UNIT 1 INTRODUCTION TO ORGANISATIONAL AND INDUSTRIAL PSYCHOLOGY

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1.0 INTRODUCTION

We spend most of our lifetime engaged in working than in any other activity. Thus, I/O psychology is devoted to understanding our major mission in life. For years, psychologists have studied how human beings have interacted with their environments and each other, but industrial psychology begins to evaluate the interaction between people and their jobs. The main goal of the I/O psychologist is in making organisations more productive while ensuring physically and psychologically productive and healthy lives for workers.

In this unit, we will examine the fields of industrial and organisational psychology, and describe the differences and the merging of these two fields. We shall also distinguish among the various subfields of Industrial/Organisational Psychology, and finally get some idea of research in this field. When you have finished reading this unit, you should have some understanding of what industrial/organisational psychologists do at the workplace. Hopefully you would be stimulated enough to see yourself as an I/O psychologist in one of the fields of I/O Psychology. It is certainly one of the most challenging, rewarding and relevant discipline in contemporary times.

1.1 **OBJECTIVES**

After reading this unit, you will be able to:

- Define industrial psychology;
- Define organisational psychology;
- Differentiate between industrial and organisational psychology;
- Describe the major fields of Industrial/Organisational Psychology;
- Explain the process of research in Industrial/Organisational Psychology; and
- Differentiate among various methods of research in industrial and organisational psychology.

1.2 DEFINITION OF INDUSTRIAL PSYCHOLOGY

Industrial psychology may be defined as "simply the application or extension of psychological facts and principles to the problems concerning human beings operating within the context of business and industry" (Blum & Naylor, 1968, p. 4).

Let us begin by understanding the term industry. Wikipedia defines industry as "the production of an economic good (either material or a service) within an economy". By extension, the field of industrial psychology addresses itself to the wide spectrum of human problems that arise in the production, distribution, and consumption of the goods and services of the economy. The knowledge of human behaviour may be applied to product design, manufacture and distribution, not only in improving bottom lines for the employer, but also in making work more pleasant for the employee.

Industrial psychology developed from attempts to apply the theories, techniques and procedures of psychology to the practical problems of the workplace. Simply put, industrial psychology is the application of psychology to industry. Industrial psychology grew out of psychology's initial success in describing and measuring differences among people. There is little doubt that "the study of individual differences is a major foundation of the field" (Argyris, 1976, p. 152). It soon became clear to psychologists that the implications of such differences were in the areas of occupational choice, vocational guidance, personnel selection, job placement, and even counseling in organisations.

So what do psychologists really do in industries? Traditionally, industrial psychologists were concerned with the following:

- Selection and testing
- Personnel development: training, performance appraisal, attitude measurement, employee counseling, career planning
- Human engineering: Equipment and product design
- Productivity study: worker fatigue, monotony, absenteeism, physical aspects of work environment, for e.g. lighting and temperature
- Human relations: relations between supervisor and subordinates, and of labour union to management
- Others: marketing research, accidents and safety, etc.

As you can see, the psychologist working in industry does far more than give tests, a job widely believed to be his forte. Yes, psychologists have developed tests and are using them extensively. But, what the psychologist really does in the industry depends upon the size of the industry, what it does, and perhaps most importantly the attitude of the management towards psychology. Today there is hardly any known company that does not employ a psychologist or uses the services of one.

Traditional industrial psychology was however, not without limitations. Let us consider some of them (Argyris, 1976):

- A focus on description and prediction from individual differences, with little regard to the processes of human behaviour within organisations;
- A focus on selection and placement without extending it to development at either organisational or individual levels;
- Research methods (being experimental, precise, objective and too rigorous) resulting in the alienation of subjects.

Thus, industrial psychology has been regarded to have a narrow, over-restrictive range of interests that did not pay sufficient attention to the interpersonal, group and inter-group issues involved in behaviour in organisations, paving the way to the new field of organisational psychology.

1.3 DEFINITION OF ORGANISATIONAL PSYCHOLOGY

Interests in the social aspects of human work, largely ignored in traditional industrial psychology, led to the crystallization of the new field called 'organisational psychology'. As in the earlier section, let us begin by understanding the term organisation. Organisation refers to "a consciously coordinated social unit, composed of two or more people, that functions on a relatively continuous basis to achieve a common goal or set of goals" (Robbins, 1991, p. 4). Based on this definition you can see that manufacturing and service firms (or industries), retail stores, military units, hospitals, educational institutions, Non-Governmental Organisations (NGOs), other governmental or state agencies – are all organisations.

