CHAPTER - III

HUMAN RESOURCE DEVELOPMENT
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We are living in an age of rapid industrialization and rapidly changing technology. Cottage and small scale industries where manual work was predominant have yielded place to the large and capital intensive industries. In lieu of hands, small tools and equipments, heavy and gigantic machines are being used in the factories now-a-days. Technological change has also led to the use of machines run by electronics and power and they are changing day by day in such a manner that today's skilled becomes ignorant of tomorrow's change. Moreover management techniques are also changing constantly with the change in social outlook and value system of the society. New scientific techniques of management decision making are gradually replacing the old methods of hit or miss judgement. Labour that had been regarded like any other factors of production, are now being considered as human being and thus they are getting their real status in the society.

Thus new machines new tools and equipments, new methods of work, new social outlook and the need to raise productivity in relation to 5 M's (men, money, machine, material and management) have made continuous training at all levels imperative. This is important from another
point of view also that is by training not only the employees are benefitted in terms of greater skill, increased efficiency, promotion to higher positions and better pay scale as well as higher status, but the employers also gain its advantages in terms of greater efficiency and better labour productivity and contended labour force. Therefore, a comprehensive discussion on manpower development and training programme with special reference to oil refinery industry in India as a personnel policy and personnel function has become an integral part of this study. Hence in the following pages, it is proposed to take into account the various types, steps and methods of imparting training to the employees in general and to the technician, supervisors, engineers and other executives in the refineries in particular.

**Training and Manpower Development:**

Now we will try to analyse and assess the need means, agencies and arrangement for preparing a person for work environment through training before and after he gets into employment. In this connection various types and methods of imparting training to employees as well as executive will also be taken into account.

It is a well known fact that with the growth and development of science and technology and resultant rapid industrialisation, agricultural economy is very swiftly heading towards industrial economy in almost all parts of
the world. And with the pace of time, machine revolution and technological changes are also taking place. It creates the problem of adaptation to the rapidly changing technology in the industries. While successful adaptability may be easy in case of a few persons, employees generally need help in adapting themselves to the changed circumstances. It is evident from the above facts that training has become a continuing function and that programme for retraining employees for new occupations and job in the same organization will be increasingly important and necessary. It will be necessary for management to pay considerably more attention to training and retraining the employees for the changed jobs than it has been in the past. That's why effective managers recognize that training is an ongoing continuous process and not a 'one shot' activity.

At one extreme training consists of a few hours of induction by the supervisor while at the other extreme it consists of formal courses designed to develop qualified specialist over a period of years. In between these two extremes there are countless programmes tailored to fit the needs of particular organizations. However, it is misleading to think of training in terms of purely formal courses and programmes. Because almost everything that happens to an employee after he joins a company serves as a training experience. The informal work group with its clearly defined codes of behaviour has a potent influence on its members.
Formal groups like unions also exert a strong effect on them. Many times the supervisor may be training his subordinates without even being aware of it. Thus we see that not only formal training but informal methods also exert their influence on the development of employees.

**TYPES OF TRAINING**

Training may broadly be classified into two categories, namely pre-job training and post job training.

(i) **Pre-job Training:** Such types of training are imparted to the prospective job seekers before they get into employment. Institutional and apprenticeship training will come under this category.

(a) **Institutional Training:** The purpose of such types of institution is to prepare young men and women for the jobs in the business organization. In India also there are many institutions of this nature which are imparting knowledge skills and attitude to the young persons after their schooling period is over. Though colleges and Universities also serve this purpose but they generally give education on general lines while technical institutions like colleges of Engineering and technology, Indian Institute of Technology (IIT's) and Industrial Training Institutes (ITI's) impart technical skills and prepare for specific jobs.
No doubt institutional training is of great use of the organizations but fresh graduates from these institutions can not directly be sent to the job, unless they get some orientation to this particular environment. The business environment requires technical as well as social skills both to fit in the work environment. Induction and orientation can be achieved in vestibule, on the job and apprenticeship training etc. but it can never be achieved in institutional training. So far as the technical skill is concerned, it is also not without defect in the sense, that they impart more of theoretical knowledge than practical which can be compensated only through familiarising them with the actual work environment for which apprenticeship training is one course of action in the pre-job condition.

(b) **Apprenticeship Training**

To remove the short comings of institutional training, the system of apprenticeship training in any plant can be a very good measure before a person gets into employment. It provides not only practical knowledge and skills about the machines but makes the trainees familiar with the working conditions and industrial environment in which they are to work. In fact, this is a transitional scheme which converts a trainee into a worker.

Since voluntary schemes for apprenticeship training were not forthcoming on the scale needed for industrial
development in the country, the Shiva Rao Committee recommended for compulsory apprentice training. Accordingly the Apprentice ship Act was passed in 1961, and enforced in March 1962. Under the provisions of this Act, employers in specified industries are obliged to train a certain number of apprentices in designated trades according to the prescribed national standards.¹

The oil refineries in the country are not an exemption to the provisions of this Act, and they are also imparting training of this nature to a specified number of candidates in different trades. These apprentices are being paid stipendiaries during their training period. Though the refineries are not obliged to absorb such trainees but they can get an open chance to compete with others whenever any vacancies are there to which they are eligible and may have a better possibility to get themselves selected.

Post-job Training

These types of training, as the name suggests, is given after a person has been employed in any organization. There will be two situations. Either the newly employed person will be directly sent to the work place or he will

¹. Report of the National Commission on labour, Ministry of Labour and Rehabilitation. Govt. of India, 1969, p.82.
be trained first and then asked to perform the job on which he has been placed. On these bases there are two types of post-job-training, namely (1) on the job training (2) vestibule training. Before going for any of these two kinds of training a type of orientation also becomes necessary which is popularly known as induction and orientation. Let us discuss all of them one by one.

Orientation and Induction as a part of training:

Before a newly employed person is trained for specific job or trade he must be welcome as a new member of the organization. At the first day at school or anywhere else, the first day of employment is also long remembered. The informations given and impressions created on the minds of newly hired employees at the outset count much and have a bearing in moulding their attitude towards their jobs and the company in the latter stages of their employment career. Proper induction, therefore, is an integral part of the overall training process. Helping new employees to feel at home more quickly enables them to get maximum benefit of specific job training.

A friendly welcome to the organization is not the only purpose of induction training. An equally important objective is to give new employees accurate and useful informations about the organization, the employee services offered by the company, the personnel policies that will
affect them as the employees and the jobs that they will have to perform, their nature and the relationship with other jobs. "A good induction programme has three parts:

1. Introductory information given informally or in group session in the personnel department.

2. Further information given by the new employees' supervisor in the department about departmental facilities and requirements.

3. A follow-up interviews several weeks after the employee has been on the job, given either by the supervisor or a representative of the personnel department, to answer further questions that the new employee may have and to repeat some of the earlier information for emphasis".  

