

This chapter describes the first operative function of personnel management, namely, the procurement of personnel to man the organisation. In the case of a new industrial enterprise this function begins only *after* an industrial engineer has designed an effective man-machine system *i.e.*, assigned each function to a man or machine. Assignment decisions are not fixed or immutable. These are always made at some point in time and relative to a particular state of development of engineering art. Therefore, they need to be continually evaluated. A function which could not be assigned to machine yesterday may become assignable today. That is why an industrial engineer's work is never done. It is also essential for the industrial engineer to sum-total the functions of every individual to see that they make up a job which is interesting, motivating, and challenging to him. This means that industrial functions which might be done better by machine should sometimes be assigned to man solely for the purpose of making the job complex enough to match his psychological needs.

Procurement of personnel involves 3 important steps :

1. Determination of the kind or quality of personnel needed.
2. Determination of the quantity of personnel required, and
3. Recruitment, selection, placement and induction.

Determination of the Kind or Quality of Personnel

A knowledge of the nature and requirements of jobs is a fundamental prerequisite for determining the kind or quality of personnel needed. The securing of this knowledge entails three closely related steps : the analysis of jobs, the writing of job descriptions and the preparation of job specification.

Job Analysis

Job analysis is the process by means of which a description is developed of the present method and procedures of doing a job, physical conditions in which the job is done, relation of the job to other jobs and other conditions of employment. Job analysis is intended to reveal what is *actually* done as opposed to what should be done. Therefore, if a man is found doing some activity not required of that job, it should still form part of the job analysis except where the immediate removal of that activity is possible. The purpose of job analysis is not to describe an ideal but to show the management how at the moment a particular job is being carried out.

Various points on which information may be gathered for job analysis are as follows :

1. Job title
2. Alternate titles
3. Work performed
4. Equipment used
5. Tools used
6. Materials used
7. Reports and records made
8. Relation of the job to other jobs

9. Education (general, technical and on-the-job) required
10. Experience (type and duration) required
11. Physical effort required
12. Mental effort required
13. Visual attention required
14. Responsibility (in terms of typical damage, money value and normal consequences) for equipment, tools, materials and records and reports.
15. Discomforts
16. Hazards (in terms of typical injury and preventive measures taken)
17. Supervision (close or general) received
18. Supervision (close or general) given
19. Any other details (e.g., number of persons—men and women—employed)

Job Analysis Techniques

Some Important job analysis techniques are as under :

1. Functional Job Analysis,
2. Critical Incidents,
3. Job Elements,
4. Position Analysis Questionnaire, and
5. Physical Abilities Requirement.

Functional Job Analysis

This technique focuses on identifying the key competencies required for a job. A competency is defined as a behaviour rather than a skill or ability. In this technique trained professionals develop information about the job on the basis of workers' interviews, observation and training manuals in five stages as under:

First of all, the purpose, tools and objectives of the job are clarified. *Next*, tasks necessary to accomplish the job are identified. *Next*, performance standards are developed in terms of specific output. *Next*, competencies required to accomplish that output are identified in the following dimension:

1. Data (worker's involvement with information and ideas.)
2. People (communication and instruction)
3. Things (use of machines and tools)
4. Instructions (amount of autonomy)
5. Reasoning (use of concepts and decision making)
6. Mathematics and Language (reading/writing/speaking).

Finally, training needs are identified and the training material is developed.

The chief *merit* of this technique is that the performance standards developed under it can form the base of a work sample test for selecting workers. The *demerit* is that this technique is too costly to be used by a small organisation.

Critical Incidents

Folling are the steps involved in this technique :

First of all, the job analyst asks workers, supervisors, managers and others to think of the most recent examples of workers whom they saw performing at a very high and at a very low level and to describe their on-the-job behaviour.

Next, all incidents are collected. According to Flanagan an analysis of simple jobs requires 50 to 100 incidents, of skilled and semi-skilled jobs from 1000 to 2000 incidents and of supervisor jobs from 2000 to 4000 incidents.

Next, the collected incidents are transferred to index cards and informants are asked to group them independently into various categories which collectively describe the content of the job. For example, in the case of a sales person some such categories may be "promptness of service", "interaction with customers" "fairness", "self-confidence", and so on.

Next, independent groupings are compared and differences in categorisation are removed.

Finally, a detailed outline of the contents of job emerges. It gives an objective picture of what behaviours constitute a specific job.

The merit of this technique is that the information collected under it can also be used for other purposes such as performance appraisal and job design. The demerits are:

(a) Much of employees time is spent in recording incidents. Production thus suffers.

(b) Number of incidents should always be large lest some aspects of the job may be overlooked.

Job Elements

This technique focuses on describing a job in terms of various elements (such as knowledge, skills, ability, willingness etc.) that a worker uses in performing a specific job. The steps involved are as under: First of all, supervisors and workers meet in a brainstorming session to identify as many of the elements of the job as possible.

Next, each identified element is rated in terms of:

- its importance in selecting superior workers;
- its availability (in candidates) when making selections;
- its consequence of ignoring it when making selections.

Finally, on the basis of statistical analysis of the above ratings those elements which are most important in selecting superior workers are determined.

The merit of this technique is that the information about job elements collected under it serves as a base for developing curricula for training programmes. The demerits are that this technique is time-consuming and costly.

