand Nagari (Co-Educational)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Stenography 3. Book-Keeping and Accountancy 4. Nutrition and Food Preparation 5. Tool and Die Making 6. Packing Technology
14. Jheel Kuranja (No. 1) (Boys)		<ol style="list-style-type: none"> 1. Income-Tax & Sales Tax Assistants 2. Book-Keeping and Accountancy 3. Banking and Insurance Assistants 4. Auditing 5. Plumbing and Sanitary fittings 6. Building construction and Maintenance
15. Vivek Vihar (Co-Educational)		<ol style="list-style-type: none"> 1. Receptionist & PBX Operators 2. Book-Keeping and Accountancy 3. Costume Designing and Tailoring 4. Scooter and Auto Service

1	2	3	4
16. Kalyanpuri (Co-Educational)		5. Radio and TV 6. Paints, Pigments & Varnishes. 1. Dairy Farming 2. Feed Manufacturing and Processing (Cattle, Poultry) 3. Marketing and Salesmanship 4. Costume Designing and Tailoring 5. Health worker.	
17. Commercial, Daryaganj (Boys)		1. Book-Keeping and Accountancy 2. Income-Tax and Sales Tax Assistants 3. Pharmacist 4. Machine Tool Technology 5. Electronics Industrial Communication 6. Fabrication and Welding.	
18. Anglo Arabic, Ajmeri Gate (Boys)		1. Office Management and Secretarial Practice 2. Stenography 3. Income-Tax and Sales Tax Assistants 4. Book-Keeping and Accountancy 5. Packing Technology 6. Bakery and Confectionery.	
19. S.S. Khalsa, Daryaganj (Girls)		1. Stenography 2. Child Care and Nutrition 3. Dietician/Beautician 4. Electrical Equipment and Home Appliances 5. Painting 6. Music.	
20. Nav Shakti, Roase Avenue (Girls)		1. Nursing GNM/ANM 2. Radiographer 3. Occupational Therapist 4. Receptionist and PBX Operator 5. Nutrition and Food Preparation 6. Child Care and Nutrition.	
21. S.G.H.K. Bangla Sahib (Girls)		1. Office Management and Secretarial Practice 2. Stenography	

1	2	3
22. Lajpat Nagar No. 1 (Boys)	3. Costume Designing and Tailoring 4. Hotel Reception and Book-Keeping 5. Blue Prints & Drafting Designs including Graphics 6. Music.	1. Business Management 2. Marketing and Sales Management 3. Hotel Reception and Book-Keeping 4. Restaurant, Canteen Management 5. Surveyors-Quantity Surveying and Specialisation 6. Commercial Photography.
23. Lodhi Road No. 2 (Boys)	1. International Trade Assistants 2. Income-Tax and Sales Tax Assistant 3. Costume Designing and Tailoring 4. Radio and TV 5. Refrigeration and Air-conditioning.	1. Advertising and Salesmanship 2. International Trade Assistants 3. Tool and Die Making 4. Draughtsman (Mech) 5. Machine Tool Technology 6. Packing Technology 7. Air-conditioning & Refrigeration.
24. Kalkaji No. 2 (Boys)	1. Office Management & Secretarial Practice 2. Marketing and Salesmanship 3. Pharmacist 4. Costume Designing and Tailoring 5. Toy Making 6. Watch and Clock Mech.	1. Poultry and Duck Farming 2. Feed Manufacturing and Processing 3. Book-Keeping and Accountancy 4. Medical-Lab. Assistants 5. Brass Metalwork and Handicrafts 6. Materials Management
25. Madangir No. 1 (Boys)		
26. Mehrauli No. 1		

1	2	3
27. Sarojini Nagar No. 4 (Boys)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Stenography 3. Medical Lab. Assistant 4. Dental Hygienist 5. Book-Keeping and Accountancy 6. Electrical Equipment and Home Appliances.
28. Balwantraj Mehta Lajpat Nagar (Co-educational)		<ol style="list-style-type: none"> 1. Stenography 2. Costume Designing and Tailoring 3. Commercial Photography 4. Commercial Art 5. Income-Tax and Sales Tax Assistant 6. Painting.
29. Sarojini Nagar No. 3 (Girls)		<ol style="list-style-type: none"> 1. Nursing GNM/ANM 2. Dental Hygienist 3. O. T. Assistant 4. Costume Designing and Tailoring 5. Office Management and Secretarial Practice 6. Insurance and Banking Assistants.
30. Lady Irwin, Canning Road (Girls)		<ol style="list-style-type: none"> 1. Costume Designing and Tailoring 2. Nutrition and Food Preparation 3. Stenography 4. Sculpture 5. Music 6. Beautician.
31. Najafgarh No. 1 (Boys)		<ol style="list-style-type: none"> 1. Poultry & Duck Farming 2. Feed Manufacturing and Processing 3. Manure, Pesticides and Plant Protection Services 4. Building construction and Maintenance 5. Plumbing and Sanitary Fittings 6. Book-Keeping and Accountancy.
32. Janakpuri, 'B' Block (Boys)		<ol style="list-style-type: none"> 1. Book-Keeping and Accountancy 2. Business Management 3. Costume Designing and Tailoring 4. Radio and TV