The actual information provided in a well-planned induction may vary from organization to organization, but it should typically cover all those matters which may affect new employees during their early days with the employer.

**On-the-Job Training**

As the term "OJT" indicates newly hired persons are trained by sending them directly to the job assigned to them.

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This type of training is universal in practice. It is simple and inexpensive and the actual training is imparted by the employees' Supervisor or by an experienced worker already familiar with the job. This method is satisfactory under many conditions. However, it is not without defects. For instance:

1. It will take longer time;
2. It will not produce uniformly trained workers; and
3. It has no time schedule and the trainer hardly knows the principles of management and training. He will pass on time on this pretext and production will suffer. He may not like to impart the whole knowledge for the fear that the trainee being a youngman may surpass him.

Apart from these, there is another problem to be overcome, that is, it poses a dilemma before the supervisor who may find that his production objectives conflict with his training objectives. This is possible because production requires that the man should work at the job he is best at; training requires that he should work at the job he is least good at; for this is job he needs most to learn. Unless the top management keeps on the training accomplishment, the supervisor is likely to keep the trainees on the job he does best.³

³ M. George Strauss and Leonard R. Sayles, op.cit. p.453.
On-the-job training is a common practice in almost all organizations in India and so is the case in refineries too. Refineries working under IOC and Cochin Refinery Ltd. also have adopted this method of imparting training very widely. It is mainly given to employees who have been promoted or transferred. So that they may perform their jobs effectively. Production supervisors are generally made responsible for finding out the weaknesses in the workers and for giving necessary on-the-job training to them. In case of CRL craftmen are trained to acquire skills in more than one trade so that they may fit effectively into the multicraft system of work prevailing there.

**Vestibule Training**

With a view to remove the defects inherent in on-the-job-training, vestibule training is a good alternative, and helps as a preliminary to OJT, but the difficulty is that only big organizations can provide this kind of training facility. In this method the newly employed workers are not directly sent to the work place rather they are sent to a place similar to the actual work place where every thing is provided in the like manner as in the real workshop. Thus it becomes a workshop at a miniature scale. The trainers are experienced and well trained in the trades and they are mainly appointed for the specific purpose of training new employees when the trainees become acquainted with the job and trade, they are sent to the actual workplace to perform the specific job assigned to them.
This method has many advantages, but the cost of setting up such duplicate workplace, by providing machines, tools, equipments and materials and creating real working condition, is such that every concern big or small can not afford it. Further, if everything is not duplicated, it would not be very much useful from learning as well as adjustment point of view which is the basic objective of this type of training.

Vestibule training are not given in refineries in its strict sense, but training approximating this method is very common there. The only difference is that instead of establishing a duplicate workshop they are sent to the actual work place alongwith their instructors who explain them how to work and ask them even to work for their practical experience.

**STEPS IN TRAINING**

It is difficult to recommend a training programme which may be equally suitable for each job and in every organization because there are so many special features in each firm to which a good training programme must be able to accommodate. However, a systematic programme for training may be broken down into several steps which are briefly mentioned below:

1. **Identification of Training Needs**: Firstly, it is necessary to decide in which occupations training is needed.
and for what purpose, either to remove current weaknesses or for future development. Training is usually needed where there is a special problem interfering with production or service such as excessive turnover among new employees, considerably high rate of absenteeism, a high accident rate, excessive spoilage of raw materials, delay in work accomplishment or a serious shortage of adequate replacements for a given job. These are the training needs which specially developed training programmes are designed to meet. Apart from identification of occupation, the second problem is to find out as to how many people will need training in these occupations and thirdly what are the critical areas where the planned training will bring about the biggest and quickest return and what resources will affect these decisions.

(ii) Examining the occupation chosen and analysing it: In this step we have to analyse the occupation and prepare job description and job specification. And if necessary further analysis of skills, knowledge and attitude will be made in order to specify the areas of difficulty for the selection of appropriate techniques for imparting training.

(iii) Selection and Appraisal of Trainees: It is done to determine the persons to whom training will be imparted. What aptitude or personal trait is required? Whether we have to recruit or retain present employees and which of the
specified skill, knowledge and attitude they already possess when compared with the job specification.

(iv) **Setting Training Objectives:** This step deals with setting of the goals and objectives of training. What must the trainees be able to perform and to what standard after getting the training in the field of that occupation.

(v) **Drawing a syllabus:** Here we have to frame a syllabus and include such contents which are required to fill up the training gap in order to achieve the objectives.

(vi) **Planning the Training Programme:** This gives the detailed tactics of training and is decided keeping in mind the principles of learning in order to ensure that the objectives will be achieved. Here we have to consider where and in what consequence learning will take place? How and by whom learning be caused? How much time it will take and what resources will be required? How much of these resources we have and how much we have to acquire?

(vii) **Implementation of Training Programme:** Now the actual training will be started according to the programme earlier decided and it will continue till the objective is achieved.

(viii) **Audit:** The next step is to check and audit the training programme to find out whether the training objectives have been achieved. Whether these objectives were right and whether the results justified the costs. The last question is of futuristic nature i.e. could the same results be achieved more effectively and economically by other means?
Follow-up: The next and the last step is to follow up the training to ensure that the personnel trained are putting into practice what they have learnt. If they do not do so, further need should be identified and from step no (1) to on ward should be repeated.  

Application of Learning Theory in Training:

Whatever type and methods of training is adopted, some attention to the principles of learning is worthwhile. These principles have mostly been evolved and developed by the psychologists.

Motivation is an important factor and it greatly influences the learning of an individual. An indifferent and reluctant person will learn little, even from a very good instructor. For an employee to get benefit from training, he must be anxious to improve himself and his job performance and thus enhance his opportunities for advancement. But this fact should also be kept in mind that excessive motivation leading to the setting up of the goals beyond the capability to achieve them may result in acute disappointment and loss of motivation instead of helping in the learning process.

Reinforcement is another need for learning to take place. The individual must receive some encouragement or reward, either intrinsic such as sense of personal progress

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or accomplishment or extrinsic encouragement such as praise done by an instructor or supervisor. It is better if there is balance between these two types of reward.

Feedback or knowledge of result must be obtained for reinforcement to be effective and improve performance of the trainee. If self-correction is to take place the trainee must know his behaviour and the impact that it creates. Unless he knows how close his achievement is to be desired standard of good performance he will not be able to improve his performance, no matter how hard and how many times he tries.

Learning is most effective when the learner is actively involved in the learning process, rather than merely listening to a description of it. The impact of learning by doing is greater when number of senses involved are more.

Learning takes place expeditiously if the total process or skill to be learnt is broken down into small parts. Thus the trainee will become satisfied after getting the part of his objectives to be achieved and thus it will be helpful and encouraging in learning the whole job.

While preparing a training programme and determining the steps in training the manager personnel or the training manager should keep in mind the above mentioned principles of learning to make the training highly effective and meaningful. Apart from this he should also know about the pattern in which new skills are learnt. This learning pattern
is shown graphically is called "learning curves". With the help of a hypothetical learning curve the whole process and pattern of a normal learning can be easily illustrated.

