



AREA V

SOME MAJOR FINDINGS, RECOMMENDATIONS
AND SUGGESTIONS

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Time is the essence of the Problem. The next few decades are crucial and the future of the country depends largely upon what is done about education during the next ten years or so. The decisions on the several recommendations made in this Report need to be taken quickly. Action must start forthwith and continue at an ever increasing pitch of intensity in the years to come.

- Education Commission
(1964-66)

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Schools' and 'Vocational Schools.' But the vocational schools are not in any way considered inferior to the general schools. In India still we have not been able to give an honourable place to vocational education in our educational system. Till today education in India is mostly a 'Single Track' education which is purely academic and bookish.

3. Germany is the first country in the world to introduce compulsory vocational education upto the age of 18. Compulsory school education here begins at the age of 6 and ends at 18 i.e. it lasts longer than in most of the countries. The vocational schools provide training and education beyond the elementary school stage upto the age of 18 or till the completion of apprenticeship training. In Germany, Law demands that all children between the age group of 14 to 18 have to compulsorily attend part-time vocational schools (Berufsschulen) provided they are not getting any other type of schooling during that interval. In 1968, in West Germany some 20,93,32 youngsters were attending vocational schools of various types and 86 percent attended part-time vocational schools. In India the target to bring all children between the age group of 6 to 14 to primary schools even for general education is yet to be achieved.
4. Vocational education in Germany involves certain rights and corresponding duties both for the pupils as well as the employers. Vocational education is based on the principle that every one, until the age of 18 has a right to education alongwith an obligation to attend the part-time vocational school once or twice a

week. The employers have the rights to train the youths but at the same time it is compulsory for them by law to send the youngsters to Vocational Schools where lessons are given during the normal working hours.

5. Vocational education in Germany has developed more as a 'People's Movement' rather than the 'Governmental Efforts'. In India people still continue to rely on the Government to do everything. It is absolutely necessary that private agencies and voluntary organisations should come forward to share some responsibilities with the Government in taking up the vocational education programme with conviction.
6. In Germany, vocational education is considered a 'Joint Responsibility' and a 'Joint Venture.' The Federal Government, the State Governments, the community, the business and industrial agencies, the labour organisations and various other agencies co-ordinate and co-operate in this important task. The Chambers of Commerce and Industry and Trades also play a very dominant role in vocational training. In India, still the major burden of providing vocational education and training falls on the shoulders of the Governmental agencies including the Government Vocational Schools. Though the industries do share some responsibilities, their contribution as a whole is far from being adequate. The Chambers of Commerce, Industries and Trades and other voluntary organisations should also come forward to play a more important role than they are actually playing today.

7. To the Germans, a man's work is more than a means of earning a livelihood; it is his inner calling - his 'BERUF' - through which he is able to demonstrate to society his moral virtues, his creative skills and his technical knowledge. To them, although their occupations are different they are equally honourable as their fundamental obligations as citizens are the same. In India, though much has been talked about, the dignity of labour in theory, the fact still remains that people look down upon certain types of work as low and inferior. The Caste and the Class systems are still too rigid and powerful.
8. Researches in West Germany have demonstrated that raising the level of skills of the population through systematic vocational training plays an important role in increasing productivity of a nation. Such training is also helpful in cultivating higher standards of professional ethics and ability to take appropriate decisions. To the Germans, the expenditure on vocational education is an investment in manpower, yielding 'human capital'. In India, vocational schools are still considered as substitutes for educationally (and even financially) backward pupils.
9. In Germany, the people still remember that it is the skilled and patriotic German workers who rebuilt the West German economy after its total devastation during the Second World War. India still requires skilled and patriotic workers to increase her pace of industrial development which can be done through planned vocational training only.

10. To the Germans 'Vocation' is a much wider term and includes all trades and activities connected with production, distribution and useful services. As an industrial country, production is no doubt important to them but distribution is also of equal importance and hence they take great care for training in business and commercial trades also. It is essential to note that in 1966, there were 2,54,444 apprentices in industrial trades while the number of apprentices in business and commercial trades was 4,83,624. This shows that the number of trainees in commercial and business trades is higher than the number of trainees in industrial trades. Again, the majority of the trainees (more than 60%) in commercial and business trades are females. In India many people still take a narrow meaning of the term 'vocation' and they generally apply it to 'technical or industrial' vocations only. Commercial and non-engineering trades are still given comparatively less importance. Adequate opportunities for systematic training of clerical staff, office secretaries, accurate typists, stenographers etc. are still not available in India. Consequently some youngsters become unfortunate victims of illequipped and at times bogus 'typing classes.'
11. Today in Germany, apprenticeship training is neither considered as cheap labour nor as a source of profits. On the contrary, the industries and the enterprises spend a sizable amount on the training of the future workers because to the German mind, establishment of the training centres is the most efficient means of

creating the cadres required for progressively developing trades and industries. It is estimated that today the training of one apprentice costs about 8,000 DM (approximately Rs. 16,000) in Germany. Moreover, some employers and trade associations provide extra voluntary facilities which are not required by law or regulations. In India still apprenticeship is considered by some as a source of cheap labour or a burden on the industries imposed upon them by the Government. Of course, this tendency is now undergoing a change and more and more industries are taking interest in the training of apprentices. Yet this is still the beginning of it.