Position Analysis Questionnaire

Contrary to the above technique which assumes that jobs vary in their elements, this technique assumes that all jobs have common elements. The total number of these elements is 194 and they are classified under six categories as shown below:

Category	No. of Elements
1. Information input (Where and how does the worker get the information needed to perform the job?) Example: use of written material	35
2. Mental processes (What reasoning, decision-making, planning and information-processing activities are involved in the job?) Example: use of coding/decoding	14
3. Work output (What physical activities does the worker perform and what tools and devices are used?) Example: use of keyboard devices	49
4. Relationships with other persons (What relationships with other persons are required in the job?) Example: Interviewing	36
5. Job context (In what physical or social contexts is the work performed?) Example: Working in high temperatures	19
6. Other job characteristics, Example: Irregular hours	41

As in the foregoing technique here also the various elements of a job are rated by the job analyst, supervisors and workers and the job is described in terms of the relative importance of the above six categories.

The merits of this technique are its easy data collection and their replicability. The demerit is that the questionnaire is sometimes not comprehensible to the workers.

Physical Abilities Requirements

Unlike all the above techniques this technique focuses on collecting information about physical requirements of the job. Uncertainty about physical requirements results in women being discriminated against in selections for certain jobs and selected men proving themselves unfit and leaving the job later on.

In this technique supervisors and workers are asked to classify and rate tasks in terms of sensory, perceptual, cognitive, psychomotor and physical abilities.

How to obtain Data for Job Analysis

Following methods may be used to collect information for a job analysis :

- (i) **Questionnaire.** This method is usually used to obtain information about jobs through a mail survey. The job incumbents who can easily express themselves in writing are asked to provide data about their jobs in their own words. This method is, therefore, best suited to clerical workers. But it is often a very time-consuming and laborious process to analyse the data obtained in this manner.
- (ii) **Checklist.** This method requires the worker to check the tasks he performs from a long list of possible task statements. However, in order to prepare the checklist, extensive preliminary work is required in collecting appropriate task statements. While checklists are easy for the incumbent to respond to, they do not provide an integrated picture of the job in question. They are easily administered to large groups and are easy to tabulate.
- (iii) **Interview.** In this method a group of representative job incumbents are selected for extensive interview—usually outside of the actual job situation. The interview may be carried out either individually or in a group to save time. The replies obtained from the interviewees are then combined into a single job description. This method though very costly and time-consuming helps in getting a complete picture of the job. Very often many such things are revealed about the job which were never previously known. Sometimes persons leaving the job are also interviewed to give their views about the job.
- (iv) **Observation.** This method can be followed right on the job. The analyst observes the incumbent as he performs his work and questions him to get the required data. Besides being slow and costly, this method also interferes with normal work operations. Some employees do not like someone taking a hard look at their performance. However, it generally produces a good and complete job description. This method is particularly desirable where manual operations are prominent and where the work cycle is short. Working conditions and hazards can also be better described when observed personally by the analyst.
- (v) **Participation.** In this method the job analyst actually performs the job himself. In this way he is able to obtain first-hand information about what characteristics comprise the job under investigation. This method is fairly good for simple jobs but in case of complex jobs advance training of the analyst becomes necessary. The method is also time-consuming and expensive.
- (vi) **Technical Conference.** In this method information about the characteristics of the job is collected from the experts—usually the supervisors—and not from the actual job incumbents. One important drawback of this method is that the experts may at times show poor knowledge about the job which they are not actually performing themselves and may give answers based upon their past experience.
- (vii) **Self-recording or Diary.** In this method the job incumbent is asked to record his daily activities each day using some type of logbook or diary. The method is good in that it systematically collects a great deal of information about the nature of and the time spent on various activities during the day by each incumbent. But it is very time-consuming and the incumbent may start complaining that he spends more time in writing his diary than in doing his job. This method is particularly useful for high-level managerial jobs.
- (viii) **Critical Incident.** In this method the supervisor is asked to provide instances of on-the-job behaviours of people which he considers to be noteworthy. Such instances can be both of good and bad on-the-job behaviour. The number of such instances can be as many as the supervisor can recall. These instances can provide information about critical aspects of the job, but the method does not provide an integrated picture of the entire task.

The choice of a job analysis method depends upon the purposes to be served by the data. There is no one best way to conduct a job analysis. Wherever possible, multiple methods of job analysis must be followed.

Uses of Job Analysis

The following are the possible uses of job analysis :