**LEARNING CURVE**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Discouraging</td>
</tr>
<tr>
<td>II</td>
<td>Increasing</td>
</tr>
<tr>
<td>III</td>
<td>False Plateau</td>
</tr>
<tr>
<td>IV</td>
<td>Peak Proficiency</td>
</tr>
<tr>
<td>V</td>
<td>Over Learning</td>
</tr>
</tbody>
</table>

Training Time

As is shown by the graph when an employee starts learning a new skill he first faces the discouraging stage. This can be more discouraging to those who feel proud of their ability and hence they need encouragement from their supervisors. The duration of this stage may last between a few minutes to a few weeks depending on the newness and complexity of the skill to be learnt.

The second period is an indicator of a rapid rate of learning. This is the stage of increasing returns in which input output ratio, in terms of efforts made and proficiency gained, is greater than one. In this period the confidence
and satisfaction of employees also increase. In the third period a plateau emerges and now any effort or time spent on training will not result in significant job proficiency and both the learners as well as the trainer may be deceived that the maximum proficiency has been attained. This plateau may develop because of a loss of motivation or the progress becomes more difficult, and the trainees need for substantial time to develop new and improved skill.

The fourth stage is where the learner reaches to the peak of learning a skill, but this is not the all. The supervisor should bear in mind that with the continued repetition over-learning will take place and hence it should be encouraged. Over learning helps in diminishing the chances of forgetting even after a longer period of time and discontinuation of practice.

It is to be noted here that the learning curve of all the employees will not be the same. "There are differences in native ability to synchronize muscular movements, to effect eye-hand co-ordination and to sense subtle differences in tactile and muscular responses". These differences pose serious problem before the supervisor and he has to deal with properly.

5. George Strauss & Sayles, op. cit., p. 452.
Management Training and its Techniques

Over the years, many terms have been evolved and developed by the management and behavioural scientists to denote the meaning of imparting knowledge and skills and changing attitude of the various members of the business organizations. These terms are training, manpower development, technical training, management training (MT), organization development (OD) and human resource development (HRD). Whereas training and manpower development are common and have general applications of their sense to all, the term technical training is mainly designed to meet the gap between skill and knowledge required of the workers in operations below the supervisory level and their availability in them. On the other hand management training is meant specifically for developing managerial skills to deal with various problems arising out of managerial issues, particularly the problems of human relations in industry. Organization development is comparatively a new term which covers the aspects of over all skill development in the organization as a whole irrespective of the fact whether the recipients of the training are from technical cadre or managerial. Thus management training implies development of managerial skills rather than technical. Depending on this difference eventually, the techniques adopted for this purpose are
different from those which have been adopted in case of
developing technical skills. Some of the major techniques
prevalent for developing managerial capability are as
follows:

1. Lecture Method:

This is traditional way of teaching and gives the
trainer the greatest degree of control over the training
situation. This is the easiest method of training, taken
least time and needs least costs. A lecture can be delivered
even under the branches of trees as it happened in case of
"Shantiniketan" without the arrangement of many things which
are necessary in other methods. These are the main causes
of its wide spread acceptance. But still it is not without
defects. The major short comings of this method are as follows:

i) Shorter time to deal with a host of problems.
ii) Inability of the lecturer to connect all the points
systematically, if he is not a good teacher; and
iii) Absence of good training situation and passive role
of the trainees.

This method requires that the lecturer must have
extensive and intensive knowledge of the subject matter to
be discussed and enough time to feed back and to go in
necessary details.
2. **Discussion or Guided Conference Method**

In order to overcome the limitations of straight lecturing many companies have adopted "guided discussion" type conference. In this method the instructor knows in advance what information and procedure he wants to bring out. Active participation of everyone and give and take of ideas is also necessary in this method. Hence, active role, in this case, is played by the trainees and not by the trainer.

There are dangers of not applying those basic principles in the process of training. For instance, some trainees may be mere listeners and do not participate actively while others may be highly talkative and continue to dominate the group. Hence, it is the responsibility of the trainer to put some check on active participators and at the same time to encourage the passive listeners for speaking something. In this way he directs and controls the whole discussion.

3. **The case study method**:

In this method prepared cases relating to the problems of real life business situations are distributed among the trainees and they are asked for identify the problem(s) and their alternative solutions, which they will have to do in their own ways. Thus through this method, the instructor
tries to bridge the gap between reality and abstract theories discussed in the class-room. In the process he puts stress on the following points.

(i) Increases the trainees power of observation, helps him to ask better questions and to look for a broader range of problem;

(ii) Encourages the group to look for more and more implications in each solution, keeping them away from pat analysis and oversimplified solutions;

(iii) Helps the students to discard vague principles and urges them to consider not only what to do but also how to do it; and

(iv) Encourages the trainees to test their solutions against reality.

4. **Simulation:**

   Simulation is a term which is used to denote a broad range of techniques in which trainees workout various samples of real life problems to practise in decision making or working together as members of a group or both. It involves learning through doing rather than memorising. It is a kind of vestibule training and requires more involvement than the case method. Under this term we can include management game, in basket technique and role playing.
(i) **Management Game:**

This is one form of simulation in which several teams are involved and each team is given a firm to operate for a number of periods. In each period each team has to take decision as to how much to produce, at what price to sell, how much to spend on advertising and how much inventory to maintain. Since all the firms run in the same industry, it is, therefore, natural that all the firms will act and re-act and their results will be affected by the decision taken by one firm or the other. All such informations are fed in the computer which is programmed and behaves like a market. At the end of each period the computer reports back to each firm which becomes feed back and a basis for further decision. Finally that firm is supposed to be well managed which becomes able to accumulate largest volume of profit during the whole period. When the game ends all the firm analyse their mistakes and generalise their experiences.

(ii) **In-basket Technique:** This is a form of simulation in which the trainee is given a very short period of time to take decision or handle a situation. He is suddenly exposed to an unexpected situation and has to handle it properly within a short period of time. One of such situation may arise in the real life of a manager when he is placed in the chair of his boss on his sudden death and he will have to see into a variety of matters at the same time. This
technique provides experience not only in decision making but also in implementing them. This differs from management game in the sense that in this form there is no feed back as to how well the decision was effective as it is possible in case of management game.

(iii) **Role-Playing:** This is a third form of simulation which puts emphasis on human relations. Here trainees are directed to play some role after they are acquainted with the problems and related subject matters. They have to act as they do in real life. Among the trainees some are assigned with the role of executives while others are made their subordinates. A person may be a personnel manager other one his deputy, a third one a trade unionist and other may be posing themselves as the Heads of other departments. Role playing is much more fruitful if it is followed by class discussion. Before the session starts, the trainer may suggest crucial points for the participants to observe and then use these areas as a framework for the subsequent discussion.