Activity

Pause for a moment and ponder, 'What organisations are you part of'?

(**Hint:** Is its composition conscious? Does it have more than two people? Does it function relatively continuously? Does it have a common goal or goals?)

As you would have noted, the definition of an 'organisation' is far wider than 'industry'.

The deeper psychologists' delved into the behaviour of individuals within organisations, the more they realised that the organisation is a complex social system that exists as a psychological entity to which an individual responds. This must be studied as a total system in order to cope with the full complexity of the person-related aspects of life within organisations. It was this realisation that created organisational psychology as a discipline in its own right. In the United States of America, this change was reflected in 1973 when Division 14 of the American Psychological Association (APA) changed its name from Division of Industrial Psychology to Division of Industrial and Organisational Psychology.

Organisational psychology may be defined as "the study of the structure of an organisation and of the ways in which the people in it interact, usually undertaken in order to improve the organisation" (Collins Dictionary).

The focus of organisational psychologists has changed from the individual per se to the individual as a member of a group or to larger units like groups and organisations. Organisational psychology examines the effects of work environments and management styles on worker motivation, job satisfaction, and productivity

Back in the 1970s, industrial and organisational psychology were recognised as two sub-groups in the field. The basic differences were the following:

Scope: Industrial psychologists were mainly involved in testing, selection, job evaluation, etc., while organisational psychologists were involved in individual and organisational change. While the former focused more on matching individuals with existing jobs, the latter were interested in modifying jobs, interpersonal and organisational conditions.

Orientation: Industrial psychology is individual-oriented, while organisational psychology is systems-oriented.

Research tradition: The research methodology in industrial psychology was largely experimental, empirical and objective; while organisational psychologists have been willing to use less rigorous, humanistic and clinical methods in order to obtain data.

1.4 DEFINITION OF INDUSTRIAL/ ORGANISATIONAL PSYCHOLOGY

Toady, when you will read most recent textbooks of 'psychology at the workplace' or something similar sounding, you will see that most of them bear the title "Industrial/Organisational Psychology" (abbreviated as I/O Psychology) or "Industrial-Organisational Psychology" (abbreviated as I-O Psychology). You might be beginning to wonder 'Is this a new field that combines both industrial and organisational psychology?' You are partly right.

Organisational psychology has now caught up with its 'older cousin' industrial psychology to form a strong and comprehensive field exploring diverse issues in the workplace ranging from individual topics like 'selection', to group ones such as 'women at work', 'groups', to organisational issues such as 'communication', 'corporate culture', 'organisational effectiveness', etc.

Thus, Industrial/Organisational Psychology encompasses both industrial and organisational psychology. In fact, Division 14 of the American Psychological Association, the Society for Industrial and Organisational Psychology "espouses the scientist-practitioner model in the application of psychology to all types of organisations providing goods or services, such as manufacturing concerns, commercial enterprises, labour unions or trade associations, and public agencies".

Let us now examine some of the sub-fields of Industrial and Organisational Psychology.

1.5 MAJOR FIELDS OF INDUSTRIAL/ ORGANISATIONAL PSYCHOLOGY

Industrial and Organisational Psychology (I-O) applies psychological concepts and methods to optimize human potential in the workplace (Wikipedia).

(Refer Figure 1.1).

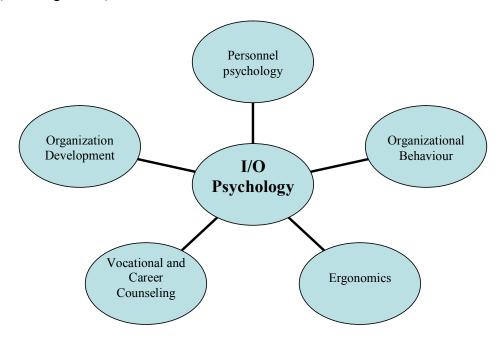


Fig. 1.1

If you choose to specialise in this area, you could be working in any (or more) of the following subfields:

1.5.1 Personnel Psychology

The term *personnel* (please don't confuse it with personal, meaning private) comes from person or people. So, personnel psychology is concerned with individual differences and therefore deals with all aspects of recruiting, selecting and evaluating personnel. For many years (and perhaps even now) personnel psychology dominated the field of Industrial/Organisational psychology, being the oldest and most traditional activities of I/O psychologists.