12. Again, membership of the Trade Examination Boards is an honorary and unpaid job and yet it is readily accepted by the experts in the field when approached. This shows the spirit of service and sacrifice of the Germans. The Indians should try to follow this spirit of service for the development of vocational programmes.
13. In Germany no tuition fees are charged throughout the period of compulsory school attendance in the part-time vocational schools. At times, the text-books and other learning materials are also supplied free of charge. Throughout the period of training, the pupils are given stipends for their pocket expenses. In India too, the vocational training is mostly provided without charging fees and even stipends are also given to the trainees.

14. In Germany, private enterprise also plays an important role in apprenticeship training. Special professional or training schools of almost all large companies, factories, firms, banks, departmental stores and other enterprises are found in this country. They often have so many apprentices that they find it worthwhile to arrange special classes for them. Some concerns even establish their own training schools which are usually well-equipped. For example, the training Centre of Höchst, a giant industrial plant in Frankfurt/M, is training approximately 2500 apprentices for 44 different occupations at present. In India too, some big enterprises, both public and private, have started to take more interest in the training of future employees by having their own training facilities. But still we have a very long way to go in this direction.
15. One more important aspect of the German vocational schools is that they vary according to local requirements. It is rightly pointed out by Prof. Dr. Karl Abraham that all over Germany there are probably no two professional schools which are organised exactly alike. In India also enough care will have to be taken to meet the local requirements while introducing various courses in vocational institutions.
16. In Germany, it has become almost a social convention that youngsters who leave the school before the age of 18 should serve as apprentices under an indenture. This is mainly the result of spontaneous choice on the part of the employers, parents and the youths themselves. An overwhelming majority (more than 80 percent) of the German Youths begin their professional training as apprentices in the trades or industries which lasts for

3 or 3½ years. Out of these, some (less than 10 percent) may take up even a shorter training courses of 1 or 1½ or of 2 years duration which is known as semi-apprenticeship or learnership training. Only a small minority (less than 20 percent) begin work as unskilled workers without some sort of vocational training. In India, most of our young workers take up jobs without pre-training or vocational training. Mostly they acquire skills by mere experience during the course of their service period. After passing the secondary school examination or even after graduating from an University they take up the job that is at hand. Their professional career is hardly pre-planned or pre-prepared.

17. In Germany, apprenticeship is served in almost all fields of economic activities. Here in-plant apprenticeship supplies the labour force with some 300,000 young trained workers annually. In 1966, the total number of apprentices receiving training in Germany was 1363509, while in India only 30,326 apprentices received training in 2108 establishments. In 1968, in Germany this number rose to 1392225 while in India there were only 37,625 apprentices receiving training in 3,313 establishment in 1969. The Indian Parliament has passed the Apprenticeship Act in 1961. The number of apprentices receiving training in India as shown above shows how slow the implementation of this Act is.
18. Vocational training of girls is not neglected in Germany. Of course many girls prefer semi-apprenticeship or leadership training which is shorter in duration.

From 1966 to 1968, more than 92 percent of semi-apprentices were girls, while in apprenticeship training about 35 percent were girls and about 65 percent were boys during the same period. In India we shall have to strive hard to bring enough number of girls for apprenticeship training programme.

19. In 1966, there were 404 registered apprenticeable trades and occupations in West Germany while in 1966, the trades designated under Apprentice Act in India were only 40 and the total number of industries specified under the Act was only 140. In Germany there were 566 registered apprenticeable trades in 1950. But this number was reduced to 404 in 1966. Thus some of the out-of-date trades and occupations are deleted from the training lists. The needs of the society are always kept in mind. In Germany, in 1960, only seven new trades were added while 42 were deleted; in 1965 only one new trade was added and 53 were deleted. Such is not the case with India. In India, in 1969, the number of trades designated under the Act was raised to 50 while the total number of industries specified was raised to 195. In the years to come, India shall require to add more and more trades and occupations to fulfil the training needs of the society.
20. One more outstanding achievement of the recent development of vocational education in West Germany is the establishment of 'Vocational Schools for Upgrading Courses' (Berufsaufbauschulen). These courses are specially meant for the benefit of youngsters who have not gone through the normal

channel of secondary education and yet who want an opportunity for further education and advancement according to their capacities. About 80 percent of the pupils who take up these courses follow evening classes. These courses support the principle of 'Equality of Opportunities' in education and are getting more and more popular among the pupils. Thus persons of exceptional talent and ability from the skilled workers' cadre are provided facilities to aspire to be a university trained engineer. Thus a sense of justice is created among the workers.