Role playing is very difficult, because everyone will not be so sincere to fit in himself to the position assigned to him. And if they are unable to do so their learning and experience will remain incomplete.
(5) Sensitivity Training:

This is also known as T-Group training (where "T" stands for training) and laboratory training. This is based on non-directive principles of therapy treatment, evolved by Carl Roger, an eminent psychologist. In non-directive system of this treatment, the insane person himself discloses everything and thus helps the therapist in the process of diagnosis and suggestion of treatment.

T-group training differs from other techniques of training in the sense that it is concerned with real and not with simulated problems existing within the training group itself. In this method of training the executives and supervisors induce themselves to learn something in their own way. Since they have to deal with human elements in the business, hence, it is necessary that they should understand each others desires, feelings and sentiments which can be well done by keeping one-self in the position in which others are. This is why the trainees are advised to live together, eat, drink and talk together so that they can realise the situation and appreciate the same in which others are. This will also be helpful in understanding the sentiments, feelings emotions and problems of others in the group.

Although individual trainers may differ in emphasis, T-group training can be used to help the trainees to:
1. Learn more about themselves specially their own weaknesses and emotions.
2. Develop insight into how they react to others and also how others react to him.
3. Discover how groups work and how to diagnose human relations problems.
4. Find out how to behave more effectively in interpersonal relations, and in particular, how to manage people through means other than power.
5. Develop more competent, authentic, relations in which feelings are expressed openly.
6. Confront interpersonal problems directly, so that they can be solved, rather than trying to avoid them, smooth them over, or seek a compromise that is not really a solution.  

This is called laboratory training, because T-groups are like laboratories in which people experiment on themselves and generate data for their own discussions. T-groups are really small discussion groups with no set leaders.

TRAINING NEEDS IN REFINERIES

All the refineries working under IOCL, HPCL and BPCL are very large in their sizes and complex in their operations.

They are employing one thousand to three thousand workers each and in some cases even more than that. Most of the units working independently are also considerably bigger in their sizes. Moreover they are always expanding their production capacity and adding new products to their product lines. Despite the fact that machines are mostly automated, the complexity and technicality of machines, tools and equipments used there can not be taken lightly. They are so much complicated that even the raw hand graduates in Engineering and Technology can hardly handle them without some practical training of specific type. Thus the need for trained persons and consequently that of well planned and well managed training programmes constantly increasing with the expansion of existing plants and establishment of new ones. Therefore, need for establishment of full fledged training centres in various units was felt badly and ultimately they were established. The units which don't have adequate training facilities in their premises to train all types of people, get the advantage of such facilities available at other places.

**Training Programme in Oil Refineries**

As is obvious from the preceding discussion, due to unavoidable needs and continuous requirements of a large number of trained persons, the refineries have already established their own training centres working under their
respective personnel departments. Mostly they are run by a Manager Training under whom several other Engineer trainers perform the job of imparting training to the needy persons.

Engineering graduates of different branches viz., Mechanical, Electrical, Chemical and petrochemical etc. are selected according to the needs of different refineries and then trained there. In case of refineries under IOC, the future requirements of such personnel are assessed locally and centrally for each unit and recruitment is done by company (IOC) on the basis of written tests and interviews. Then they are sent to different units for training purposes where they are trained in their respective fields. After successful completion of their training they are absorbed in these units according to their needs and requirements.

Besides engineering graduates they also invite applications from candidates passing from ITIs for their apprenticeship programme. In view of the Apprenticeship Act, 1961, they are obliged to give training to a certain number of persons. During the training period which is generally of one year they also pay stipend to each apprentice but in this case they are not bound to absorb them in their organizations as it is applicable in case of engineer trainees.
More than a decade back (i.e. in 1974) they have started "Management Training" programme also to train fresh graduates from any discipline and particularly those who have management qualifications like MBA, MMS, D.B.Ms degree or diploma holders in labour relations and Social Welfare. These candidates are also selected on the basis of written test, and interviews. Since they started this programme, the application of sophisticated techniques of selection and training had not been adopted to the extent as they had been in use in industrially developed countries of the world and also in some of the Indian firms with foreign collaboration such as CRL and Madras refineries. Management trainees are also trained theoretically and practically in different areas of management and then absorbed in different units according to their needs. During the training period they are also paid a consolidated amount as their stipends as in case of engineer trainees and then they are given proper scale of pay after their final placement.

So far as the types and methods of training programme are concerned in case of technical training to the technicians and engineers they generally adopt on the job, vestibule and apprenticeship training in which both lecture, discussion and learning by doing methods are applied. Alongwith a little amount of conceptual and theoretical knowledge major emphasis is put on practical training.
Management trainees were imparted training through lecture and group discussion methods. Most sophisticated techniques of managing training like role-playing, case study, management game and T-group training could get their places in the refineries only a few years back.

For executive and administrative personnel they arrange for some vocational training programmes. It is arranged for ten days, one week, three days and some times even for one lecture only.

The purpose of imparting such training to the existing employees and also to the potential personnel is to improve their skills and proficiency for effective performance of their tasks in the organization. Some times it is meant for final placement after fresh appointment and some times after transfer or promotion as the case may be.

Inspite of all these, for long there have not been proper provisions for the training of common workers in the refineries. Since they are basic operatives in the total frame work, if they will not be properly educated and sincerely trained the whole organisation will suffer. It is they whose increased efficiency will mainly raise the productivity and ultimately the profitability of the companies. Hence their improvement through various types of training required adequate attention to be paid, without which the purpose and objectives of training and manpower development,
in their true sense, would have not been achieved. During the past few years operatives' training could also be paid full attention and get momentum. A full account of all types of training in refineries would be made in the following pages.

**TRAINING PROGRAMMES IN REFINERIES OPERATING UNDER I.O.C.**

Indian Oil Corporation Ltd., has 32000 employees, one fifth of whom are officers. These people work in 300 units which are spread all the country. The company knows the importance of human resources and fully recognises how important it is to develop its human resources. That is why it has launched the Human Resource Development Programme.

Indian Oil Human Resource Development Programme comprises -

(i) Role Analysis; (ii) Goal Setting and Appraisal;
(iii) Feed back and counselling; (iv) Recruitment and Selection; (v) Succession Planning; (vi) Career Planning;
(vii) Manpower Planning and forecasting; (viii) Job Enrichment (ix) Work Re-design, and (x) Role Development.

**IOC'S TRAINING PHILOSOPHY**

It is Indian Oil's Corporate Philosophy that the inherent potential of everyone should be developed for better
organizational performance. The training is usually meant for the development of knowledge and skills and change in attitudes.

Each and every employee seeks to develop his knowledge and skills. The corporation encourages and assists such efforts through formal and on the job training.

On the job training is an essential aspect of functional training programme and class room training supplements it.

The training efforts aim at fulfilling the requirements for employees towards better job performance and consequently achieving organizational effectiveness.