The thrust of personnel psychology is to study a job and the traits of individuals who hold the job, and then use this information to predict what kinds of individuals would do well in the future. Among other things, personnel psychologists study and practice in areas as employee selection and assessment, job analysis, performance evaluation, job evaluation, etc. Many professionals working in these areas use, construct or develop tests and other instruments that can be used to select or evaluate employees. Such tests have to be constantly evaluated to ensure that they are both fair and valid.

A survey by Rassenfoss and Kraut (1988) revealed that the most common activities of personnel psychologists are:

- Developing, administering and analysing employee attitude surveys
- Constructing performance appraisal instruments
- Validating tests
- Developing employee selection tests
- Conducting job analyses.

As you can probably guess, research and statistical analysis are extensively used by personnel psychologists. Those of you who fancy your chances in personnel psychology should brush up your statistics!

1.5.2 Organisational Behaviour (abbreviated as OB)

Organisational behaviour may be defined as "the study of individuals and groups in organisations" (Schermerhorn et al., 2003, p. 3). Organisational behaviour applies the scientific method to practical managerial problems. For example, if an organisation is facing problems of high employee turnover (employees quitting the organisation) or lack of team work among employees, an organisational behaviour scientist could be called in to study's the company and give his/her recommendations for reducing turnover or improving teamwork. When applied to organisations and the people in them, the word behaviour can refer to three different levels – individual, group, and organisational. The study of organisation behaviour thus involves looking at the attitudes, interpersonal relationships, performance, productivity, job satisfaction, and commitment of employees, as well as leader behaviour, organisational commitment, and even the relationship of the organisation with its environment, culture and processes. This field of study investigates the impact that individuals, groups and structure have on behaviour within organisations, and to apply that knowledge towards improving the organisation's effectiveness (Robbins, 1991). In contrast to personnel psychology that focuses more on individual-level issues; organisational behaviour is more concerned with social and group influences.

1.5.3 Ergonomics

This branch (also called engineering psychology) is concerned with modifying the work environment in order to be compatible with human skills and talents. The engineering psychologist addresses the human issues of organisation through the design of machinery and tools that take human limitations specifically into account. Psychologists in this area are involved in workplace design, man-machine interactions, design of equipment and machinery, to minimize fatigue and stress and to maximize productivity and safety. Such psychologists often work together with engineers and other technical professionals for activities such as designing of displays for airplane cockpits and automobile dashboards, computer keyboards, or home appliances that can be operated safely and efficiently.

1.5.4 Vocational and Career Counseling

A cross between counseling and I/O psychology, career counseling is a branch that assists individuals in making decisions about their lifelong roles in the world of work and in solving problems that arise in the course of this choice process (Crites, 1969). Through vocational counseling, individuals can determine the career path that is right for them, or may even be able to identify a new career they had not previously considered. They can also develop a search strategy to find a job once the best career path is determined. Career counselors may also administer personality, interest, or aptitude assessment tests to evaluate individual career potential. They may also attempt to resolve conflicts between work and non work interests and prepare individuals for retirement.

1.5.5 Organisation Development (abbreviated as OD)

Organisation development is a long-range, systematic effort, usually supported by to management, to improve an organisation's problem-solving and renewal processes in

an organisation, with the assistance of a change agent or catalyst and the use of the theory and technology of applied behavioural science (French & Bell, 1984). Psychologists in this area are focused on understanding and managing organisational change; the change may involve people, work procedures, or technology. A few examples of interventions include team building, sensitivity training, leadership development, Total Quality Management, to name a few. If these seem like big words (they may be new to you or you may have heard them before), stop for a moment and try to find what these terms mean. You may refer to http://www.encyclopedia.com/

1.5.6 Industrial Relations

The term industrial relations is made up of two components—industry and relations, and hence addresses the relationship between management and employees, particularly groups of workers represented by a union. Traditionally, industrial relations is used to cover such aspects of industrial life as trade unionism, collective bargaining, workers' participation in management, discipline and grievance handling, industrial disputes and interpretation of labour laws and rules and code of conduct. Industrial relations is heavily legislated, hence, a psychologist working in this area must have adequate knowledge of such laws.

