UNIT-1

Introduction to Industrial Psychology

Definitions & Scope

Major influences on industrial Psychology

What is Industrial Psychology?

Industrial Psychology is the study of people at work in industry and business.

The two words "industry" simply pertains to activities relating to manufacturing, trade or business. The word 'psychology' denotes the science of the nature, functions and phenomena of the mind or mental activities of a human being or simply put psychology of human behavior.

Industrial Psychology is the study of people at work, the study of their aptitudes, and their qualifications for jobs. It includes the principles and practices of training in the skills and attitudes for Industrial work.

Industrial Psychology is a complete study of many things but primarily, it is the study of people as individuals or in groups –at-work situation.

The study of people as 'individuals' involves studying the qualifications of a person for a job, his work history, his intelligence, his special aptitudes and interests and above all, relating these qualifications to the requirements of the job and interpreting the results.

Importance of Industrial Psychology: -

Since Industrial Psychology is the study of people at work and is concerned with the entire spectrum of human beings. Its scope is the entire process of management dealing with people at work. There is hardly a field in industry where human understanding is not required; there is hardly a problem in industry and business where human aspect is not involved and hence there is hardly an area in which industrial psychology cannot play its role. Industrial psychology is a useful aid to the efficient management of people at work.

Areas:

- Recruitment
- Selection and Placement
- Executive Development and Training
- Promotional Schemes
- Motivation
- Attitude and Morale
- Wages and Salary Administration
- Human Relation
- Accident Prevention

Recruitment

Appropriate matching of job requirement with the employee's abilities lead to reduction in the cost of hiring, supervision and production. Accurate job analysis, standardized application forms, scientific screening of applications, use of psychological tests for vocational fitness, final overall rating and continuous review and check-up of the entire programme are some of the spheres where the psychologist can make an important contribution several psychological tests may be developed for the proper screening of the people.

Selection and Placement

Right man should be selected for the right job and industrial psychology helps in this effort also. It develops various devices such as interviews and psychological tests in order to achieve the objective of the selection. It also helps the placement of workers at different jobs scientific assignment of job is possible only with the help of industrial psychology.

Executive Development and Training

A psychologist by studying and investigating managerial problems like delegation, communication and supervision vitalizes the already practiced managerial psychology. Individual differences can well be measured by psychological study of the people for training purposes. Continuous and effective use of the capabilities of workers necessitates training of the workers and supervisors. Psychology determines what type of training should be given to the workers.

Promotional Schemes

Why a man should be promoted or transferred or demoted or discharged. These employment situations should be based on abilities, usefulness and seniority. Performance appraisal is one of the psychological techniques to recognize the peoples' ability mere seniority should not be the guiding principle for promotions.

Motivation

The psychologists assume that the causes of different types of human behavior in industry and business are the needs or the motives that drive an individual to behave in a particular way. Industrial psychology problems into behavior of people at work to determine the conditions in which an individual or people at work to determine the conditions in which an individual feels motivated and is willing to work whole-heartedly to maximize the productivity. Industrial psychology has identified the financial and non-financial incentives which are used by the management to motivate the personnel.

Attitude and morale

- The psychologists have established the relationship between the attitudes of the employees and their performance. Psychological studies outline the major factors favorable or detrimental to good morale and give some class as to the steps which can be taken to give further understanding of needs, perceptions, satisfaction and motivation of people in relation to their working situations.

Wages and salary administration

- The wage rates in the industry should be fixed on some suitable and scientific formula. The psychologists have developed the techniques of job evaluation, merit-rating and job analysis as basis for rational wage and salary structure. Job evaluation and merit-rating are the techniques which evaluate the worth of the job and of the man respectively.

Human relations

- Human relations may briefly be described as the relations or contacts among individuals in an organization and the group behavior that emerges from these relations. The modern industrial psychologists treated people in industry as human being and have made significant contribution to industrial management by developing concepts and techniques of effective leadership. They suggest the possible ways and means to solve the industrial strife.

Accident prevention

- The psychological studies show that 98% of the accidents in industry are preventable. It means personal or psychological factors play an important role in any programme of accident prevention. Monotony and fatigue studies help in minimizing the accidents. Psychologists have made the contribution of signals to the development of safety programme and the preservation of human factor in industry.