Now the organization puts equal emphasis on imparting training to all categories of employees.

In a developmental training programme an attempt is made to bring together the participants from different disciplines.

The vitality of an organization depends mainly on its capacity to adapt itself to the changing situations and circumstances.

**TRAINING FACILITY**

Out of 32000 employees of IOC, a little more than one third undergo one or the other types of training programme
every year. The organization has also taken keen interest in developing infrastructure for this purpose. Training centres have been developed at each refinery, marketing regions and head quarters. They provide technical training and management development programmes. These training centres are headed by Training Managers in all the six refineries besides the pipelines and the head office of the refineries and pipelines Division.

The Marketing Division of the Company also has similar training centres in each of the four regional offices at Calcutta, Bombay, New Delhi and Madras.

In addition to the Training centres at each refinery and marketing region, IOC has established, a Management Academy at Haldia in 1979. The academy is headed by a principal and has adequate facilities for organising functional and executive development programmes.

The Research and Development Centre also organises regular periodic training programmes to brush up and update the knowledge and skills of engineers, scientists and other technical personnel.

TRAINING CENTRES

All the ten training centres at various refineries and marketing regions of Indian Oil Corporation joining together cater to the training needs of all categories of
employees in the Company. They supplement on the job training experience and give exposure in all the functional areas. Apprentice trainees are also imparted training at these centres. The class-room instructions are reinforced by on-the-job exposures. Each training centre prepares its annual calendar of various kinds of training programmes. This is done well in advance and the participants are intimated well in time so that they may also plan and programme properly.

These centres have sufficient hostel accommodation for trainees in their townships. In case of marketing, adequate hotel accommodation is provided for at all training points. The duration of training programmes varies from a few days to several months. Most of the training programmes for executive development are conducted at the Haldia Management Academy. HRD Programmes were also initiated at Haldia on experimental basis and after getting success it was gradually extended to other refineries.

**INDIAN OIL MANAGEMENT ACADEMY**

The Indian Oil Management Academy at Haldia often called IMA, primarily offers functional and developmental programmes, for executives and managers at various levels. In a short span of eight and half years it has developed
training calendar for over 40 programme per annum. Approximately 3,000 executives have been benefitted from these programmes.

The IOC Management Academy has acquired and developed sufficient infrastructure for the purpose of training. The building consists of an auditorium, a conference hall, a fully equipped library, a spacious lounge and air-conditioned boarding and lodging facilities.

The Academy also avails a modern communication system and sophisticated audio-visual aids. These facilities are provided for various sessions as well as individual and group exercises. Adequate sports and recreation facilities have also been made available there in the academy.

TRAINERS AND INSTRUCTORS

Most of the trainers for various training programmes are in house. The corporation is very choosy in selecting faculty members. They are very carefully chosen, keeping in view their areas of specialisation. The types of trainees, their level of understanding and the objectives of the training programmes are fully taken care of. Another important factor given full weightage, while selecting faculty members is their communication ability and proficiency in their expression.
The company also invites renowned speakers and guest faculty in areas where expertise are not internally available.

**TRAINING METHODOLOGY AND PEDAGOGY SYSTEM**

The training methodology is such that provides the trainees with ample opportunities to actively participate in the programme. Full recognition is given to the learning theory and learning process. Emphasis is placed on the use of case study method, simulation exercises, role play, in basket technique and various other kinds of structured and unstructured exercises.

Sophisticated and modern communication aids and instructions techniques are used to reinforce the learning process. Audio-visual aids like slide projectors, Cinema projector, Overhead projectors, Video-Cassette recorder and T.V. monitor sets are made use of in almost all training centres. Besides, traditional black boards and flip charts are also used frequently.

**FUTURE PROSPECTS:**

The Corporation has both short term and long-term plans for its growth and development. Alongwith organizational growth and corporate plans training activities and facilities are also required to cope with. It is required to meet the
growing needs of human resource development in the organization. I.O.C. is also aware and fully recognises its role as catalyst in the area of HRD and also as a change agent in the society at large.

Two training centres are added to the pipelines division one each at Calcutta and Rajkot. At the corporate level also I.O.C. plans to establish two training institutes. One such institute will be established at Gurgaon near Delhi and will be named as Indian Oil Management Development Centre. The other one will be providing training facilities to chemical trade apprentice trainees. It will also organize training programmes for improving skills of technicians and operators etc.

The Indian Oil Management Centre will cater to the training needs of Senior Management Cadres. This will help organisation in developing managers for high positions in the company.

**ORGANIZATIONAL STRUCTURE:**

All the training centres at each of the refineries and the pipelines divisions have a common organizational set up. All the training Departments/Centres are headed by Training Managers (TRM) who are assisted by Deputy Training Managers (DTRM), Senior Training Officers (STRO)
and training Officers (TRO); They come under the 'Officers' Grade of the Department and their number may vary from one centre to another centre.

Apart from 'Officers' Grade' the centres also consist of staff and ministerial employees. They include stenographers, secretaries and messengers etc. who assist the Officers in their work and facilitate in the smooth functioning of the centres.

ORGANGRAM OF THE TRAINING CENTRES

The following organizational chart depicts the organizational structure of the various training centres of Indian Oil Corporation.
The organizational set up of I.O.C. Management Academy at Haldia is slightly different. It is headed by a Principal, who is assisted by a Vice-Principal, faculty members and Additional Officers (ADO'S).

All the training Managers at various training centres and the Principal of the Academy have to report to the Deputy General Manager (HRD), who is accountable to the General Manager (Personnel) at the Headquarters at New Delhi, as it is shown in the following chart.

```
G.M. (P)
|
D.G.M. (HRD; TRG)
|
GAUHATI BARAUNI GUJRAT HALDIA MATHURA PIPE-LINES I.M.A.
|
STRM STRM STRM STRM STRM TRM PRINCIPAL
|
DTRM DTRM DTRM DTRM DTRM DTRM V.PRINCIPAL
|
STRO STRO STRO STRO STRO STRO FACULTY
|
TRO TRO TRO TRO TRO TRO ADO'S
```

| 3 | 5 | 3 | 3 | 5 | 2 | 4 |
(A) **IDENTIFICATION OF TRAINING NEEDS:**

The training needs of officers are generally assessed through the Annual performance Appraisal (A.P.A.) in which the Officers are required to tell about their needs according to their assessment and the Reporting or Controlling Officers are also required to assess the training needs of the assessee officer as per his assessment. The need for refresher courses in functional areas is assessed by the Heads of Departments.

In the Indian Oil Management Academy the courses and programmes conducted are linked to the needs as mentioned in the APA forms, the copy of which is also forwarded to the training department. The Department convenes meeting of the unit level training committee to review and decide the training needs. Only then the annual calendar for the IMA training programmes are prepared.

**EMPLOYEES SELECTION FOR TRAINING:**

Except Barauni and Gujrat in all IOC refineries Selection of employees for the purpose of training is done on the basis of the recommendation of APA and also on the basis of adhoc recommendations.