212. In West Germany, the full-time training in Vocational Schools plays only a secondary role in the national system of vocational training programme. The total enrolment in the full-time vocational schools like Berufsfachschulen, Fachschulen, ~~Fach~~ Höheren ^{Fach} Schulen etc. is very small which is approximately 10 percent while the remaining 90 percent of the trainees prefer part-time vocational schools. In India, the facilities for vocational education available at present are found merely in the full-time courses. Part-time courses have not as yet gained popularity in this country.
22. In Germany adequate guidance through Guidance Bureaus and other agencies is a regular programme of the schools. In this country, some 90 percent of all young people pass through a guidance session before making their choice of a vocation. In India, only a beginning has been made now to provide some guidance programme in the secondary schools. But this is much inadequate. The States have Guidance Bureaus and Guidance officers but they can hardly

cope up with the guidance work. The services rendered by the Career Masters in Indian schools are also superfluous and do not yield any concrete results. Mostly guidance programmes in Indian schools are mere shows meant to meet the requirements of the Educational Departments. A genuine desire to help the pupils in selection of their careers is mostly missing. For primary school children there is no provision for any type of guidance programme.

23. One more important aspect of German Vocational education is an organised transfer from vocational schools to an industry or an enterprise. The apprentices do not experience difficulties in finding suitable jobs for which they are trained. The Government Labour Office plays a very important and useful role in making this placement smooth and convenient. In India, the placement of a trained worker to a suitable job is still a problem. The vocational institutions have no separate agencies for this important task. The Directorate of Employment and Training in New Delhi does some useful work in this direction but its services are solely inadequate compared to the vastness of the problem. A good number of trained or skilled workers experience difficulties in getting suitable jobs in time. Pre-surveys are hardly made for the trade or industrial requirements.
24. In Germany provision is also made to provide vocational education in special classes for slow learners, educationally backward children, and for mentally retarded and physically handicapped children.

Thus the disadvantaged youths are not neglected. In India, there are some Special Employment offices and few training centres for the physically handicapped children. But the facilities are utterly inadequate looking to the large number of physically and mentally handicapped children in this vast country.

25. In Germany, further training is now considered as important as basic vocational training itself. Vocational training can never be sufficient for a man's whole working life. Further training is provided to strengthen and broaden the knowledge and skills of a worker which help him to keep abreast of recent development and techniques. Adequate financial assistance comes from the Federal Government for such further training programmes. For most of the big industrial concerns and enterprises, provision for further training and retraining facilities are their normal programmes.
26. In Germany full facilities are provided for the effective training of the vocational teachers. Vocational teacher training is the responsibility of the individual States. The training courses and duration of training are as extensive and elaborate as the training of secondary school teachers. In India, till today, no serious attempts have been made to set up training colleges for vocational teachers. Generally short-term courses are organised to train them which hardly prepare them to carry out their duties in a fairly satisfactory way.

- 27 In Germany adequate care has been taken to prepare good text-books and other teaching and learning materials in details for all trades and occupations for the students of vocational schools. In India, one of the difficult problems for the effective implementation of vocational education is of getting suitable text books and other learning materials written in different regional languages for various trades and occupations. An All India Survey on Vocational Schools showed that the existing library facilities and necessary equipments are utterly inadequate so far as vocational courses are concerned.
28. The Germans are greatly conscious today not to forget the ultimate aim of education, whether general or vocational, i.e. the development of human qualities and respect for human values in life. They do not want to reduce man to a mere machine. They are also keen to see that the youths turn out to be responsible and useful citizens of the country. So languages (both German and Foreign), religion, civics and social studies are given due place in the Vocational Schools also. In India too, this ultimate aim of education will have to be kept in mind while expanding vocational education and training facilities in this country.

Recommendations and Suggestions

Despite various recommendations and suggestions made from time to time by the Education Commissions, Committees, the educators and the experts, the diversification of courses in the educational system of India has not been effected so

far. Even at present the Indian education remains mainly academic and bookish. As it is the enrolment in the vocational courses at the secondary stage is only 9 percent of the total enrolment which is the lowest in the world. It seems that most of the suggestions and recommendations so far made on vocational education have not been effectively implemented. The Education Commission (1964-66) has recommended drastic changes in this position in the next 20 years. Although more than 5 years have already passed since then, no firm policy or detailed plan of action for vocationalisation of education has yet been evolved. Only a few Reports of the Working Groups have appeared. At present each State has taken up a 'Pilot Project' in one of its districts in the form of experimentation. These Pilot Projects are still in the beginning stage and nothing concrete has yet come out of them. The process of change is so painfully slow that it is impossible to meet the challenges posed by the society. What India needs to day is a time-bound programme for vocational education and a firm will and determination to 'Act'. The following few suggestions are offered for the effective implementation of the programme of vocationalisation of education in India :

1. Vocational Education should form a part and parcel of Indian Educational System :

In India, vocational education should form a part and the parcel of educational system. There should be two separate and distinct types of schools of equal importance. (i) The General Education Schools (ii) the Vocational Schools. On completion of the general education at the primary or secondary stage, facilities should be provided for the majority of the pupils to take up vocational courses according to their interests and abilities. But in doing so the needs of the society should be kept in view. In India, the transfer from primary schools to secondary schools is easy and smooth. Similarly, opportunities should be made available for such easy and smooth transfer from these general schools to vocational schools also.

