CHAPTER VI. HUMAN RESOURCE DEVELOPMENT - TECHNOLOGICAL ADVANCEMENT

(6.1) Technological Developments

(6.2) Human Capacity and attitude

(6.3) Impact on the management of human resource

(6.4) Implications

(6.5) Resistance to technology development and Automation

(6.6) Future projections of developmental need.
Meaning:

The term technology is now commonly used to refer to the physical plant and equipment which employed in the production of goods or services. It relates to the machines which may be electrical or electronic in the organisation. These artefacts of an industrial civilisation are instruments which embody ideas about how to cope efficiently with the material world, but they are not the only ones which do so.

Some are theories or beliefs about what will cause what to happen, or about what needs to be done to create some product or service. Some are, ideas about how to organise people and their activities for maximum effect. The techniques of industrial engineering or the methods of organising workers in a monomous work group have as much claim to be included in the meaning as the machine systems already referred to.

The way in which work is divided into discrete jobs, allotted to individuals as a set of duties and co-ordinated into an ultimate whole, is itself a part of technology.

(6.1.2) TECHNOLOGICAL TECHNOLOGY:

The economic history of man is one of developing and power tools which can be used to bend the natural world to his ends with the least expenditure of physical or mental effort. In the early stages of his development his tools extended his capacity but remained dependent on his physical strength.
and powers. Subsequently, water, fire and wind were drawn into supplement this, and man ceased to be the main source of power or the prime mover. With the development of steam power in the early years of the industrial revolution, this became a prime mover of greater power and flexibility until it was replaced by electric motor and the internal combustion engin which permitted ever greater flexibility. All of these developments, however, were primarily concerned with reducing the need for human effort to move materials.

(6.1.3) ELECTRICAL AND ELECTRONIC TECHNOLOGY:

The utilisation of electricity, in the form of a current which was capable of flowing, and of the electronic pulse with a similar capability, opened up new possibilities for control — not only of mechanical but also of logical activities. The harnessing of electronics, initially through the thermonic value and later through the silicon chip, facilitated the development of more precise control of movements and locations, as well as of numerical values. Not only was the workers strength thereby supplemented and eventually supplanted, but so also was the judgement necessary to decide about which actions to take.

Recent advances have made their main impact on the information processes associated with the control of production activities, where the earlier ones more particularly affected the physical or motor activities involved in work. This development
focuses on the capacity of the computer to process vast amount of data quickly - in fact, more quickly than the human brain.

Therefore, this development makes it main impact on office workers concerned with information processing rather than on manual workers. These developments have in turn brought about two major changes in the worker's relationship to one's work:

1. The progressive take over by the machine of the physical effort required to perform work - in the sense that, for example, a hydraulic press enables much more physical pressure to be applied that human beings could muster on their own.

2. The assumption by the machines itself of responsibility for much of the precision in location of, and action on, materials and components which had previously been supplied by the skilled workers, so that the machine now supplies much of the perceptual and judgemental skill previously supplied by people.

(6.1.4) Technologies used in Life Insurance Corporation:

Most of the uses of technology in the corporation generally utilized are computer or micro processor based. Some help in improving the efficiency and effectiveness by doing jobs in a much better, faster and with lesser errors in operations. Other directly affect policy holders by giving them a greater sense of service.
Technologies used by the corporation are as follows:

Computer:

Computer play a pivotal role in the automation of operations and services in the organisation. Computers are available in various sizes and have various names but they all work essentially in the same manner. Mostly corporation have Micro Computers. Micro Computer are faster and have more memory than an ordinary computer does. A larger or more complex Branch might use a mini computer as well as micro computers. Small branch have the data capture unit (DCU). In the corporation, micro processors are used in the big branches and Divisional Offices to print commission bills for agents, renewal premium receipts for policy holders, trial balance for office use and salary for office employees. Data Capture Unit is used only for data entry and to print the check list of captured data.

Equally important in a computer system is the software or the programs. Many computer programs used in the corporation, are standard software packages specially designed for specific purpose such as commission printing, RFR's etc. This software is supplied only by the Central Office.