In Barauni and Gujrat refineries Selection of employees is done (i) by the Heads of the Departments through APA upto
'C' Grade, (ii) by Head Office for 'D' Grade Officers and above and (iii) mid-year recommendations by the Heads of the Departments for all employees are duly approved by the DGM/GM/H.O.

Once the annual calendar for training is finalised at IMA, the courses are intimated to each TRM (Refineries & Pipelines) requesting them for nomination of trainees. The TRMs normally review the APA recommendations and obtain the approval of the H.O.D. as also of the management and then the nominations are intimated to I.M.A.

**A CHOICE BETWEEN IN-HOUSE AND OUTSIDE TRAINING:**

The training programmes which can be organised with the help of internal faculty and available resources are conducted at the units training centres of Refineries, Pipeline Division and Marketing Division. However, in all refineries where specialised training is required and faculty is not available internally, or facilities are inadequate for such programmes employee requiring such kinds of training are sent outside. The decision for outside training is based on cost-benefit analysis. For IMA, this choice is finalised by the unit TRM'S at the unit level. IMA has nothing to do with the decision of deputing any officer for in-house/outside training of the officers or staff.
SELECTION OF FACULTY MEMBERS:

The faculty members are selected in consultation with the Head of the Departments of respective disciplines and areas of study. They are selected from other units and the Head quarter as and when they are required.

For some in-house training programmes faculty is borrowed from outside agencies like ISTD, DPC, and NPC etc.

Capable and potential faculties are encouraged in different in-house training programmes as a part of further development of skills and knowledge for the purpose of further grooming.

While selecting faculty for various training programmes their education, experience, training aptitude for imparting training are given due weightage. While selecting faculty from outside two things are considered very important; their reputation and performance.

At Indian Oil Management Academy, Officers are deputed on tenure basis. It takes sufficient time for the faculties to develop themselves to become core faculty. Efforts are made to develop each faculty to the fullest extent so that they may ultimately become core of the faculty at a later stage.
DESIGN OF CURRICULUM AND COURSE CONTENT

Courses are designed and course contents are decided in consultation with the respective HOD'S of the concerned discipline which are reviewed by the Head Office and also in the conferences of training Managers from time to time to ensure that they confirm to the present and future training needs.

IMA course design is also based on the needs and requirements of the organization. The objectives of each course are discussed at TRM'S Conference at the Head Office. Discussion with outside faculties of repute is also done to cross check. Various faculties who have already offered those subjects at IMA are also requested to develop hand books. These handbooks are distributed among the participants. The content, reading materials and technical notes of high standard are also prepared.

EVALUATION OF TRAINING PERFORMANCE

For all the training programmes whether conducted inside or by the outside agencies, there is a system of performance evaluation. This is done immediately after the programme and also after a lapse of time. Feed back for the improvement in the training programmes are obtained from the participants.
MAINTENANCE OF TRAINING RECORDS

Training records are maintained in the Cardex System and periodically updated at all training centres as well as IMA. At Barauni records of officers are maintained in Cardex and a register is maintained for non-officers. At Mathura also various records pertaining to training and development activities are being maintained.

At Gujrat refinery training centre a profile and training card of each trainee is maintained. Similarly reference copies of each programme reading materials and technical notes are also maintained.

At pipelines Division training records are maintained in the IOC formats. Action has already been taken to computerise training records, so that the data stored in computer may be utilized for analysis and future decisions.

At the IMA files for each course is maintained in the office. Names of faculty and participants alongwith their designation and placement are kept in the file. Separate files are maintained for evaluation sheets and reports of the courses, which are circulated to all the GMS/DGM's and TRMs.

TRAINING BUDGETS

As per procedure of budgeting each training centre prepares its annual budget for different training programmes.
The allocated amount is spent on the following heads:

- Wages and salary of the staff and officers of the training department.
- Expenditure on welfare amenities and over time.
- T.A. & D.A. paid to participants and faculty.
- Payment for hired accommodations and residential facilities.
- Course fees paid to outside agencies.
- Maintenance of building furniture and equipments.
- Journals, periodicals, and books.
- Educational films and cassettes.
- Video Cassettes and other audio-visual aids for making presentations.
- Printing and stationery expenses.
- Expenses on working lunch.
- Honorarium to internal and external faculty.
- Subscription for membership to various institute.
- Miscellaneous and other expenses.

Data relating to financial commitment on training and development programme during the last few years have been presented in the following table to examine and evaluate the financial performance.
<table>
<thead>
<tr>
<th>Year</th>
<th>GAUHATI Planned</th>
<th>GAUHATI Actual</th>
<th>BARAUNI Planned</th>
<th>BARAUNI Actual</th>
<th>GUJRAT Planned</th>
<th>GUJRAT Actual</th>
<th>HALDIA Planned</th>
<th>HALDIA Actual</th>
<th>MATHURA Planned</th>
<th>MATHURA Actual</th>
<th>PIPELINES Planned</th>
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* Dash (-) indicates non-availability of the data.

Source: Data collected from the record files of IOC.
In case of Gauhati refinery the budget allocations have been increasing gradually. The amount has gone up to 11.64 lakhs in 1987-88 from an amount of Rs. 3.17 lakh in 1981-82. The pattern of the actual expenditure has also followed the suit starting from Rs. 3.08 lakhs in 1981-82 to 9.42 lakhs in 1985-86. The remaining expenditure data are not readily available.

The budgetted expenditure in case of Barauni refinery has increased at an increasing rate over the years. The actual expenditure has always been more than the planned expenditure.

The figures for planned expenditure in majority of the years have not been available in case of Gujarat, but the annual expenditure has been found to be increasing at an increasing rate.

The planned expenditure has consistently been increasing in case of Haldia Refinery except the year 1986-87. The actual expenditure initially increased at an increasing rate and then at a decreasing rate.

The budgetted expenditure, in case of Mathura refinery has increased at a marginal rate during 1981-85 and then it increased at an increasing rate. The actual expenditure has always been less than the planned ones.

In case of pipelines data pertaining to planned expenditure has not been available for the period but the actual expenditure data for a few years show an increasing trend.
So far as the planned expenditure data of IMA is concerned, it is available for the last four years only. However, the actual expenditure data is available for the whole period under study except 1987-88. The data relating to both the budgetted as well as actual expenditure has shown tremendous increase and a clearly depicted upward trend.

The above recorded data are pertaining to technical training performance of officers and staff during the period 1981-88. The primary objective of the training centres is to meet the training requirements of all the employees in the organisation by organising suitable training programmes. For doing so, generally in-house training programmes are organised and use of internal faculty is made. Though for the programmes requiring specialised skills and knowledge, assistance of outside faculty is also sought when needed.