It is believed that India has possibly the highest transfer rates from elementary to secondary education and from secondary to undergraduate level. At the same time, she has also one of the lowest proportion of enrolment in vocational and technical schools. The ratio of enrolment in vocational and technical schools to that in high and higher secondary schools. For general education is only 5.5 percent as compared to 17 percent in China, 24 percent in France, 29 percent in Italy, 59 percent in U.S.S.R., 65 percent in

in U.K. and 80 percent or more in Switzerland, Denmark and Germany.

2. Vocational Education should be provided through Specialised Institutions only :

Efforts to combine general and vocational education through institutions like Multipurpose Schools have so far failed to achieve their goals and hence that policy should be given up. Vocational education should be provided in proper, specialised vocational institutions or schools only with courses at two stages.

- (i) Vocational courses in different fields such as agriculture, industry, medicines and public health, village arts and crafts etc. should be organised to meet the requirements of children who on completion of primary education do not wish to proceed to secondary education.
- (ii) Vocational courses of higher level in a variety of fields such as agriculture, industry, commerce, medicine and public health etc. for those pupils who after completion of the secondary education do not wish to proceed to higher studies in the universities.

Thus the introduction of terminal vocational courses of various duration is important in agricultural as well as non-agricultural fields depending upon the types of competencies required.

3. Vocational Courses should be Terminal in Character :

These vocational courses should be terminal in character and must prepare the youths for careers or independent work. At the end of a given course, examinations should be conducted and certificates be awarded. These Certificate Courses should impart training which would enable the trainee to possess minimum knowledge and skill required for the vocation. They should produce semi-skilled and skilled workers for lower and middle-level requirements. The knowledge imparted should be both theoretical as well as practical.

4. Vocational Courses for Drop-Outs :

Vocational and technical courses of varying duration should also be provided for those who stepped off the streams of general education at various stages. The needs of the drop-outs have also to be met. In our country out of 100 students who join Class I, only 22 reach Class VIII and only 16 reach Class X. These drop-outs are our potential producers of wealth and their education should be as meaningful as the one for those who are in the schools.

It is suggested that two part-time courses should be organised for these drop-outs. One part-time course should help them to continue their general education leading to S.S.C. Examination and the other to provide vocational training. As far as possible these courses should be taught

in the evening classes. Separate courses should also be devised for girls in accordance with their requirements.

5. Vocational Institutions should not be regarded as dumping ground for drop-outs and educationally backward pupils :

It is extremely essential that the attitude towards vocational schools should be entirely changed. People still look down upon them as a dumping ground for the drop-outs or educationally and financially backward children. Still it is believed that general education schools and colleges are mainly meant for the children of upper and higher middle class people while the vocational schools for the lower-middle or the middle class people. Secondary schools are believed to be for those who want to 'proceed on' and other institutions for those who want to 'step down.' Such attitudes will not help in the development of vocational institutions because not only the intelligent pupils there are likely to gain more individually but the society as a whole will also benefit from their greater skills.

6. Part-time Vocational Courses for Self-employed Persons :

Part-time vocational courses for self-employed persons should be organised through separate vocational institutions. There are many young people who follow the hereditary trade and get to learn the secrets of the trade there. No doubt, they

learn by experience but lack formal training without which they remain poor both in skill and means of livelihood. Generally they are ignorant of modern tools and new scientific techniques of production. But now-a-days the world of work is dominated by science and technology. Hence part-time courses will considerably help them and give them insight into their trades.

Such courses will be all the more useful to the agriculturists who work on the family farm. They will enable them to get basic insight in agricultural science, and will help them to use scientifically-based agricultural techniques. Part-time agricultural courses will also help to boost 'Green Revolution' and 'White Revolution' (Dairy Industries) in this country.

A few central places in the district should be selected for such courses. In the initial stage programmes should be restricted to a few selected occupations. A careful study of the local needs should be made before the selection of these occupations. The cooperation of the existing vocational institutions in nearby places should be sought for maximum utilisation of their tools and other materials. The cooperation of the local community will also be essential in such programmes.

7. Provision for On-the-Job Training :

Provision for on-the-job training should be made with the help of nearby industries or enterprises both of private and public sectors. Of course, some of these industries might be having provision for the training of apprentices. Yet some arrangements may be made to provide practical work for the youngsters receiving training in the vocational institutions. A well-coordinated plan and time-table should be prepared and implemented to provide maximum opportunities for practical work and firsthand experience and thereby enrich their theoretical knowledge gained in the vocational schools. Some big industries may also be encouraged to set up their training workshops for practical work.