1. Job analysis provides complete knowledge about jobs. Executives do not always have adequate knowledge of the jobs under their direction, even though they may come in daily contact with the men working under them. In many instances a strange faith is put in the job title as conveying all the information needed concerning the job. Thus "every one knows" that the major duty of a college professor is teaching. Yet he may spend more time dealing with administrative matters than he spends in teaching. In a study by Charters and Whitley when six secretaries to businessmen and executives were asked to compile a list of their duties they recalled 166 duties only but when 125 secretaries were asked to record their actual activities as they performed them, 871 different duties were mentioned.
2. Job analysis is the first step in the development of selection techniques. It is the best means of discovering the essential traits and personal characteristics leading to success or failure on the job. The design of application forms, the choice of psychological tests, the plan of items to be covered in interviewing applicants—all are best validated in terms of job content and requirements.
3. By giving a complete picture of a job, job analysis helps in developing such measures of job proficiency as would take into account all the elements of the work involved.
4. Job analysis precedes job evaluation which measures the worth of jobs within the organisation for purposes of establishing its base compensation. A satisfactory evaluation of jobs is not possible without a comprehensive job analysis.
5. Job analysis uncovers many organisational ills such as overlaps in authority and responsibility, ambiguities in the chain of command, and so on.
6. Job analysis may help to rearrange the work flow and to revise existing procedures when they are revealed as faulty.
7. By revealing the required skills and the knowledge for doing a job, job analysis determines the training needs of workers.
8. When considering an employee for promotion, job analysis may facilitate comparison of his current responsibilities with those of the post for which he is being considered. The two job descriptions can help in making a correct decision.
9. Job analysis helps in the development of effective tools and equipment.
10. Job analysis provides a common language in the employment field. It helps in giving the same titles to jobs involving exactly the same task in all organisations.
11. Job analysis can be used to develop appropriate design of job for improved efficiency and productivity. There are 2 distinct approaches to job design, *viz.*,
 - (a) Process-centred or equipment-centred approach, and
 - (b) Worker-centred or behavioural approach.

In the process-centred approach, which has immediate cost of production as the central consideration, jobs are designed by specialising activities, improving work methods, standardising the time of performing a specific task and making equipment and tools more effective and less tiresome. In fact, this is the classical method of increasing production by time and motion study and ergonomics.

In the worker-centred approach, which has team building and motivation of the workers as the central consideration, jobs are designed by according greater importance to human factors and

locating areas of task conflicts. In fact, this is the behavioural method of increasing production by enriching the job content and making workers participate in deciding the allocation of work. There is now a definite trend on the part of job designers to design jobs by integrating the two approaches.

Job Description

The results of a job analysis are set down in job description. The main points to be included in a job description are :

- the location of the job—division, department, branch or section;
- the title of the job;
- the job title of the individual to whom the job holder is responsible;
- the job grade;
- the job titles of any individuals responsible to the job holder and the number of employees he supervises;
- a brief description of the overall purpose of the job;
- the main tasks carried out by the job holder—these should be listed either in chronological order or in their order of importance;
- details of the equipment or tools used or any special requirements to deal with people, inside or outside the company;
- characteristic position of the job holder, his isolation or association with others;
- special circumstances such as shifts or night work, overtime or weekend working, heavy lifting, exceptionally monotonous work, unpleasant or dangerous working conditions, travelling required, and so on.

Job Description for Managers

Writing job descriptions for the rank and file workers is a fairly established practice. A more recent development is job description for managers. The two types of job descriptions, however, differ from each other in many ways :

- (i) The lower level job descriptions are generally written by personnel department but managerial job descriptions are written by the incumbent executive himself or by his superior.
- (ii) The lower level job descriptions centre directly around tangible duties but managerial job descriptions are more closely related to several intangible duties and relationships. They are descriptions of the authority and responsibility relationships of an executive as can be seen from the following tasks of a marketing manager :
 - to sell marketing objectives;
 - to develop marketing plans and strategies;
 - to determine policies, relating to products, prices, distribution and production;
 - to develop marketing budgets;
 - to do manpower planning for the marketing division;
 - to select, train, direct, motivate and evaluate marketing personnel;
 - to coordinate the work of all the marketing personnel; and
 - to work closely with the other functional managers.
- (iii) The lower level job descriptions being complete descriptions of the day-to-day work of an employee always serve as the basis in the recruitment and selection of workers but managerial job descriptions being incomplete portrayal of the changing assignment of a manager cannot serve as the basis in executive selection. It should be remembered that though the description of

a managerial job may not change for a long time the assignment may change every time the position is being filled. For example, when a new regional sales manager is being recruited the job description for this position may remain unchanged but this does not mean that there is no change in the assignment as well. It may be that the core assignment of the new regional sales manager is going to be to recruit and train new sales people because the present sales force is nearing retirement age. Or, it is going to be to open up new markets because the company's products have not been able to penetrate new and growing markets. Or, it is going to be to build a market for the company's one or two new products only. Each of these is a different assignment and requires a different kind of person.

Role Analysis Technique (RAT)

Since managerial job descriptions centre around mostly intangible duties and relationships, they often leave many things unsaid and unclear. For example, they may not say anything about the discretionary aspect of a managerial job or about the behavioural expectations which others have from the manager, and so on. To overcome this shortcoming Prof. Ishwar Dayal suggests the use of *Role Analysis Technique*.

Under this technique each managerial role is analysed by a 4-member group consisting of the manager (called the role incumbent), his boss, subordinates and peers. The exercise begins by identifying the objectives of the unit and its functions. The role incumbent is then asked to present his understanding of his key performance areas and his role in them. Next, other members of the group are asked what their expectations are from the role incumbent. Finally, a discussion takes place to integrate the different view points about the incumbent's role. The incumbent then writes a summary of the discussion defining the role. This summary is called the *Role Profile*.

By taking into account the expectations of various members of the role set, role analysis enables the role incumbent to work out interpersonal problems more effectively than is otherwise possible through a job description. It provides better yardsticks for identifying training needs and is more helpful in the recruitment process.