As you can see, I/O psychology comprises of several subspecialties. Although some of them overlap, many are quite different from each other. I hope that a brief introduction of these subfields may have excited you and you can see a future for yourself in one of these specialties of I/O psychology.

Self Assessment Questions	
1) Define industrial psychology.	
2) Define organisational psychology.	
3) List three points of difference between industrial and organisational psychology.	
4) The subfield of Industrial/Organisational Psychology that is concerned with developing tests for employee selection is:	
(a) Organisation Development (b) Personnel Psychology (c) Ergonomics(d) Vocational and career counseling	

1.6 RESEARCH IN INDUSTRIAL/ ORGANISATIONAL PSYCHOLOGY

Critics of I/O psychology sometimes dismiss the field as simply common sense- a charge that is sometimes levied at psychology as well. After all don't managers and business executives understand human behaviour at the workplace already? For example, don't we all know that satisfied employees will be more productive? I bet you have answered 'Yes, certainly!' Well, it turns out that there is a very poor relationship between job satisfaction and performance. We can't always trust our common sense, right! This is where research in I/O psychology becomes important. There are important reasons of conducting research in I/O Psychology:

To understand and solve practical problems at the workplace, for e.g. causes of absenteeism that might help devise a program to reduce absenteeism and save costs for the organisation.

To enhance the organisation's efficiency. This is especially true if an industry has sponsored a research. It is generally not for idle intellectual curiosity, but to implement research findings to improve efficiency.

In order to test a theory. Once a theory has been formulated, predictions derived from it are generally tested through research. If they turn out to be correct, our confidence in the theory is strengthened. If not, the theory may undergo modifications and retested, or completely rejected.

In this section, we will briefly overview the process of research in I/O psychology and discuss some methods of research. Our aim here is not to make you an expert in scientific research, but to give you some insight into how research is done in I/O psychology.

1.6.1 Empirical Research Cycle

The research process follows five basic steps (Muchinsky, 1997):

1) Statement of the problem

The first step in conducting research is deciding what to research. Questions that initiate research may come from experience, previous research, personal hunch ('I think my employees who generally don't come to work on time lack commitment'), or some formal theory. Once a research idea has been created, the next step is to search the literature for similar research. Important sources are journals (for e.g. Journal of Applied Psychology), magazines (like Harvard Business Review) and increasingly the Internet. An extensive review of literature gives valuable pointers for design of your own research study.

2) Design of the research study

Research design is a plan for conducting the study to answer the question raised in the previous step. It includes deciding the location of the research, the sample that will be used, which type of research method to use, etc. We shall discuss some of the research methods used in I/O psychology in the next section.

3) Measurement of variables

A variable is anything that can vary. For e.g. employees can be 'high', 'low' or 'moderate' on job satisfaction and hence job satisfaction may become a variable of interest to the researcher. Broadly speaking, researchers are interested in examining

the effect of one variable (called the independent variable) on the other (dependent variable). As a norm, dependent variables are the focal point of the study. Consider the following example:

Gender
(Independent variable)

Job Satisfaction
(Dependent Variable)

Performance

Note that the same variable may be selected as either a dependent or an independent variable, depending upon the researcher's discretion. In the first case, the researcher wants to study the effect of gender (being male versus female) on job satisfaction. He might select two groups of male and female employees and then assess their job satisfaction. In the second case, the researcher wants to assess the effect of job satisfaction on performance. Now he might divide employees into 'high job satisfaction' and 'low job satisfaction' groups and then compare their performance to see if they are significantly different.

(Dependent Variable)

4) Analysis of data

(Independent variable)

After data has been collected, the researcher has to make sense out of it using some statistical techniques. A discussion of statistics is beyond the scope of this unit. You have already been introduced to some statistical measures (like mean, standard deviation, correlation, etc.) in Course 4. It would suffice here to say that sound knowledge of statistics is required to analyse and interpret data. The use of computerised packages like SPSS has made this job simpler, but remember the cardinal rule: 'Garbage in, Garbage Out'.

5) Conclusions from research

After the data have been analysed, the researcher draws conclusions. A conclusion may be that 'females are higher on job satisfaction than their male counterparts'. It is not just enough to state a conclusion, but the researcher also attempts to explain why. Whether the conclusions drawn from research can be generalised to a broader population or setting depends upon a number of factors, including the size of sample, whether the sample is representative of the population, and the degree of control in the research method used. Conclusions from research may lead to further statement of problem. The findings from one study influence research problems in future studies.