In the process of training both instructional and participative methods are used. While techniques of imparting training vary from programme to programme, ordinarily emphasis is placed on lecture method, case studies generally based on refinery’s experience, group discussion, role play and selected text readings. Modern and sophisticated teaching and training aids like audio-visual, slide projectors, Video-cassette etc. are also used frequently.
The following are the data pertaining to training Man-days, officers and staff trained internally and the Officers and staff nominated for outside training.

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<th>OUTSIDE TECH. PROG.</th>
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**Source:** Data collected from the record files of IOC.
For the development of promotee officers a programme has been developed which comprises of three modules. In the first module, the emphasis is on the individual, in the second on group working and in the third the individual contribution to the organisation is thoroughly emphasized.

For shouldering the responsibility of training unit training Advisory Committees have been set up in each refinery, pipelines Division and also at the Head Quarters. The Unit Advisory Committee has been assigned with the following role.

(i) To define the training objectives for the year;
(ii) To approve in-house training programme to be conducted during the year;
(iii) To review and approve external training programmes for the officers and non-officers;
(iv) To approve the training budget for the year for each unit.
(v) To finalise the Annual Unit Training plan, and
(vi) To review and evaluate the training courses.

The Refinery Advisory Committee is comprised of the following Officers:

(a) General Manager;
(b) Dy. General Manager;
(c) Chief Production Manager;
(d) Chief Maintenance Manager;
(e) Chief Technical Services Manager; and
(f) The Head of Personnel Administration Department.
The Head of the Training Department acts as the Convenor of the Training Advisory Committee.

The Committee examines the individual training needs and suggests for in-company training or recommends for outside the company training programmes. It recommends for officers upto grade 'C' and non-officers in all grades.

Management Development Committee at H.Q. Comprising of the Director (R & P) and G.M.s (R&P) Division, is responsible for examining training needs of officers Grade 'D' and above. Training plan is prepared by the MDC for a period of two years and finally approved by the Director (R & P).

The following are the important points which are considered while identifying the individuals training needs and recommending the training course for officers and non-officers:

(i) Training needs as identified by the immediate supervisor/Departmental Head,
(ii) Availability of the recommended programmes within the organisation.
(iii) Training programme conducted by outside Agencies of repute in the country.
(iv) Training Course already attended by the Officers.
(v) Performance of the officer during the past two years.
Generally officers and non-officers with good record and enough potential for further growth are selected for good type of courses offered by the outside agencies. Before sponsoring for any training courses senior officers are also consulted regarding the suitability of the training programme.

The Training Centres in different refineries, pipelines Division and Indian Oil Management Academy meet the needs of all categories of employees in the Corporation. These training programmes supplement on the job training experience. Front line managers and young management trainees are also imparted training at these centres. At all the centres the Annual Training Man Days is also calculated. The Annual Training Man Days is the product of the following three items:

(a) Number of programmes held during the years;
(b) Number of participants in each programme; and
(c) Duration of programme in days.

Then the difference between planned man days and actual man days is computed at the end of each year. This is worked out to reveal the positive or negative variance. A positive variance occurs when the actual man days is more than the planned man days and it happens otherwise when the situation is reversed.

In the previous pages data pertaining to planned Vs actual training man days for officers and non-officers have been presented for a period of seven years. Similarly
number of officers and non-officers nominated for outside training and also the number of officers and non-officers technically trained in house training programmes have also been presented side by side for the same period.

To measure the effectiveness of training programme training satisfaction level is calculated. It is, in fact, ratio of number of trainees actually completed the programme to the number of officers or non-officers recommended through Annual Performance Appraisal for training.

At Gauhati Refinery and Pipelines Division, the training level of satisfaction during the year 1986-87 was more than satisfactory.

At Barauni Centre it was abnormally high because the number of officers recommended for training was only 33 whereas the number of officers completed their training actually was 219 during the year 1986-87.

At the Gujrat and Haldia centres, the training level of satisfaction was 100%, whereas at Mathura it was as low as 53.51% because APA recommended 484 officers for training and only 259 officers could actually complete their training.
STRENGTH AND WEAKNESSES OF TRAINING

The following strengths have been traced in the refineries so far as training is concerned.

(i) A well developed training culture;
(ii) Sufficient number and adequate amount of facilities;
(iii) Organizational climate highly conducive to training;
(iv) Good team work spirit in the Department; and
(v) Whole hearted support from top management.

- SWOT analysis has indicated the following strength conducive to training programmes to be carried out in the refineries.

- Facilities for apprenticeship training were made available much earlier.

- Has wide range of training activities, like apprenticeship training, officers training, Housemen training, Nurses training and the training of the Officers and the staff.

- Management support is the very concept of training.

- Training set up is considered to be a part of HRD set up.

- Integrated operations are undertaken in refineries and marketing.

WEAKNESSES

(i) Non-availability of fresh young blood

(ii) Lack of adequate staff/officers required for a temporary period of 2.3 years to clear the back log of technical training.
(iii) Want of a concept of training reserve in manpower planning on the lines of leave reserve resulting in fewer nominations.

(iv) Training treated as a Cadre.

(v) Difficulty in arranging catering for more than 50 participants per day.

(vi) Low profit from 1970 to 1985

(vi) Inadequate infrastructure, manpower, training aids and other training facilities.

(viii) Inadequate internal facilities.

(ix) In the past training was based on need.

**ACTION PLAN FOR IMPROVEMENT**

The action plan may include the following:

(a) Immediate action plan for officers is to implement training outlined in career path modules. This will take 3-4 years.

Similar career path based training to be devised for non-officers and implemented. In view of large number involved, this would take 5-7 years.

Along with backlog clearance new entrants are to be given the same training at the outset. Refresher Courses are to be outlined and implemented.

At this stage a breakthrough in technological upgradation is possible if certain in-puts like creativity
workshop, creation of a climate of free and democratic functioning where ideas can be generated.

In Barauni Refinery hand books for production units and other Departments have been developed. Further action plan should also be chalked out, stressing on finalisation of long term training programmes. The modular system of training programme, can be introduced if a corporate decision is taken to develop faculty of technical subjects on a long term basis as a few faculty members who had been exposed for such modular training have developed write ups on the ILO based module such as basis of supervision, leadership and maintenance management. The suggestions has also been given that the ILO modules should be used for technical training after due modifications in the light of our environment, culture and constraints.

Mathura refinery has plea that a separate group should be constituted to prepare the modular programme on technical training. Another group should also be there to prepare hand books for various technical training programmes.

**IMPROVEMENT IN TECHNICAL TRAINING INFRASTRUCTURE**

Gujrat refinery is stressing a comprehensive action regarding procurement of training aids and other infrastructural facilities for example equipment, Video Camera, Video tapes, process simulator and Commercial type photocopier to be acquired for the training purposes.
People in Barauni Refinery have the view that improvement in infrastructure is absolutely necessary for effective development and utilisation of human resources. The important suggestion given at Mathura refinery were that wooden models of various equipments be provided to various training centres. Such facility would create an on the job environment without involving duplication of expenses on equipments.