Job Specification

A *job specification* (also called *man specification*) is a statement of the minimum acceptable human qualities necessary to perform a job satisfactorily. Making job description as its base, it prescribes the abilities and qualities that a worker should possess in order to hold the job in question. The exact list of information varies according to the company and the uses to which the job specification is to be put. For example, if a job specification is to be used only for hiring decisions it may list only the physical, educational, experience and skill requirements of the job but if it is to be used also for appraising an employee's performance or for career counselling then it must clearly lay down the performance standards and the career paths as well.

It should be remembered that preparing a complete and correct job specification is relatively difficult as compared with preparing a complete and correct job description. There is always considerable disagreement concerning the human requirements for the work. For example, on the question of education some people may say that simple high school is enough, others may say that some college education is necessary. There may also be a difference of opinion on whether a requirement should be classified as 'mandatory' or 'desirable'. The employer cannot arbitrarily decide such issues. Nowadays more and more burden is being placed on the employer of showing that any given requirement has a manifest relationship to the employment question.

We give below an example of a job description and a job specification form.

Part I — Job Description

Department	Section
Job title	Job grade
Reporting to (job titles)	
Reporting to job holder (job titles)	
Overall purposes of job	
Main activities/tasks	
Special requirements (tools and equipment used, external contacts, etc.)	
Other features of job : shift or night work, travelling, working conditions, etc.	
Location of job	

Part II — Job Specification

Knowledge and skills	
Educational qualifications and special training	
Experience	
Personality requirements	
Physical requirements	
Other requirements	
Age	
Travel	
Analysis by.....	Approved by.....

(Ind. Relations Director)

As we conclude this section it is essential to mention that now-a-days when the job is becoming increasingly organised around teams rather than around individuals and when individual's skill flexibility has become more important than his skill specialisation, *jobs are fast losing their traditional meaning*. Under these conditions many people have rightly started questioning the usefulness of the above techniques (job analysis, job description and job specification) in determining the kind or quality of personnel to be hired.

Determination of the Quantity of Personnel (Manpower Planning)

The second step in the procurement of personnel is the determination of the number of persons which should be hired. This forms part of *Manpower Planning*.

Manpower planning may be defined as a strategy for the procurement, development, allocation and utilisation of an enterprise's human resources. Procurement of personnel deals with the task of recruitment and selection of workers of the desired skill-mix. Training and development plans help in keeping and raising the skill-standards of workers. Manpower allocation plans help in mitigating shortages and surpluses in manpower supply through promotions and transfers. Manpower utilisation deals with the dynamics of leadership and motivation. Description of all these topics is given at relevant places.

Objectives of Manpower Planning

The objectives of manpower planning are mainly :

1. To ensure optimum use of human resources currently employed;

2. To determine future recruitment level;
3. To provide control measures to ensure that necessary resources are available as and when required;
4. To anticipate redundancies and avoid unnecessary dismissals;
5. To forecast future skill requirements to serve as a basis for training and development programmes;
6. To assess future housing needs of employees;
7. To cost the manpower component in new projects;
8. To decide whether any of the enterprise's activities, e.g., maintenance, be off-loaded or subcontracted.

Manpower Planning Process

Following are the steps involved in manpower planning process :

- (a) Analysis of the system,
- (b) Deciding the time horizon of the plan,
- (c) Forecasting the demand for and the supply of manpower,
- (d) Reconciliation, and
- (e) Preparation of action plans.

(a) Analysis of the System. Before embarking on the manpower planning exercise, it is essential to define the system in which the organisation works. The system can be either 'closed' or 'open-end'. A closed system is one which contains within its boundaries all actions, variables, information and relationships necessary for the achievement of its goals. Such a system has a high degree of predictability of its behaviour. This makes planning easiest in a closed system. An open-end system, on the other hand, is far more uncertain and unpredictable, causation is speculative, vital relationships are a matter of mere guess, and appropriate corrective actions are often unknown.

It should be remembered that manpower planning generally has to make its way in a vast open-end system (the national economy) which contains a number of complicated open-end subsystems (firms, unions, families and individuals). It is, therefore, necessary that first of all a thorough analysis of this system is done in the following terms :

1. Goals. Goals should always be explicit. Manpower planning cannot go on efficiently until the goals of the organisation (e.g., profit, welfare, utility, etc.) are clearly defined and translated into human resource objectives by determining the job categories and types of people required to be able to accomplish business plans successfully.

2. Uncontrollable Variables or Constraints. The planner must take account of all such variables (economic factors, competitive trends, technological changes, socio-cultural changes, politico-legal considerations, labour-force composition and supply, and demographic trends) which influence the availability of the workforce and are beyond his control.

3. Controllable Variables. The planner must also identify those variables which are manipulatable, for example, productivity incentives or training or redundancy payments. He may also focus on business strategy, technology and culture.

4. Expectations about Behaviour. All expectations about the behaviour and the environment and about the reactions which the planner's own behaviour and the behaviour of the system will provoke must be specified.