Scope of Industrial Psychology

- Work Behavior
- Management
- Environmental Design
- Product Design
- Human Relations

Learn to Handle People

- Avoid Criticizing People
- Don't Condemn People
- Don't Complain Against People
- Give Your Sincere and Honest Appreciation to People
- Arouse in Other Person an Eager Want
- Be Genuinely Interested in Other People
- To Make a Good First Impression……Smile
- Call the People by Their First name
- Be a Good Listener

- Keep Other Person's Interest in Mind While Talking
- Make the Other Person Feel Important
- Don't Attempt to win on Argument
- Never say to Other Person "You are Wrong"
- If You are Wrong Admit it
- Begin Your Talk in Friendly Way
- Ask Gentle Question to Get "Yes, Yes" Response
- Let the Other Person Do a Great Deal of the Talking
- Give the Other Person Feeling that the Idea is His
- Try to See Things from other Person's Point of View
- Be Sympathetic with the Other Person's Ideas and Desires
- You Must Appeal to the Nobler Motive
- You should Dramatize Your ideas
- You may Throw Down a Challenge to Others

Needs of an Individual

Good human relations can only be established if the needs of an individual are satisfied and his/her will to work is stimulated. This presents the difficulty that management is dealing with a group of individuals, all of whom may respond differently in a given situation.

Major influences on Industrial Psychology

The findings, principles and techniques of industrial psychology may have major influence in the following few areas of management:

- **Employee selection and placement**
- **Employee training and executive development**
- **Human Engineering (Equipment design)**
- **Motivation**
- **Morale**
- **Counseling**
- **Financial Remuneration**
- **Working conditions**

WHY INDUSTRIAL PSYCHOLOGY IS ESSENTIAL FOR ENGINEERS?

- The following points highlighted the essential nature of industrial psychology for engineers.
- The knowledge and technique of motivation provided by industrial psychology helps the engineer to get the wok done through the efforts of the workers without much hardship.
- Since the physical aspect of the work environment have great influence on the output and safety of workers, the engineers by properly manipulating this aspect can greatly improve the output of the employees as plant engineers and also avoid accident as safety engineers.
- The data, provided by industrial psychology is essential for the design engineers to design the proper machine and equipment, tools etc., to get the greatest efficiency of man-machine system.

Scientific Management

- In general scientific management is defined as the use of the scientific method to define the **"one best way"** for a job to be done.
- According to Taylor, **"Scientific Management is the substitution of exact scientific investigation and knowledge for the old individual judgment or opinion in all matters relating to the work done in the shop."**

Henri Fayol –Theory of Management

- Fayol began by classifying all operations in business organizations under the following six categories:
- Technical (production)
- Commercial (purchases and sales)
- Financial (funding and controlling capital)
- Security (protection)
- Accounting (balance sheet, costing records) and Administrative or Managerial (planning, organizing, commanding, coordinating and controlling).
- Fayol pointed out that managerial activity deserved more attention. In his view, management is the process composed of five elements of functions: planning, organizing, commanding, coordination and control.

Fayol observed

- To plan means to study the future and arrange the plan of operations.
- To organize means to build up the material and human organization of the business.
- To command means to make the staff do their work.
- To coordinate means to unite all activities and to control means to see that everything is done in accordance with the standards that has been laid down.

Scientific management and human relations schools Hawthorne Experiments

- Scientific management school of thought was developed by the pioneering contributions of individual like Charles Babbage, Fredrick W. Taylor, Gilbreth and Henry Gantt. They developed the managerial skill of job design through the division and specialization of labor and formulated the first approaches to mass production. They were the first to place importance on both the selection and training of workers.

Limitations

- However, there are a number of limitations to be considered in this school of thought.
- The scientific management's applications found to be useful only in stable work environment but not in dynamic complex organizations.
- The contribution placed too much emphasis on rational and economic nature of man..
- They tried to apply universal management principles to every work situation, without recognizing the uniqueness of some work environment.

Hawthorne Experiments

- The human relations approach to management developed as a result of a series of experiences (in all four) conducted by Elton Mayo and his associates F.J. Reothlisherger and W.J. Dickson at the Hawthrone plant of the Western Electric Company at Chicago in United States. The Hawthrone studies were aimed at finding out what factors really influenced the productivity and work performance of workers.

Human Relations Concepts: Findings of Hawthorne Studies

- The main findings of Hawthorne studies were as follows:
- 1. Physical environment at work place (i.e., working conditions) do not have any material effect on the efficiency of work.
- 2. Social or human relationship influenced productivity more directly than changes in working conditions.
- 3. Favorable attitudes of workers and work-teams towards their work were more important factors determining efficiency.
- 4. Fulfillment of workers social and psychological needs have a beneficial effect on the morale and efficiency of workers.
- 5. Employee groups formed on the basis of social interactions and common interest exercised a strong influence on workers, performance. In other words, informal organization controlled the norms established by the groups in respect of each member's output.