1	2	3
33. Tilak Nagar No. 1 (Boys)	5. Printing Technology 6. Materials Management 7. Fabrication and Welding.	
34. Karampura (Boys)	1. Radio and TV 2. Scooter and Automobile Service 3. Electrical Equipment and Home Appliances 4. Book-Keeping and Accountancy 5. Office Management and Secretarial Practice 6. Marketing and Sales Management.	
35. Chandnagar (Boys)	1. Book-Keeping and Accountancy 2. Materials Management 3. Furniture Designing and Upholstery 4. Packing Technology 5. Plastics 6. Marketing and Sales Management.	
35. Chandnagar (Boys)	1. Furniture Designing and Upholstery 2. Marketing and Sales Management 3. Advertising and Salesmanship 4. Electrical Equipment and Home Appliances 5. Office Management and Secretarial Practice.	
36. I.A.R.I., Pusa (Boys)	1. Bakery and Confectionery 2. Restaurant, Canteen Management 3. Institutional Catering 4. Radio and TV 5. Refrigeration and Air-Conditioning 6. Tool and Die Making.	
37. Naraina (Boys)	1. Business Management 2. Income-Tax and Sales Tax Assistants 3. Pharmacist 4. Costume Designing and Tailoring 5. Packing Technology 6. Electronics Industrial/Communications 7. Printing Technology	

1	2	3
38. Dev Nagar (Boys)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Costume Designing and Tailoring 3. International Trade Assistants 4. Leather work 5. Business Management 6. Income-Tax and Sales Tax Assistants.
39. S.B. Mills, Shivaji Nagar (Co-Educational)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Material Management 3. Book-Keeping and Accountancy 4. Costume Designing and Tailoring 5. Textile Designing and Block Printing 6. Painting.
40. Salwan, Rajinder Nagar (Boys)		<ol style="list-style-type: none"> 1. Book-Keeping and Accountancy 2. Business Management 3. Marketing and Sales Management 4. Radio and TV 5. Electrical Equipment and Home Appliances 6. Furniture Designing and Upholstery.
41. Najafgarh No. 1 (Girls)		<ol style="list-style-type: none"> 1. Food Processing and Preservation 2. Book-Keeping and Accountancy 3. Advertisement and Salesmanship 4. Health Worker 5. Costume Designing and Tailoring 6. Child Care and Nutrition.
42. Surehra (Co-Educational)		<ol style="list-style-type: none"> 1. Feed Manufacturing and Processing (Cattle, Poultry) 2. Poultry and Duck Farming, 3. Office Management and Secretarial Practice 4. Costume Designing and Tailoring 5. Nutrition and Food Preparation 6. Toy making.
43. Janakpuri 'B' Block (Girls)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Marketing and Sales Management 3. Nutrition and Food Preparation 4. Bakery and Confectionery 5. Painting 6. Music

1	2	3
44. Tilak Nagar No. 1, (Girls)		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Marketing and Sales Management 3. Costume Designing and Tailoring 4. Nutrition and Food Preparation 5. Electrical Equipment and Home Appliances 6. Kindergarten and Primary teachers.
45. Karampura (Girls).		<ol style="list-style-type: none"> 1. Office Management and Secretarial Practice 2. Marketing and Sales Management 3. Costume Designing and Tailoring 4. Toy Making 5. Packing Technology 6. Nutrition and Food Preparation.
46. Ramesh Nagar (Girls)		<ol style="list-style-type: none"> 1. Advertising and Salesmanship 2. Marketing and Sales Management 3. Business Management 4. Costume Designing and Tailoring 5. Nutrition and Food Preparation 6. Librarian and Documentation Assistants
47. Punjabi Bagh (Girls).		<ol style="list-style-type: none"> 1. Receptionist and PBX Operator 2. Costume Designing and Tailoring 3. Commercial Art 4. Nutrition and Food Preparation 5. Advertising and Salesmanship 6. Banking and Insurance Assistants.
48. I.A.R.I. Pusa (Girls)		<ol style="list-style-type: none"> 1. Nursing GNM/ANM 2. Institutional Catering 3. Bakery and Confectionery 4. Receptionist and PBX Operator 5. Hotel Reception and Book-Keeping 6. Pharmacist.
49. Naraina (Girls)		<ol style="list-style-type: none"> 1. Office Management & Secretarial Practice 2. Receptionist & PBX Operator 3. Costume Designing and Tailoring 4. Stenography

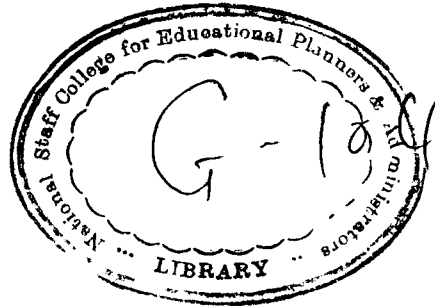
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50. Salwan, Rajinder Nagar (Girls)

5. Nutrition and Food Preparation
6. Bakery and Confectionery.
1. Stenography
2. Office Management and Secretarial Practice
3. Nursing GNM/ANM
4. Nutrition and Food Preparation
5. Costume Designing and Tailoring
6. Beautician.



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