(b) Deciding the Time Horizon of the Plan. The planner must determine in advance the time horizon of his plan since this will affect how much is changeable within the system. Generally, the shorter the time span contemplated, the less there is variable and the more there is fixed in the system. A reasonable accuracy can be expected in case of short-term forecasts up to two years. A useful technique is to roll on the forecast by a year at each annual revision, thereby keeping the length of the forecasting period unchanged whilst making any amendment necessary in the light of changing circumstances.

Short-term planning is generally done to find a temporary match between the existing individuals and the existing jobs. It aims at removing the anomalies in postings and placements. Long-term planning, on the other hand, is done to find a proper match between the future jobs and their future incumbents.

(c) Forecasting the Demand for and Supply of Manpower. The most crucial step of manpower planning is the forecasting of the demand and the supply of manpower, for the period for which the plan is outlined.

Forecast of Manpower Demand

The manpower demand forecast stems from the objectives of the organisation as represented in the company's plan. Hence to be able to forecast manpower demand in the future, the manpower planner must have a detailed knowledge of the company's future achievement targets. He should know:

- What new products, machines, techniques, processes, facilities and company locations will be added or reduced.
- What changes will be made in the existing organisation structure. Current trend in favour of lean structures could eliminate some existing management positions.
- How many positions will exist at each level and in each category.
- To what extent will qualifications for existing positions change. Job enrichment or enlargement could change the qualifications for certain positions.
- What skills will be required for each position. Innovations in technology could make existing skills obsolete.

The following steps are involved in the procedure for projecting manpower demand:

- (a) Selection of an appropriate basis for the calculation of manpower needs;
- (b) Calculation of the productivity ratio;
- (c) Making adjustment in the productivity ratio, and
- (d) Projection of manpower requirements.

(i) Appropriate Basis. Selection of an appropriate basis for the calculation of manpower needs is the critical first step. For a retail store, the appropriate basis may be the rupee volume of sales, for a company producing steel, it may be tons of steel, for a university it may be number of students. To be useful, however, the basis must satisfy one important requirement—the required manpower be proportional to the changes in the basis. Thus, for example, in a steel manufacturing company, 'tons of steel' will serve as a useful basis for the calculation of manpower needs if the number of workers is proportional to the output of steel.

(ii) Productivity Ratio. Calculation of the productivity ratio or output per individual is the second important step in the forecasting process. Productivity ratio can be calculated in a number of ways. The most typical method used by small companies is managerial judgement or copying of ratio of other concerns. Thus, the manager of a small insurance company may determine on the basis of his own judgement or on the basis of experience of other similar companies that he needs 12 persons in his office to process 360 proposals per week. This gives a productivity ratio of 30 proposals per individual per week. On the basis of this ratio, one can easily forecast the number of men needed to carry out a planned volume of work.

Productivity ratios may also be calculated with the help of statistical or work study techniques. Under statistical techniques regression analysis is the most popular technique. It provides a measure of the extent to which movement in the values of the two variables—manpower and output are correlated with each other. After finding out this measure, one can easily predict manpower requirements for a given level of production activity. Under work study technique standard hours required to produce one unit of output are calculated on the basis of work measurement done by industrial engineers. Once the standard hours per unit have been found out it is not difficult to forecast the number of workers required for producing the planned number of units.

(iii) **Adjustments in the Productivity Ratio.** Making adjustments in the productivity ratio for likely improvements in it resulting from planned advances in technology, changes in organisational structure, training and better utilisation of human resources is the third important step in the forecasting process. Our manpower projections for the target year must reflect the productivity anticipated at that time.

(iv) **Projecting Manpower Requirements.** Once an appropriate basis has been found out and productivity ratio computed, the projection of operative manpower need for the target year is not at all difficult. Having worked out this need for each section or department the organisation can proceed to find out the ratios between the number of operative and managerial personnel at various levels on the basis of certain assumptions about span of control, nature of work, technology and historical data. Finally, with the help of these ratios it can work out the projections for its managerial personnel.

Forecast of Manpower Supply

Manpower demand is one aspect of manpower forecasting. The other aspect is the supply of manpower to fulfil the demand. The supply of manpower may be obtained from internal sources or external sources.

(a) **Internal Supply Forecast.** This is to be based on a study of the existing manpower resources and the potential losses and changes in them due to internal promotions, turnover, etc. The study of the existing manpower resources of the organisation is called *manpower audit*. Three important sources of information in manpower audit are the manning table, replacement schedule and skill inventory. The *manning table* indicates the number of employees in each job. It may also denote the required training time and may classify employees according to sex, age, marital status and such other characteristics as may be significant and useful. One may study this table *vis-a-vis* the current level of operations to find out if there is any significant labour underloading and underutilisation or overloading and overutilisation. *Replacement schedules*, which are prepared department wise, give the name and age of each present job-holder and of the person who is regarded as immediately available as a replacement for the first. They may also name a second candidate and specify a date when he is likely to be ready for the position. *Skill inventory* contains each employee's record of his primary and secondary skills in the light of various jobs he has performed before and since joining the organisation.