Electronic Typewriter:

Electronic Typewriter is a latest technology used by the corporation. In Divisional Offices, this typewriter is used for printing important letters, Circulars, fleses etc. This typewriter typed the dark impression and its letters are same as printing press's letters. This is a very costly typewriter and its maintenance is very expensive.
Computer
Intercom - System :

Intercom means many phones in an office and divided into many numbers are connected with a machine which installed in that office. By using intercome one employee can talk to another employee who is sitting to another seat. The corporation is also using this system.

Fax - Machine :

Fax machines are used in Divisional, Zonal and Central offices of the corporation. Any printed message can be sent within one minute to all over India with the help of this machine. Corporation is using this machine for receiving complaints, messages, figures, current circulars immediately from other offices.

E.C.R. (Electronic Cash Register) :

Corporation is using E.C.R. for receiving premiums from the policy-holders. With the help of ECR one premium can be deposited within 30 seconds. It helps the cashier to write cash book and putting stamps of date, cheque. Corporation is using ECR since 5 years. By using ECR, corporation is providing quick services to its policyholders.

Word Processors :

Word processor ties together two technologies, the typewriter and the computer. Material is typed into a computer and the operator can read what is typed on the screen. If changes need to be made, the appropriate matter is recalled to the screen, and any insertions or deletions are made.
Continuous upgrading of technology is essential to survive in competition and for progress. Fear of changes, fear of new technology will be present at all levels of managers and staff like fear of learning new systems, fear of losing one's importance, even fear of losing one's job. Continuous efforts are needed to create confidence, to build mutual trust and to enable people to learn new competencies and develop existing skills.

Management styles will have to change from feudalistic, beaurocratic, procedure oriented and order-compliance style to democratic, collaborative, system oriented, new work communication oriented style. This is especially true for large organisations whether in public sector or in private sector.

Running through the chain of strategies listed above is the thread of Human Resource Development. The researcher observed clearly the importance of the individual to the organisation. Hence, the need for the one to nurture and faster the other and the need to realise the significance of new Technology.

(6.1.5) Impact of Technological Changes on the Corporation:

All technological changes have come into force in the corporation since 1979-80. Before technological changes corporation was not providing better services to its customers so its business was not increasing rapidly. In 1979-80, corporation's new business was Rs. 2744.33 crore from individual policies and Rs. 5262.06 crore in Group Insurance policies. After fourteen years from 1980 to 1994 with technological development in 1994 its business became Rs. 42017.23 crore from individual and Rs. 38728.88 crore from Group
insurance. Corporation achieved this good target only by the technological changes. At present policyholders are satisfied with the services of the corporation. They are receiving good, fair and prompt services from the organisation. Life Insurance Corporation is adopting new technologies day by day. Recently Corporation has gained the premium income of Rs. 13,500 Crore in the financial year 1995-96 and insured 110 lakh people in India. Comprison of corporation's progress before technological changes and after technological changes is given below:

<table>
<thead>
<tr>
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<th>Before Technological Changes</th>
<th>After Technological changes</th>
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<tbody>
<tr>
<td>Individual Business</td>
<td>2744.33</td>
<td>32196.30</td>
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<tr>
<td>Group Business</td>
<td>5262.06</td>
<td>28941.78</td>
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<tr>
<td>Prem. Income</td>
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Note: @ figures are not available
Since 1971, new technologies are continuously implementing in the corporation. Before 1971 some ordinary technology was used. The Chairman of the corporation had decided in 1971 with the consent of Government of India for introducing computer in the corporation, Trade Unions and all employees had opposed the computer. They were thinking that after the installation of computer in the corporation, employees would be shorted-out, promotions of the employees would be stopped as well as there would be no new recruitments. The biggest union of the corporation, All India Insurance Employees Association had also opposed that new technology forcefully. The top management of the corporation were assuring the employees that after the installation of computers, no employees would be shorted-out and promotions of the employees would not be stopped. Top management was saying that the purpose of installation of computer was only providing good services to the policyholders and maintain properly all records of new business and force business. AIIEA had not believed the verbally assurance of the management and they wanted the above assurance in writing as well as AIIEA had decided to go on a long strike.