8. Provision for Further Training and Retraining :

Provision for training and retraining should be made. Facilities should be given to skilled and unskilled workers to further their studies in the evening classes. A person once trained as a middle-level worker should not remain the same for ever. If he is capable and is willing to make further progress he should be given the opportunity for it. Youngsters who are highly talented should get the opportunities to further education leading to even university studies. There is a considerable body of persons who for various reasons have not been able to get degrees, diplomas or higher qualifications but have the capacity

to rise to higher ranks by force of merit and competence, if such training is made available to them. Again, a technician whose education ends with the high school or college, gets out of date within a short period of time because science and technology are fast developing. So such training facilities will not only enable him to continue his studies but will equip him with upto date knowledge. The Indian industries too are said to be handicapped for want of persons having after-school education. Vocational and technical education should not only be perfect but should be upto date. Proper in-service programmes for further vocational education should also be provided. Evening or night classes or even correspondence courses should be provided to those persons who want to increase their knowledge. In India^{ours} is a democratic society and it should provide equal opportunities to all. The nation too will have the benefit of a trained man-power which will be fully and properly utilised. Persons opting for vocational courses will have the assurance that they will have the chance for advanced studies and higher specialisation if they have the capacity and the will to do it.

9. Strengthening the Existing Programmes :

The existing programmes of vocational education and training through Industrial Training Institutes, Technical Schools, Junior Technical High Schools, Agricultural Schools etc. should be strengthened and be made more effective and of more practical use. Their courses should be reoriented to make them more intensive

and terminal in character. Maximum use of these existing facilities should be made. The courses available at the various Multipurpose Schools should also be reoriented and made thorough and effective for terminal education. The Multipurpose Schools and other vocational institutions should so frame their timetables that they are not only of maximum use to their trainees but they provide facilities for 'Work-Experience' to school pupils also.

10. Training of 'Village Workers' for Agricultural Extension Programme :

The Ministry of Food and Agriculture and Community Development have begun training multipurpose workers during the post-Independence era. Such training programmes should certainly be encouraged and be made extensive and systematic. These village workers should be trained in Agricultural Extension Programmes through intensive courses. Short refresher courses to increase food production and to give a new outlook to agriculture be organised for such workers. The programmes for training such workers should be given top priority. But the training and theoretical knowledge provided should be enough to serve the necessary purpose. It should not degenerate into a scheme to provide jobs for those who are not really interested in agricultural activities but are only drawing their salaries through such schemes.

11. Compulsory Introduction of 'Work-Experience' in all Primary and Secondary Schools:

A scheme for providing well-graded work-experience programme with scientific bias should be introduced with immediate effect in all primary and secondary schools in all the States in India. This work-experience should be forward looking in keeping with the character of the new social order. This programme should form an integral part of the general education from classes 1 to XI. It's main purpose should be to relate education to life and productive activities. It should serve to acquaint pupils with science-based technology. As a matter of fact it is indispensable for bringing 'new approach to the school system in India. The use of costly materials should be avoided in providing work-experience to the primary school pupils and it should be made as less expensive as possible. As far as possible locally available materials should be used. Some funds must be made available to the heads of the schools. For work-experience programmes for secondary schools, co-operation of institutions like Central Craft Schools, Technical High Schools, Industrial Training Institutes etc. should be sought. Establishment of a 'School Complex' consisting of a group of schools to provide work-experience to the pupils individually as well as in groups will be very useful. These activities should involve higher

mental work. In rural areas work-experience in Agriculture should include crop product, horticulture, poultry production, dairy and animal science etc. The programmes of work-experience would differ from urban to rural schools. They will also differ in schools situated in different environments and localities in cities also.

A word of caution is necessary here. This programme should not become merely a 'paper programme' or undesirable activity thrust upon the schools having no faith in it. Proper care should be taken to see that it does not meet the fate of 'Basic Education' programme.

12. Study of Manpower Needs :

It is widely felt that in India, the expansion of vocational and technical education should be done with caution and with full regard to the development of organised industries and needs of the society. Let it not be forgotten that in 1937, Messers 'Abbot and Wood had warned that it would be a great misfortune if a large body of men received a prolonged technical training, and on its completion found that they had no opportunities of using the knowledge they had acquired. It is indeed true that much has been done to increase the facilities for technical education in this country during the last decade. But the Government has woefully failed so far to match demand with supply. The paradox of acute technical manpower

shortage in certain industries together with surplus technical staff in others continues to stare the country in the face. At the same time, if economy does not expand at the expected rate, the problem of unemployed technicians will become even more acute than it is today. The Education Commission has also pointed out : ' If India is to achieve its targets of economic growth, it must have an adequate supply of educated specialists for each category of job to be performed. Conversely, if there is an excess of trained people in any category, it implies an imprudent use of scarce resources.' Hence estimates of manpower needs should serve as a guide for expansion of vocational education. Even today the manpower surpluses continue to increase in some categories such as engineers - both degree and diploma holders - and in some trades, even the trained craftsmen experience difficulties in finding employment, while on the other hand, manpower shortage continues to exist particularly amongst the medical and para-medical and managerial personnel.