One probabilistic or stochastic model which helps in forecasting internal supply is the Markov-chain analysis. In this model, first of all, probabilities are calculated of the movement of people from one job to another in the organisation or of leaving the organisation on the basis of past record over some specified time period. Then, on the basis of assumption that these probabilities would remain stable forecasts are made of future manpower supply in the organisation. In the following table internal supply forecasts for the coming year are made in respect of 4 types of jobs (A, B, C, and D) on the basis of their transition probabilities. Thus, for job A where the transition probabilities are that 70% of the employees stay on the job during a year, 20% shift to job B and 10% leave the organisation, it is expected that out of 300 employees 210 will stay on job A, 60 will shift to job B and 30 will quit the organisation by the end of the current year. Similarly for job B where the transition probabilities are that 80% employees stay on the job, 10% shift to job A and 10% quit, it is expected that out of 150 present employees 120 will stay on the job, 15 will shift to job A and 15 will leave the organisation. For

job C where the probabilities are that 60% stay on the job, 10% move to job D and 30% leave the organisation, of its 275 employees 165 will remain on the job, 28 will shift to job D and 82 will leave the organisation. For job D where the probabilities are that 90% stay on the job and 10% leave the organisation it is expected that 324 will remain and 36 will quit the organisation. Thus, the final forecasts of supply for each job are A = 225, B = 180, C = 165 and D = 352.

Markov-Chain Analysis of Manpower Supply

Job	Present number of employees	Probability and No. of employees			Forecasted No. for the coming year
		Staying on the job	Shifting to other job	Leaving the organisation	
A	300	210 (0.7)	60 (0.2)	30 (0.1)	210 + 15 = 225
B	150	120 (0.8)	15 (0.1)	15 (0.1)	120 + 60 = 180
C	275	165 (0.6)	27.5 (0.1)	82.5 (0.3)	165 = 165
D	360	324 (0.9)	—	36 (0.1)	324 + 28 = 352

(b) External Supply Forecast. The demand forecast and the internal supply forecast match only in the most exceptional circumstances. In an expanding situation the supply will be less than the demand. In a contracting situation the supply will exceed the demand. In the expanding situation attention is generally given to increasing the supply by recruitment although other internal means to alter the supply (such as amendment in transfer and promotion policies, change in skill-mix, etc.) can be used. To plan recruitment an external supply forecast is needed.

External supply forecast should be made in the light of several local and national factors operating in the labour market. Among the local factors the following are the most important:¹

- (a) Population density at various distances from the work place.
- (b) Local employment level particularly of the categories which are relevant for the operation of the organisation.
- (c) Availability of part-time labour.
- (d) Current competition for similar categories of labour from other organisations both local and national.
- (e) Output from the local educational system (general as well as technical).
- (f) Patterns of immigration and emigration within the area and between it and other areas.
- (g) Residential facilities available now and in future.
- (h) Local transport facilities and communication pattern.

Among the national factors special mention may be made of the following:

- (a) Trends in the growth of the working population.
- (b) Government training schemes and systems of technical, vocational, professional and general education and their outturn.
- (c) Immobility of labour due to resistance to 'outsiders'.
- (d) Impact of company's image, compensation structure and social security measures of certain types, e.g., unemployment benefits, layoff and retrenchment benefits, etc. on the manpower supply.
- (e) Cultural factors and customs, social norms, etc. affecting school leaving age, labour force participation of women, children and young persons capable of joining educational institutional as students.
- (f) Availability of people of required level of skills.

(d) Reconciliation. It may be that when the detailed work has been done the cost implications of the manpower plan are found not to be wholly compatible with the company's finances. If so, the manpower

needs and manpower programmes will have to be re-examined and re-assessed and a suitable reconciliation within the financial constraints achieved.

(e) **Action Plans.** On the basis of the analysis of manpower requirements, productivity and manpower costs action plans covering the following subjects be prepared:

- (a) Recruitment,
- (b) Redeployment (Transfer)
- (c) Redundancy,
- (d) Training,
- (e) Improvements in productivity, and
- (f) Improvements in the retention of employees.

In each of the above areas of the manpower plan, it will be necessary to estimate the costs involved so that they can be assessed against the potential benefits. It will also be necessary to indicate who is responsible for implementing the plan, for reporting the progress and for monitoring the results achieved.

Manpower Planning in India

Barring only few big organisations manpower planning has never been seriously done by Indian organisations in the past. It is by now a common knowledge that most of our public enterprises have been frequently criticised by the Parliamentary Committees for their overstaffing. In a study of 15 American subsidiaries and 15 local firms situated in India carried out by Anant R. Negandhi and Y. Krishna Shetty in 1970 it was found that only 20% of the American subsidiaries and 7% of the local firms undertook manpower planning.

In recent years, however, focus on manpower planning is increasing due to the following reasons :