Training simulators to be procured for training of operating staff and safety films and Video-Cassettes on safety to be made available to the refinery units in a centralised form.

MANPOWER DEVELOPMENT POLICIES AND PROGRAMMES IN GRL

The Company believes and recognises the fact that manpower or human element in the organization is a resource which needs to be procured according to the requirements of the company and then constantly developed and utilized. Any kind of expenditure on procurement, development, preservation and utilization is a sort of investment, which equally benefits to the organization and the individuals trained and developed.

The training efforts in the organization are particularly oriented towards the needs and requirements of the company which are based on the standard of performance
required for the jobs. The necessity of development of existing personnel and new recruits to suit future requirements is also an important consideration. While planning training programmes both present and future needs of both the individuals and the organisation is kept in view.

The various training schemes, programmes and practices in Cochin refinery are as follows:

1. **Induction Training**

   On the very first day of joining an employee is familiarized with the company, organizational objectives, philosophies, policies, practices, service conditions rights and responsibilities of an employee, opportunities for advancement, the task to be performed, the conditions under which the work has to be done. The employee is also introduced to his boss, subordinates and peers in the Department. The induction programme thus helps the employee in developing a proper perspective for his new job and in creating a favourable attitude and positive response towards the company philosophy and objectives.

2. **On-the-job Training**

   In the refinery on-the-job training is mainly given to help the employees who are promoted or transferred so that they may be able to perform their newly assigned tasks and jobs more efficiently and effectively. Production and Line
Supervisors are made responsible for identifying the weakness and, therefore, need for training and they are the people who take the responsibility for providing necessary on-the-job training.

3. Job Rotation

Through rotational assignments on various jobs employees are given opportunities to increase their area of operation and the knowledge of additional job. This is a continuous process in which employees with talents and potential grow and develop themselves with the organization.

4. Supervisory Training

To maintain and enhance supervisory effectiveness periodical training programmes are conducted in CRL. The first series of such programmes covering all supervisors was designed to acquaint the supervisors with certain basic concepts of supervision and management. Covered the basic principles of supervisory styles in management. A one day programme on "performance Appraisal System" was also conducted for all supervisors when a revised Appraisal Form was introduced. Senior Supervisors were also given a one week training on decision making aspects in addition to the above mentioned programmes. Apart from them programme on industrial safety and fire fighting etc. are also given from time to time.
5. **External Training Programmes**

On the basis of training needs assessed through periodic performance appraisal, the employees are sponsored for training programmes organised by the external specialised agencies. The company also sends employees to participate in seminars and conferences organised by specialised professional organisations, and institutions.

6. **Worker Teacher Training**

Workers are sometimes sponsored to participate in the programmes organised by Regional Centre for Workers Education. Such programmes help to inculcate responsible leadership among the workforce. CRL already has several worker Teachers developed by the Centre and efforts were made to organise unit level classes in the company so that their knowledge may be shared by other workers also and this process may continue.

7. **Self-Development Programme**

The Company has evolved an educational assistance policy for workers self-development for the purpose of mutual benefits to the company and the individuals. Assistance is being granted in the form of cash to the extent of 2/3rd expenses of the programme and special leave for attending the examinations are granted under this policy.
8. **Other Programmes**

Besides the above mentioned programmes there are several other programmes for imparting training to apprentices and students of MBA, MSW and Engineering Courses depending on circumstances and availability of training facilities.

**CONCLUSION**

We are living in an age of rapid industrialization and rapidly changing technology. Cottage and small scale industries where manual work was pre-dominant have yielded place to large and capital intensive industries. In lieu of hands, small tools and equipments, heavy and gigantic machines are being used in the factories now-a-days. Technological change has also led to the use of machines run by electronics and power and they are changing day by day in such a fashion that today's skilled becomes ignorant of tomorrow's change. Moreover, management technique are also changing constantly with the change in social outlook and value system in the society. Methods and techniques of managerial decision making have also undergone substantial change. Labour that had been regarded like any other factors of production are now being considered as human being and thus they are getting their real status in the society.
Thus new machines, new tools and equipments, new methods of work, new social outlook and the need for raising productivity have necessitated continuous training and manpower development programmes at all levels of hierarchies in the organization. Human resource development and training programmes are simultaneously beneficial to the employees and the organization both and hence important. At one extreme training consists of a few hours of induction by the supervisor while on the other extreme it consists of formal courses designed to develop qualified specialist over a period of years. In between there are countless programmes tailored to suit the needs of particular organizations.

There are various types of training like pre-job and the post-job. Under these two broad categories there are several variants such as institutional, apprenticeship, on-the-job and vestibule training. In all kinds of training several steps are generally involved. These steps are identifications of training needs, examination of the occupation chosen and their analysis, selection and appraisal of trainees, setting training objectives drawing a syllabus, planning the training programme, implementation of training programme, audit of training and finally follow-up action. In doing so application of learning theory must be considered at different steps and stages.
There are several methods of imparting training. Some of them are common to all kinds of training whereas rest of them are already demarcated for operatives' training and managerial training. These methods are lecture, discussion or guided conference method and the case study method. Then comes simulation training which is exclusively meant for executive training and consists of management game, in-basket technique, role playing, and sensitivity training etc.

All the refineries are very large in their sizes and complex in their operations. Despite the fact that machines are mostly automated, the complexity and technicality of machines, tools and equipments used there in can not be taken lightly. So far as the size of workforce is concerned IOC alone has 32,000 employees in all, one fifth of which are officers and they are scattered over 300 units. The company is fully aware of the importance of human resource development. It has given full recognition to it and as a mark of this recognition has already launched HRD programmes. Under this programme the following aspects are covered: 'Role Analysis; Goal setting and appraisal; feedback and counselling, recruitment and selection; succession planning; career planning and forecasting; job recruitment; job re-design; and role development.
It is the company's philosophy that the inherent potential of everyone should be developed for better organizational performance. The training is usually meant for the development of knowledge, and skill and change in attitudes. Each and every employee seeks to develop his knowledge and skills and the corporation encourages and assists such efforts through formal and on-the-job training.

The Corporation has established one training centre in each refinery, pipeline division, marketing division and it has started Indian Oil Management Academy at Haldia to cater to the training needs of the employees. These centres are imparting training to the officers as well as staff. The duration of training may be one session to one year for different kinds of employees.

All the centres are fully equipped with all kinds of modern training aids like audio-visual, over head projectors, opaque projectors, cinema projectors, video-cassettes, tape recorders, T.V. sets and so on so forth. The methods adopted for imparting training also range from lecture methods to discussion, conference, role play, case discussion, in-basket, management game and sensitivity training etc.

Apart from IOC refineries CRL and other units of HPCL and BPCL and other independent units are also having adequate training facilities for their officers and the staff. On the whole training inputs as well as training out-puts both have been found to be quite satisfactory in the refineries.