In order to make the vocational programmes useful and purposeful, courses for vocational schools should be selected after a very careful survey of manpower resources and job opportunities available in the area. A pre-survey to assess the vocational needs of the community is also very important.

Creation of a special section within the State Department of Education to study 'Manpower Needs' which is closely connected

with the programme of vocationalisation of education is recommended.

A word of caution is also necessary here. Surveys and Statistics are, of course, necessary and important but they should not unnecessarily confuse or delay in making an early beginning of the programme. Sometimes years are wasted in making surveys and then from the surveys made, the programmes are either delayed or deleted. This should not be allowed to happen.

13. Pre-Occupational Education and Vocational Guidance
are pre-requisit to Vocational Programmes :

It is very essential that youngsters in the school should know about various occupational opportunities and the required qualifications or training for them. Each school should have a 'pre-occupational education programme to provide knowledge about the world of work around them. Proper vocational guidance programmes must be made compulsory in schools. An efficient vocational guidance service to disseminate information regarding various careers that the young boys and girls can take up according to their choice is not only important but indispensable for effective vocational educational programmes. There should be provision not only to provide vocational advice but there should be provision also for aptitude and psychological tests wherever possible.

It is recommended that there should be a post of Career Master for each big school say with a number of 800 to 1000 pupils. If the school has less number then two or at the most 3 schools should have a common Career Master who should distribute his time equally to two or three schools. This Career Master's post should be compulsorily introduced. He must be a full - time employee only for this job. He should be properly trained for the purpose. Some Universities and a few selected training colleges should introduce a full - time training course for Career Masters as well as Vocational Counsellors. The existing Departments of Extension Services should also come out with bigger programmes in helping the schools for vocational guidance. A regular diploma should be provided by the University for this course and only trained persons should be in charge of vocational guidance programmes.

14. Placement or Organised Transfer from Vocational Schools to Industries or Enterprises is very Essential :

It is suggested that a separate agency should be set up to take care of placement of the trained workers or artisans in their suitable jobs. This agency should remain in constant touch with big industries, business, workshops, factories, Governmental agencies etc. Some work of this kind is done through Employment Exchanges. But this is not enough. A separate State-wise agency should be set-up to keep upto date records

of all trainees undergoing vocational training at different institutions and help them to find job or opportunities to start their own individual independent works. Information about the financial aid like grants etc. should also be made available.

The Central Government should also expand the work of Employment Exchange Services because organised transfer of the trained personnel to the industries or enterprises is very essential. These agencies should also help to point out over-crowded vocations and vocations with scarcity of trained personnel.

15. Vocational Education should become 'People's Movement' and a Co-Operative Venture in India :

In India, during the post-Independence era, the people have developed an attitude to rely upon the Government more and more. Now let it be clear that Government (mainly the Central Government) alone can never cope up with the mighty task of the development of nationwide vocational education programmes. The Government may take the lead. But it must need the co-operation of the State Governments as well as other non-Governmental agencies. Vocational Education should be a co-operative venture between the Central Government, the State Governments, the Community, the Local Corporation, General Schools, Industries, Chambers of Industry and Trades, Labour Organisation and other

voluntary agencies. The Universities should also come forward to help in this mighty task.

Vocational Education Programmes should become the People's Movement.' If possible, it is necessary to start 'The Community Vocational Education Centre' like the 'Community Science Centre' started at Ahmedabad. This should become a nationwide movement.

16. Formation of Advisory Committees :

A high level 'Advisory Committee' should be formed not only at the State level but also at the district level. In the District Advisory Committee, the representatives from the District Educational Officer, Teachers' Association, Head Master's Association, Training College, University (if there is) Trades, Industry, Zilla Parishad etc. should be included. They should have frequent meetings to review the vocational programmes of the district.

17. The Financial Aspects :

The expenditure for a vocational school or institution will be much more - approximately 3 to 5 times more - than the expenditure on a general education school. So the financial problem will have to be tackled. Firstly the Central Government should give reasonably sufficient grants for vocational programmes in each district. This grant should be supplemented by the State Government grants. The local community should also

bear some of the expenses. Even the local big industries, and other voluntary organisations should come forward to share some percentage of this expenditure. Our primary education has suffered a lot due to scarcity of funds. Vocational educational programmes should not be allowed to suffer for want of money. The Gujarat Government has made secondary education for girls free. At one stage the State Government was prepared to make secondary education free for all. If it not possible that those who can pay - say those whose annual income is more than Rs. 4800/- or so - should be asked to pay for the secondary education of their boys and girls and the money thus saved be utilised for developing vocational educational programme? The programme for vocationalisation of education should be given preference on an 'emergency basis' and the challenge should be accepted. India did accept the challenge when the Refugees from Bengla Desh came; again it accepted the challenge when the 14-day war broke out. It must accept this challenge to win a war on economic front.