1. Rapid changes in production technology, marketing methods and management techniques are changing the contents and contexts of jobs, causing widespread redundancies and necessitating retraining and redeployment of personnel.
2. Industries are facing shortage of talented and skilled manpower.
3. The profile of the workforce in terms of age, sex, education and social background is changing.
4. Various pressure groups (such as unions, politicians and sons of the soil) are demanding changes in recruitment procedures to serve their own ends.
5. New laws are being enacted with regard to working conditions, weaker sections, women and children, casual and contract labour, handicapped and scheduled castes.
6. The number of applicants for a vacancy is evergrowing. Sometimes, the ratio is as much as 1 : 100 or even more. This is increasing the expenditure and inconvenience involved in examining a large number of candidates for a few positions. Not only this. This has also increased the chances of incorrect matching of the job and the individual—the reason being that a man whose choice of employment is very limited accepts any job that falls to his lot irrespective of his attitude and suitability.
7. Lead time between receiving applications and recruiting individuals is becoming longer. The large number of applications that need to be processed and the equally large number of candidates who need to be examined and evaluated is an important source of delays.
8. There is increase in employee absenteeism and turnover. Not only the labour force which is drawn from the villages but even the urban educated are finding difficulty in adjusting themselves to the rhythm, discipline and social relationships in industrial undertakings, and to the new way of life in the community of which the undertakings form a part. Their acceptance of the new environment is proceeding at a slow pace and this is often expressed through absenteeism, high turnover and other acts of protest. Call centres in India are an instance in point.
9. There is greater demand for internal promotions and career planning.
10. *Under the existing statutes dismissal of an employee is very difficult because it requires certain elaborate procedure involving considerable time and money to be followed by a manager.* No manager likes to follow this procedure. This means a person once recruited is going to be around longer on any given job and it is not possible to rely on replacement to improve the quality of the work group. The management must count more on utilising the skills and abilities of the employees that are already present than on replacing them by more able ones.

The above reasons make systematic manpower planning and well-understood, fair and objective criteria for recruitment of special significance to us. Those few companies which do undertake manpower planning utilise not only historical data on manpower but also various forecasting methods to evaluate their future manpower requirements in terms of both quantity and quality. A brief description of how Hindustan Lever—a private undertaking—performs this function is given below :

First, with the help of a detailed organisation chart it is determined that how many people, at what level, at what positions and with what kind of experience and training would be needed to meet the business objectives during the optimum planning period of 5 years.

Second, an audit of internal resources is carried out. This indicates the number of persons who possess different or higher levels of responsibilities. It also reveals the overall deficit or surplus of personnel for different levels during the planning period.

Finally, taking into account the actual retirements and estimated loss due to death, ill-health and turnover, based on past experience and future outlook in relation to company's expansion and future growth pattern the final figures are arrived at.

The planning is done every year for the coming 5 years. For instance, a plan is made from the beginning of 2004 to the end of 2008 and the next year the plan covers from the beginning of 2005 to the end of 2009. This reduces inaccuracy in forecasting.

The overall responsibility for manpower planning lies squarely on the Board of Directors. Management at other levels are also involved in this process as they supply adequate data regarding their manpower requirements. The personnel department's function is to recommend relevant personnel policies in respect of manpower planning and to devise methods and procedures for determination of quantitative aspects of manpower planning.

This planning when done in respect of managerial categories in the company is called "*management review*".

Manpower strategy in the case of alliances

The desire to consolidate into bigger entities is becoming very widespread now a days. Various types of alliances in vogue include mergers, joint ventures, buy-outs, collaborations and subsidiaries. Several banks in India from across regions (north-south, east-west) are wanting to merge in a bid to create a larger market for themselves. Some notable joint ventures of recent years are Shriram-Honda, Ford-Mahindra, Telco-Benz, Pal-Peugot, Hindustan Motors-Mitsubishi, and Government of India-Suzuki.

"You can merge with another organisation, but two drunks do not make a sensible person." Problems that generally crop up in the above types of inorganic growth are:

- Different organisational structures
- Divergent strategic visions of partners
- Cultural mismatch
- Different employee profiles
- Different human resource, dividend and investment policies
- Interference by either partner in operational management
- Grapevine and rumours leading to widespread fear and anxieties, among employees about job security, status and career prospects, role confusion, and uncertainty about change.

It is generally observed that organisations give more attention to legal and financial implications of alliances than to various other aspects of human resource management. Alliance between Procter & Gamble and Godrej broke down precisely because Godrej's senior managers could not adjust with the personnel policies of Procter & Gamble which they perceived as ruthless.

Most mergers and acquisitions follow a four-stage process of pre-deal, due diligence, integration planning and implementation. A successful merger and acquisition deal is where HR gets involved right from the first stage. HR can add value at this stage by assessing the culture of the target organisation and by mapping the management styles of the two organisations.

Similarly, at the due diligence stage, where the financial and strategic implications of the deal are assessed, HR plays a critical role in evaluating the financial implications of retirement and other benefit plans and the compensation structure of the target company.

At the integration and planning stage, the acquirer creates a comprehensive plan for integrating the two organisations. At this stage, HR plays the key role in :

1. Setting joint task groups to make pre-study of attitudes and expectations of employees
2. Integration of different cultural practices
3. Review of organisation structures
4. Harmonisation of compensation and benefits
5. Introduction of training and culture development programmes
6. Preparation of inventory of skills of employees
7. Identification of key competencies leading to performance management and succession planning
8. Planning of transfers and quits and ensuring the continuance of critical talent. On receiving the news of Daichii's acquisition of Ranbaxy, several Ranbaxy executives began looking out for alternative job options. They feared that it will only be a matter of time before Daiichi starts to place its people in the company.
9. Handling of industrial relations
10. Designing of communication programme to give a realistic view of what the acquiring company stands for, what it has managed to create in India, and, more importantly, what plan it has for its intentions of growth going forward. It is by launching such communication campaigns that many Indian acquiring companies such as Tata and Infosys have *made themselves known* in foreign countries.
11. Managing change and uncertainty.