Seeing the position critical, the management of LIC had given a written assurance and a agreement had been made between the management and the Trade Unions. In that agreement the following were included :-
- No employee of the corporation would be shorted out
- Promotions of the employees would not be stopped
- Fresh recruitment would not be stopped
- Computers would be installed only in Divisional Offices and big branches only.
- Operating staff for computers would be selected among the permanent employees of the corporation.

After the above agreement, new technologies i.e. computers began to install in the offices. The attitude of the management, Employees, Trade Unions and Policyholders about the new technologies are as follows:-

**MANAGEMENT'S ATTITUDE:** Management of the corporation became free from all the troubles which were occurred by the working staff of the corporation. Before technological advancement, managers were depend on the employees for all kinds of work and now due to introducing new technologies all the work of the office can be done by any of the employees. New business of the corporation have increased after the implementation of new technologies and it has became very easy to maintain all the records of new business and force business. Managers of the corporation says that since the fax machine has came in the corporation, any confidential written message can be sent within one minute without the help of class III and class IV employees. The management of the corporation became free from all the worries about the office work and providing services to the policyholders. Because half of the services are automatically provided to the
policyholders with the help of new technologies.

After all, the management of the corporation is very happy and satisfied with the implementation of new technologies and now they want that more new technologies should be implemented in the corporation time to time.

**EMPLOYEES ATTITUDE**: Many employees of the corporation had became happy with the implementation of new technologies and some employees were not satisfied and were angry because they thought that after the implementation of new technologies their monopoly related to office work would be finished.

The researcher has found that some employees of the corporation are not satisfied with new technologies and they are very sad because their daily output of office work is used to known by the supervisor with the help of computer and they want to throw this new technology i.e. computer. Such type of employees are in a small number. The researcher found that the attitude of mostly employees about new technologies are very good and satisfactory, they want that more and more new technologies should be introduced in the corporation as required.

**TRADE UNION'S ATTITUDE**: Trade Unions had not want the implementation of computers but they realised that the new business of the corporation is increasing day by day, and without the help of new technology, it would be very impossible to maintain all records of business manually in coming years and they had given their consent for the implementation of computers. Recently a
agreement has been made between the management and the trade unions for full computerisation and networking of all the office of the corporation. For full computerisation, trade unions has demanded a extra increment for all class III and class IV employees and it has been given to all those employees.

The attitude of trade unions are not in opposition for implementation of new technologies but they want that due to implementation of new technologies, there should not be any danger in employee's service and their career. They say that they know very well, the implementation of more new technologies is very essential for providing better services to the policyholders, spreading new business and maintain it and compete in the international market.

**POLICYHOLDERS ATTITUDE:** When new technologies had introduced in the corporation, policyholders and people had became very happy. After implementation of new technologies, they began to receive all kinds of services timely. Before 1971 people were not interested to be insured because in that time corporation was not providing proper services to its policyholders but now the attitude of policyholders and the people have changed and 90% policyholders are satisfied with the services of the corporation and they are taking interest in corporation's policies. During the investigation, the researcher has found that 90% policyholders and 65% people of the society have had welcomed new technologies - implemented in the corporation and they say that it is necessary for the corporation to adopt more new technologies.
Thus, knowing the attitude of the above parties, it can be said that new technologies have been welcomed by the management, employees, trade unions and the policyholders. With the introduction of new technologies, the new business of the corporation has increased, investment of the corporation has also increased and customers are satisfied with the prompt services of the corporation.
In Life Insurance Corporation, the purpose of the management basically is to achieve maximum output with the minimum input. The extent to which the management has achieved its goal only by developing new technologies in the corporation.

In the field of Human Resource Management, technologies has impacted the management by introduction of Electronic Data Processing, Computer application in personnel is still novel, except for few like payroll accounting, use of which is not very common.

Since the new technologies has been introduced, the management of the corporation have achieved these goals:
- Improvement in work culture
- Maximum, optimum use of installed facilities
- Increasing productivity
- Generating profits through control of cost
- Customer's satisfaction.

In near future, widespread computer applications in selection, manpower planning, manpower inventory, compensation, absenteeism, management development, etc. is evident. In Life Insurance corporation, we have not even began to scratch the surface and the sky is the limit. The escalating practice of computer and EDP is expected to give rise to three possibilities mentioned below which will alter the entire Human Resource Management Functions.
1. Through integration of personnel function in the general and top management policy making and decision making role.