1.6.2 Methods of Research

We shall briefly discuss some of the major research methods used in I/O psychology in this section.

1) Experimental method

As you might recall from your Course 1 on 'General Psychology', in the experimental method, the researcher manipulates or systematically changes one or more factors (the independent variable) to study its effect on one or more other factors (dependent variable), in controlled conditions. Such experiments may be conducted in the labouratory (lab experiments) or in the naturally occurring organisational settings (field experiments). In a labouratory, the researcher has a high degree of control but less realism, whereas field offers less control but more realism. The choice often is not easy to make.

As an example, suppose we wanted to study the effect of temperature on productivity.

To make this experimental design, we could have two groups of subjects work on an assembly line (task being identical) while being subjected to low (say, 15 degree Celsius) and high temperature (say, 35 degree Celsius). Two weeks later we compare the productivity of the two groups. All conditions other than temperature must be held constant, for instance, the initial performance of the group, the equipment used, nature of work, etc. Statistically speaking, if there is a significant difference between the productivity of the two groups, it may be concluded that temperature effects productivity. This experiment may be conducted in a labouratory on any subjects (even college students, although that might lower the generalisability of findings) or in the actual work setting with real employees. The latter of course depends upon the company's willingness to participate, which is often beyond the researcher's control.

The major advantages of the experimental method are the ability of the experimenter to manipulate the independent variables and to randomly assign subjects to experimental conditions. This leads to drawing conclusions about cause and effect. However, since random assignment of subjects or actual employees is not practical at the workplace, this method is not very poplar in I/O psychology. When experimentation can be used with care and caution, however, it can yield results that are unmatched by any other form of research that helps us to answer complex questions about behaviour at the workplace.

2) Survey method

The survey method makes use of questionnaires designed to measure how people feel about various aspects of themselves, their jobs, and organisations. Undoubtedly, this is the most popular approach of conducting research in I/O psychology as it is applicable to studying a wide variety of topics reaching a large group of people. For example, if you wanted to study job satisfaction levels of employees, you could administer Job Descriptive Index, a popular scale having five subscales and 72 items, to measure job satisfaction. Questionnaires are also fairly easy to administer (personal interviews, group setting, on phone, email, etc.), readily quantifiable, and statistically analysable.

Questionnaires rely on self-report given by individuals as the basis for obtaining information. This is both strength and a limitation: when people are honest, self-report measures are likely to be accurate. When not (particularly when studying sensitive topics like an employee's intention to quit his job), it may lead to misleading results. Other practical limitations include a low response rate (generally lower than 50%) and difficulty in tapping precisely people's feelings about issues that they are themselves unsure about. Extreme care must be taken in designing survey questions so that they are easy to understand, use simple and unbiased language, and are relatively short.

3) Qualitative Research Methods

In contrast to the highly empirical approaches just described, I/O psychologists also use non-empirical, descriptive techniques, relying on what is known as qualitative research. The researchers who employ these methods are basically concerned with retaining the natural quality of the situation: naturalness of the behaviour, the setting and the treatment. Three such methods used are observation, the case method, and the archival method.

Observation is used in I/O psychology when research is directed to overt behaviours, for e.g. nonverbal communication in interview settings. Behaviour is generally observed in natural field settings over prolonged periods of time. Once categories of behaviour

are selected for observation, the researcher must devise specific methods of recording the desired information carefully and accurately. Observation is often a fruitful method for generating ideas that can be further tested with other research methods. For example, if you wanted to find out what effective managers *really* do, one way of doing this could be to observe effective and ineffective managers (as identified by, say their performance appraisal ratings) and come up with categories of behaviours on which differences are found. One potential drawback of this method is that observers can evoke reactive behaviour on the part of those being observed, and the behaviour that is observed may reflect the influence of the observer being in the study. Thus, acceptance and trust of the observer by the study participants is critical to the success of this research method. As a research method, observation is not used very frequently in I/O psychology due to considerable investment of time, energy, and cost.

The case method is a "qualitative research method in which a particular organisation is studied in detail, usually in the hopes of being able to learn about organisational functioning in general" (Greenberg & Baron, 1995, p.38). For instance, a researcher might be interested in studying employee reactions to the bankruptcy of Lehmann Brothers. He might study the organisation's history leading up to the event and some statistics summarising its aftermath (e.g., number of people who found jobs one month later, etc.). It is easy to see how helpful such detailed accounts of events in organisations summarised in the form of written cases would be to other researchers and lay people attempting to understand such a phenomenon.