18. Provision for Buildings, Equipments etc. :

Good, adequate buildings and proper equipment are essential for the implementation of any educational programme and vocational education is no exception to it. In West Germany it was found that the buildings of the vocational schools are as big as and as fully equipped as the college or university buildings. A good

building and suitably environments play an important role in any teaching - learning programme. In India, in the beginning the existing buildings and equipments of Industrial Training Institutes, Technical Schools, Junior Technical Schools, Agricultural Schools, and even of a few good Multipurpose schools should be utilised for the purpose and at the same time efforts be made to set up new buildings for additional Vocational Institutions. It is further suggested that the managers and trustees of a few big secondary schools in the heart of the city or a town or even in a central rural place should be persuaded for the time being to run their schools in the morning and make available a major portion of their big buildings for vocational classes for theoretical knowledge. Of course for practical work some 'Workshop Courses' will have to be set up. Such provision should be thought of only as an immediate and temporary arrangement. This is suggested only because the programmes of vocational education should not be delayed indefinitely for want of proper school buildings. Even big industrial concerns and enterprises will willingly 'donate' some of the machines, tools and other valuable equipments for vocational institutions if approached through proper channel. Unfortunately some vocational training centres have started to function in old, inadequate buildings

or shades which give the feeling - consciously or unconsciously - that these institutions are meant for only backward and poor people's children. In one of such training centres it was found that more than 85 percent of the pupils belonged to financially backward and poor classes of the locality. In Gujarat some of the Commerce, Afts and Education (B.Ed.) colleges were accommodated in old secondary school buildings in the initial stage. Even today, a considerable number of these colleges occupy such old buildings till new buildings are constructed for their exclusive use in due course of time. If such provisional arrangements can be done in the case of colleges there is no reason ^{why} they cannot be made for the vocational schools also. The Central Government should come forward with substantial grants for building and equipment for vocational schools and the State Governments should give interest free loans and other financial grants for the purpose. The Community should also share some burden of these expenses. In Gujarat, almost all the public education trusts (Kelavani Mandals) have got money for secondary schools mostly in the form of donations. These agencies, if convinced of the utility of vocational education programmes, will come forward to share some financial burden.

A central place in each district be selected for a vocational school with Hostel accommodation for the pupils of round about areas.

19. Academic Preparation - a More Challenging Task :

Sometimes it is easy to provide physical facilities for a new educational programme of a different nature but it is really difficult to make the 'Academic' preparation. For vocational courses, it will be necessary to prepare text-books for various courses to be selected in different vocational schools. For India, it will again be a question of translating them into different regional languages. There are a few books already prepared for some vocational courses. These courses should be modified and readjusted according to the needs and requirements for the vocational pupils in various sectors. It is also suggested that translation of some of the excellent German books on vocational education can be made with necessary modifications. In due course of time new text-books can be prepared suited to the needs and requirements of Indian students in the Indian environment. Again various committees from different sections, both academic as well as professional, should be set-up to frame syllabi, examination requirements, etc. in details. This is a tremendous work but a beginning should be made. Reorientation of existing courses will be necessary to make vocational education really terminal in character. Help should be taken of the reports of different Working Groups and Committees appointed by Central as well as the State Governments and also number of publications and literature which have come out recently on the subject.

20. Training of Vocational Teachers :

Training of efficient teachers has always remained a great problem in this country. Very few people are satisfied with the existing training programmes of primary and even secondary school teachers in this country. The training of vocational teachers will be still more difficult. Short term training programmes will not solve the problem. A systematic long-term programme of one to two years duration should be planned out and implemented to prepare efficient vocational teachers and instructors in various vocational sectors both for theory and practical work. Specialists from the respective trades should be selected for this training. Their remuneration and other service conditions should be equivalent or even slightly more than those of the secondary school teachers. The success of the vocational programmes will depend upon efficient vocational teachers. All progressive and industrialised countries including West Germany attach great importance to this training programmes. In India, one of the main reasons for the failure of Basic Education is the inadequate teacher training programme for the purpose.

21. Freeship and Stipends to Vocational Trainees :

In the Apprenticeship training programme of the Government of India, the apprentices under training get stipends varying from Rs. 40/- to Rs.80/- per month. The training in Industrial

Training Institutes is also free and in addition some concessions like free workshop clothing, sports and medical facilities are provided. Thirty three percent of the trainees are also given the stipend of Rs. 25/- per month. All the Scheduled Castes and Scheduled Tribes trainees receive the stipend of Rs. 45/- per month. These are encouraging factors. In order to encourage more young boys and girls to take up vocational courses in the new vocational institutions to be set up, such freeship and stipends will also be necessary. They should particularly be awarded to the lower middle class and poor class pupils. Vocational courses of all types should be provided without charging any fees at all levels.