2. The function itself will exhibit more objectively, effectiveness, and systems orientations.

3. The personnel experts will sharpen their own concepts tools and techniques and make a more direct contribution to the general process of industry and business.

This development changes many of the concepts and practices prevalent in general in the personnel area, and several predictions can be made as to the future direction of this function. Forward planning by the personnel departments can be accelerated, and personnel managers will have an opportunity to participate more in top management decisions that affect the future planning of the corporation.

(6.3.1) **Reasons for Utilisation** :

The various arguments cited by different owners for installing personnel EDP systems include:

* to expedite record and report preparations;
* to provide facts quickly;
* to improve quality and timeliness;
* to provide for rapid and accurate classification and reclassification of data;
* to establish systematic and efficient procedures;
* to provide more comprehensive data;
* to improve overall control;
* to permit cross comparisons of inter departmental
data;
* to reduce costs; and
* to improve long range planning.

(6.3.2) Use of EDP Systems:

The EDP system is utilised for different purposes and
in different degrees, which generally include processing of
variety of records and reports. The major classification of
these comprise of:

1. Selection & Placement Category:

   It includes employee history cards, selection data for
   promotion, transfer, layoff, recall, roster of applicants
   and their qualifications, job specifications and test score
   analysis.

2. General Classification and Analysis Purpose:

   Such information as employee census reports, skills inven-
tory profiles, communication media effectiveness, attitude
survey analysis were among the data covered.

3. Merit rating reports include scores made by individual on
   the respective traits evaluated.

4. A tally of suggestions and grievances is usually class-
   sified by individual responsible, than by departments divisions
   and the overall company.

5. Records of education and experience and as well as overall
   manpower development analyses.
6. By far the greatest use of EDP is for payroll data. Tax reports, income/deductions from the employee's gross earnings are processed more frequently. Other records often incorporated in the EDP system are payroll records, salary payroll, overtime earnings, day or hourly payroll, pension receipt records, fringe benefits records, average wages or salaries, profit sharing, and bonus reports, incentive earnings, sick leave costs, and illness and accident costs. These all help in effective payroll administration.

(6.3.3) **What are the Problems:**

Inevitably, a variety of problems had been encountered in operating personnel EDP programmes. More than 50% of the companies utilising it, has some trouble in controlling the accuracy of input information, some organisations had difficulty in foreseeing their requirements of records and reports for future planning. Changing over to EDP, co-ordinating work between personnel and the computer centre, programming and designing records and tailoring EDP to fit personnel needs were other trouble spots often cited.

(6.3.4) **Advantages of EDP:**

Despite the problems, over three forth of the Divisional office replied that personnel EDP installations improved payroll accounting, speeded up handling of personal informations and made possible less expensive and more accurate personnel records and reports. Uniform data, improved cross-comparison and analysis of
data, more accurate forecasting and planning, tighter control of personnel operations, and better managerial decisions on personnel matters were other benefits pointed by some Divisional Offices.

Thus, it can be concluded that EDP plays a very significant role for harnessing human development, a system as yet only partly utilised. The records and reports required for sound planning, operating and controlling personnel areas continue to grow in number and complexity. Effective and prompt decisions can not be made without facts or with partial facts only, and EDP provides an orderly, systematic, and fast approach to gathering coordinating and reproducing vast areas of personnel information for superior to manual operation, and at lesser cost.
It has been realised by the management of the corporation in 1971 that the new business of the corporation was not increasing as it should be increased. During last few years, they tried to find out the reasons. Many discussions, seminars and analytical work had been done to analyse the reasons. At last they had found the reasons of not increasing new business. The reason was, the policyholders were not satisfied with the services of the corporation and the corporation was unable to provide better services to its policyholders because at that time there was the lack of new technologies.

Corporation had decided to implement new technology i.e. computer. Initially trade unions were not in favour of computer and they had opposed. Many negotiations had been made between the management and the leaders of the trade unions and it had been decided that the computers would be installed in the corporation as per trade union's conditions.