Another method used sometimes by I/O psychologists is archival research, which involves using previously collected data or records to answer a research question. For e.g. if you wanted to assess the leadership style of CEOs' of several companies, one way would be to get them fill up questionnaires. Can you imagine how daunting a task that would be both in terms of permissions and trying to catch them? An alternative method would be to analyse already published interviews of CEOs (I bet you have read several of these in business magazines), the vision/mission statements of the companies, CEO's speech from the annual reports, etc. to understand their leadership styles. The advantage of using such an approach is that it is unobtrusive and relatively inexpensive. On the other hand, however, the researcher is at the mercy of the original collectors of the material – if they've done a poor job, the results of further research will be inconclusive or even misleading.

Each method has its strengths and limitations. The choice of the method chosen usually depends upon the variables under investigation, the expertise of the researcher, a cost-benefit analysis, and other practical considerations.

Self Assessment Questions

- 5) Generally, the research process follows five basic steps in which order:
 - a) Statement of problem-Design-Measurement of variables-Data analysis-Conclusions.
 - b) Statement of problem- Measurement of variables-Data analysis-Design-Conclusions.
 - c) Statement of problem- Conclusions-Design-Measurement of variables-Data analysis.
 - d) Conclusions-Statement of problem-Data analysis- Measurement of variables-Design.

- 6) The research method that uses self-report given by individuals as the basis for obtaining information is:
 - (a) Experiment (b) Observation (c) Survey (d) Case method

1.7 LET US SUM UP

In this unit, we have discussed a brief overview of the field of Industrial and Organisational Psychology. In the 1970s, industrial and organisational psychology were recognised as two sub-groups in the field, differing in its scope, orientation and research tradition. Industrial psychology was individual-oriented, while organisational psychology was systems-oriented. Today, the two terms may be used interchangeably (although purists would never permit this) or may be combined into a broader field of Industrial/Organisational psychology. This branch of psychology applies the principles of psychology to the workplace. The major subfields of I/O Psychology are personnel psychology, organisational behaviour, ergonomics, vocational and career counseling, and organisational development.

Psychologists also conduct research at the workplace to solve practical problems, to enhance the organisation's efficiency, and to test a theory. There are five basic steps involved in conducted research: statement of the problem, design of the research study, measurement of variables, analysis of data, and conclusions from research. Some methods of research in I/O psychology include empirical methods like experimentation (both lab and field) and survey; and qualitative methods like observation, case method and archival research.

1.8 **UNIT END QUESTIONS**

- 1) What are the main tenets of industrial psychology?
- 2) What are the main tenets of organisational psychology?
- 3) Differentiate among various subfields of industrial and organisational psychology.
- Explain the process of research in Industrial/Organisational Psychology.

CT OCC A DIA

1.9 GLOSSARY	
Job Satisfaction	: A general attitude that individuals hold about their jobs.
Labour Union	: An organisation of wage earners formed for the purpose of serving the members' interests with respect to wages and working conditions.
Marketing research	: Research that gathers and analyses information about the moving of good or services from producer to consumer.
Research	: An attempt to seek information in a scientific and/or systematic manner.
SPSS	: A computer program used for statistical analysis
Sensitivity training	: Psychological techniques and programs designed

to improve self awareness and change attitudes

and behaviour of individuals to make them more sensitive to others.

Team building

: A wide range of activities, usually ranging from simple bonding exercises to complex simulations, for fostering trust, communication and cooperation among members, in order to improve team performance.

Total Quality Management

: A complete reorganisation of the work process and the workplace to achieve quality consciousness and customer satisfaction.

Variable

: A symbol that can assume a range of numerical values.

SAQs- Possible Answers

- Industrial psychology may be defined as the application or extension of psychological facts and principles to the problems concerning human beings operating within the context of business and industry.
- 2) Organisational psychology may be defined as the study of the structure of an organisation and of the way in which the people in it interact, usually undertaken in order to improve the organisation.
- 3) Three points of difference between industrial and organisational psychology are scope, orientation and research tradition.
- 4) b: Personnel Psychology
- 5) a: Statement of problem-Design-Measurement of variables-Data analysis-Conclusions
- 6) c: Survey

1.10 SUGGESTED READINGS

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