Strengthening of Apprenticeship Programme

By the end of 1966, there were 30,326 apprentices under training in 2108 establishments in India. This number was raised to 37,653 by the end of 1969 in 3,313 establishments. Also in 1966 there were 40 trades designated under the Apprenticeship Act and the total number of industries specified was 140. This number was raised to 50 for designated trades and 195 for industries specified in 1969. Looking to the vast labour force required by the Indian industries this number of apprentices is quite insufficient. In 1968, the estimated average daily employment in working factories stood at 47.39 lakhs. In 1968 there were 13,92,225 apprentices undertaking vocational

training in West Germany. This figure alone can give us an idea how important it is for us to strengthen our apprenticeship training programme in India. The Government should enforce the Apprenticeship Act of 1961 more vigorously and more strictly.

23. Need for Widening the Concept of Vocational Education :

In India, ^{the} common people generally take a very narrow view of vocational education meaning thereby only technical or engineering education. Too much importance is given to these vocations while commercial and non-engineering trades are neglected. But now greater stress should be laid on commercial and non-engineering trades also because they are also equally important. Vocational programme in India should cover all Engineering as well as non-engineering trades and the agricultural trades and village crafts be also given equal importance for a balanced development of rural as well as urban India.

24. Strengthening of Primary and Secondary Education Programmes :

It is true that sound vocational education can be provided only on the basis of sound primary and secondary education acquired by the pupils. Without a suitable foundation of general education, the training for vocations will be

inadequate. Good vocational training atleast requires some minimum of understanding and intelligence. It is generally felt that the educational level of our primary schools is far from being satisfactory and this mainly hinders the vocational programmes. This is particularly true in the case of programmes of the drop-outs. In West Germany most of the States have included one or two more years for primary education and have thus raised it to 9 years course and in some cases even to 10 years course. In India, our primary education ends at the end of 7 years schooling. The children are still immature at this age to take up any definite vocational training. If it is not possible to add one or two years more at the stage of our primary education at present, at least the academic standard should be definitely raised. The programmes for our secondary education also need to be strengthened.

25. Need for Systematic Supervision and Effective Administration of Vocational Education Programmes :

A separate Department should be established at the State level for administration of vocational education. The Department of Technical Education is interested in promoting technical and engineering education only and this is natural. But the Department of Vocational Education if set up, will look after Commercial, Agricultural, Non-Engineering trades including Craft education and engineering trades. For the time being a section may be attached

to the office of the Director of Education to look after Vocational Education Programme. Each district should have also a 'District Vocational Education Officer' of the same category of 'Educational Officer' of the District. Only then proper supervision will be possible. Moreover, the services of the State Institute of Education should also be sought for promoting this programme. Extension Officers also will have to help to create a proper climate for vocational programmes.

26. Ultimate Aim of Education should not be Forgotten :

The aim of education after all, is the development of human quality and respect for human values. Vocational education will make positive contribution in the all round development of the personality of the individual. The democratic society also needs responsible and creative citizens. Vocational education provides full scope to show the individual's worth and capacities. Industrialisation is essential but it should not reduce man to a mere machine. Vocational education and training should provide opportunities to trainees to live life with dignity and respect because they have a feeling that they have something worth giving to the society also.

Conclusion

India is on the threshold of rapid industrial development and her economy therefore depends to a large extent on the availability of trained personnel in sufficient numbers. The

expansion of industries, the advancement of science and technology, growth of agriculture and rapid increase in commerce and trade, all these will need specific skills and technics. Experience has shown that an education system which does not take into account the man-power of the economy has resulted in economic waste and large scale unemployment among the educated persons. Often the youths are found selecting courses of studies which ultimately lead to failure, frustration and disappointment.

It has been clearly realised now that a fundamental change should be made in our education system if it is to meet the new socio-economic challenges. The social structure and the pattern of living are fast changing. The expectations of the people for a better standard of living are rising. The need is to create wealth and new avenues of employment by development of industries, utilisation of natural resources, careful planning and execution of welfare services and providing opportunities so that every individual shall be assured of work and shall earn enough to enable him to live a life of culture and contentment. The young generation is to be well-equipped for entering the emerging occupations and for meeting the new requirements of knowledge and skills.

All this can be to some extent be possible by a systematic and well-planned programme of vocational education and an efficient machinery to implement it. West Germany is a highly

industrialised country and she was the first country in the world to introduce compulsory vocational education upto the age of 18. The Germans have thereby built a sound economy and have attained great technical skill and precision. India can take advantage of the experience of these people who are years ahead of us in this respect and introduce vocational education with modifications suited to her conditions. The curriculum at the secondary stage may be diversified to enable each child to follow his bent of mind and he should be diverted to such occupation and courses of studies as suit his craving and nature and where his latent abilities would shine in abundances. The child will thereby find an outlet for his individual aptitude and get training in the vocation of his choice at an early age without loss of time. On the other hand the various industrial, commercial, ^{and} agricultural and occupations would be supplied with the trained personnel that they need. As a matter of fact all the professions are meant to fulfil the needs of the society and a youngster so trained will make a willing and conscious contribution to the welfare of the society. It has been truly said that only trained man-power can lead the country to progress and prosperity. This is the challenge of the times and the future of the coming generations will be decided by the way we deal with the problem.