When the corporation had started the installation of computers, many problems had come before the management. There were no trained staff for operating computers and the corporation could not recruit new staff for computers as per trade union's agreement. The corporation had faced the problem of trained staff and had started to give sufficient training about the operations of the computer to its staff but the staff could not be fully trained and many errors had appeared in the work so the corporation had decided again for providing training by the manufacturer.
of the computer and after few months the staff had became fully trained and they had started to do office work with the help of computers in place of manual working.

An assurance has been given to the trade unions by the management of the corporation before the installation of computers that the promotions and fresh recruitment would not be stopped but after installation of computers, promotions and new recruitments had become very slow.

Now all the branches of the corporation are being fully computerised. In this respect as per the demand of the trade union, one extra increment is provided to employees engaged in this respect.

Hence, on one hand the trade unions demand is adhered and on the other hand management is satisfied that it has succeeded in implementing the problem process.

Recently, the corporation have started a computer training centre at Gurgaon. In this centre, all the office staff of the corporation will be trained for full computerisation. Trainers have been selected from open market and some trainers have been selected among the officers of the corporation at the level of A.D.M.
The introduction of computer in the corporation has created an atmosphere of impatience, anxiety and fear among the workers. Obviously when technology take place of man there is an impending danger of unemployment. The labour unions feel that where the computers are introduced, the workers become surplus and consequently their retrenchment takes place. They also apprehend that even if they are not retrenched then their chances of further promotions would be marred by the introduction of technological development and automation. Further it is also feared by them that the process of employment come to a stand still as the use of scientific appliance reduces the demand of manual labour.

When it is visualised dispassionately at the change, the researcher observe that there is substance in workers apprehension about their future due to introduction of computer in the discharging of various functions of the corporation. There is no doubt that use of computers brings forth additional efficiency in the working of the corporation but the resistance of labour fallout can not be ignored. The programs of this transformation should be phased out to minimise the devil if it cannot be eliminated altogether. The policy should be designed that the existing staff is not thrown out of employment but is assimilated in the process of change.

It is a good sign that the administrators of the life insurance corporation is alive to this resistance and are determined to tackle this resistance through negotiations with the trade unions. They held a full dressed meeting with them to discuss the entire issue and to ascertain the areas of agreement with them. After the
heotic efforts the corporation and trade unions came to any understanding. Consequently a memorandum of understanding between them was framed. It consists of the following points:

1. Life Insurance Corporation of India would embark a program of phased introduction of new technological development and automation.

2. As provided in the scheme, the life insurance corporation restate that there would be no retrenchment consequently to introduction of new technologies.

3. It is agreed to between the corporation and the trade unions that introduction of new technologies would not result in ban on necessary fresh recruitment. It is envisaged that with the introduction of computer, business would expand and the industry would continuous to recruit to manpower commensurate with the organisational and premium growth, expansion in business and operations and increase in documentation and claims.

4. While there would be some re-development of employees consequent to introduction of computer, there would be no compulsive transfers outside city/town of posting as a result of computers.

5. There would be no recruitment on temporary employment basis for computers.

6. Members of staff in class III i.e. Assistant/Higher Grade Assistant directly employed in the operation of computer would be trained as outlined by the Life Insurance Corporation for the function.
7. Functional Allowances for the computer staff would be paid.

8. Substantial part of the microprocessors (computers) and support materials would be owned by the Life Insurance Corporation.

9. A suitable structured grievances machinery would be set up at various levels of offices to process and decide upon employee's grievances arising out of introduction of microprocessor. At the same time, it was the intention of the management to introduce of system of grievance redressal of employees generally.

10. While finalising improvements in the promotion policy, on exercise which was in hand, Life Insurance Corporation would take the impact of introduction of microprocessors into consideration.

11. There would be output norms for Data Entry operators fixed at 1000 key depressions per hour.

12. After having recruited 60 system analysts and analysts programmers would be through promotions/transfer within the industry.

13. Corporation would embark upon adequate and appropriate training programme of all those required to be trained.

14. Process of consultation with the trade unions would be an ongoing regular exercise with formal meetings as and when necessary.
After the memorandum of understanding between the trade unions and the management, corporation has started the installation of computers. In 1990, the management of the corporation felt that there should be full computerisation of the branches because new business of the corporation was increasing rapidly and the corporation has realised that in coming years there would be very impossible to maintain all records of new business and would be impossible to provide better services to the customers and compete international market in the field of Life insurance. They decided to do full computerisation of all branches and networking but the trade unions has opposed forcibly. The leader of the trade unions were not want to full computerisation of all branches and networking and they decided to go on 2 days strike. Trade Unions had done many strike upto 1993 for against fully computerisation. A agreement has been made between the management and the trade unions. According to that agreement a extra increment has been given to all class III & IV staff in the place of full computerisation and networking. With the consent of trade unions, corporation has became free from this worry and has started full computerisation of big branches.
With steady growth in the annual business of the corporation over the year, the number of policies serviced have been steadily increasing and the number of offices have also considerably increased. With the significant increase in the volume of work spread over a larger number of offices, it is right now to have a look at future projection and developmental need and work system in the corporation so it will be possible to improve services to the policyholders. The size of the corporation does not impair its efficiency so long as timely and effective measures should be taken for future.

The researcher has found after the survey of different offices of the corporation that in coming years, the speed of increasing business will be very fast and the corporation will be unable to maintain the record of new business systematically and will be unable to provide services to the policyholders. It is necessary for the corporation to develop their resources and adopt modern technologies to meet the requirements and challenges more reality. In the endeavour the corporation should introduce the following at their end:

1. **Front-line Computer** :-

   Corporation should install Front-line computer systems in all branches. Under this system, three areas of the branch will be computerised. They are as follows:

   i. P.S. Enquiry

   ii. New Business

   iii. Cash
In each area the P.C. will work the following jobs:

**P.S. Enquiry**: There will be a P.S. Enquiry counter. This counter will provide the following information:

- Revival Quotation
- Surrender Calculation
- Loan Calculation
- Change of Address
- Loan Schedule
- Information about Status of Policy.

**New Business**:

- Exact premium calculation
- *N.B.* Data Capturing from proposal form
- Proposal Number will be allotted
- Proposal Register and Review Slips will be prepared
- Underwriting suggestions will be made by the computer
- After the decision of the underwriter, proposal deposit **schedule** will be adjusted by the computer.
- Policy Number will be allotted
- Acceptance letter along with First Premium Receipt will be prepared.
- First Premium Commission will be released
- Premium Income of Dev. Officer will be calculated
- Policy printing
- Policy despatch register will be prepared
- Medical bills of Doctors will be prepared
- Completion Register will be prepared every month
- Proposal deposit schedule will be prepared
Cash Counter:
- All sort of collection
- Premium Collection
- Calculation of premium, late fee/interest
- Automatic update of master file
- Premium, Policy, Proposal, Misc. deposit register will be prepared
- Paying slip-bank wise will be prepared for cheque and cash.

There should be two terminals each in cash, N.B. and P.S. enquiry. Naturally two persons will be handling the P.C. in each department. At the movement if we analyse the whole data in particular reference of "A" Branch, which is selected as pilot branch, then we find that altogether eleven employees are there in cash, 21 employees in N.B. department and sales department and suppose two are involved in P.S. enquiry, then even by this, the total no. of surplus or redundancy will be amazing. Initially for giving the data support, employees might be utilised but ones the data is completed the actual need will be reduced to six only. As no signature other than the cashier will be required, the supervisor will be also redundant. Since the record will be maintained by computer, the record clerks, will be redundant. As review slips, policy document and all related documents/statement/register will be prepared by the computer, the typists will not be required.

And above all who knows whether the system itself will prove once again backdated to the time, thus making the Front-line System itself redundant like I.B.M., Data Entry Machine, DCU and Electronic Cash Register.
The properly management system consists of a number of individuals programs, that together manage the front and back office system. Corporation should make program for adopting the P.M.S. The functions of P.M.S. are highlighted in the table. Some of the few benefits of P.M.S are as follows. *1*

1. To improve operational efficiency by eliminating repetitive tasks and by having information current and readily available.

2. To improve policy holders service through accurate, faster dissemination of information and new opportunity to keep track of policy holders likes and dislikes.

3. To improve internal operational controls by a level of standardization that is difficult to establish and maintain in a manual system.

4. To save money by improving efficiency, reducing payroll and eliminating outside service bureau costs.

Footnote :