Recruitment and Selection

After the quality and quantity of personnel needs have been decided the task of its recruitment and selection begins. There are a number of steps involved in this task :

1. Placing the requisition,
2. Recruitment,
3. Selection,
4. Placement, and
5. Induction.

A description of these steps is given below.

Placing the Requisition Indent

As soon as the blueprint for future recruitment activities is ready, the line manager or the head of a department can submit an indent for recruitment to the personnel department. An indent usually specifies the jobs or operations or positions for which persons are required, the number to be recruited, the time by which the persons should be available, their duration of employment (if needed temporarily), the salary to be offered and any other terms and conditions of employment which the indenting officer feels necessary. This form is prepared in duplicate, one copy being sent to the personnel department, and the other retained by the requisitioning department for reference. A sample of this Form is given on next page.

SAMPLE STAFF REQUISITION FORM

(This form must be sent to the Personnel Department
at least one month before the post is to be filled)

DEPARTMENT.....

Designation of post			
No. of vacancies			
Permanent/Temporary			
If temporary, state period			
If replacement, for whom			
If additional, give reference of sanction			
When needed			
Salary range			
Nature of job (Duties and responsibilities)			
Qualifications required			
(a) Desirable			
(b) Preferable			
Experience required (if any)			
Written test (if required)			
(Departmental Officer)	(Concerning Manager)		
Received in Personnel Dept. on.....	Notification to Employment Exch. Ref. Date	Action taken	
		PERSONNEL DEPTT.	

Recruitment

Once the requisition or the indent has been received, the personnel department can begin the process of recruitment.

Some people define recruitment as *the process of searching prospective workers and stimulating them to apply for jobs in the organisation*. According to this definition recruitment is a *prospecting* job where organisations make search for prospective employees. In practice, however, prospective employees too seek out organisations just as organisations seek out prospective employees. Therefore, the job of recruitment is based on the *mating* theory where success of both the parties is critically dependent on timing. Unless the two searches synchronise, conditions are not ripe for recruitment to succeed. The synchronisation in its turn depends on three factors :

1. There should be a common *communication medium*. If an organisation advertises its vacancies in a paper which is never read by the job-seekers, its efforts will go waste.
2. Only the qualified job-seeker *must perceive a match* between his personal characteristics and prescribed job requirements or the job-preview given by the company. This will minimise the cost of processing unqualified candidates.
3. The job-seeker must be *motivated* to apply for the job. Among important factors that can affect his motivation are image of the organisation, attractiveness of the job, internal organisational policies (such as "promote from within wherever possible") and government influence (such as "number of seats reserved for different classes of individuals").

Sources of Recruitment

The sources of recruitment can broadly be classified into two : internal and external.

Internal sources refer to the present working force of a company. In the event of a vacancy, some one already on the payroll is promoted. Thus, at the Tata Engineering and Locomotive Company and at Hindustan Lever, outside recruitment is resorted to only when requirements cannot be met from *internal promotions*. *Filling a vacancy from internal sources by promoting people has the advantages of increasing the general level of morale of existing employees, of reducing the cost of selection and of providing to the company a more reliable information about the candidate's suitability who has already worked with the company on a lower post.* The major weaknesses of this source are that it results into inbreeding depriving the organisation of a fresh outlook, originality and initiative, offers limited choice, decreases morale levels of those not selected and generates infighting among the rival candidates for promotion.

Among the more commonly used *external sources* are the following:

(1) *Advertisement in Newspapers.* Senior posts are largely filled by this method. This method is, however, followed by companies in 3 different ways :

First, there are some companies which do not do their own advertising. On the other hand, they send their requisitions to certain specialised agencies which advertise positions in leading newspapers without divulging the name of the client company. The applications received from the candidates by the agencies are duplicated and mailed to the clients.

Second, there are some companies which although do their own advertising but give only box numbers. Box number advertisements generally do not draw good candidates who feel that it is not worthwhile to apply without knowing employer's name. Both first and second types are called *blind advertisements*.

Third, there are some companies which divulge their names in their advertisements.

(2) *Employment Exchanges.* An employment exchange is an office set up by the government for bringing together as quickly as possible those men who are in search of employment and those employers who are looking for men. Employment exchanges register unemployed people and maintain the records of their names, qualifications, etc. The employers on their part intimate the exchange about the vacancies which occur in their factories and types of employees they require for filling up these vacancies. Whenever any vacancy is intimated, the exchange selects some persons from among the employment seekers already registered with it and forwards their names to the employers for consideration.

(3) *Field Trips.* An interviewing team makes trips to towns and cities which are known to contain the kinds of employees required. Arrival dates and the time and venue of interview are advertised in advance.

(4) *Educational Institutions.* Sometimes recruiters are sent to educational institutions where they meet the members of the faculty and persons in charge of placement services who recommend suitable candidates. Some companies send representatives to professional meetings and conventions to recruit employees.

(5) *Labour Contractors.* In many industries workers are recruited through contractors who are themselves the employees of these organisations.

(6) *Employee Referrals.* Some companies with a record of good personnel relations encourage their employees to bring suitable candidates for various openings in the organisation. Companies offer rich rewards also to employees whose recommendations are accepted. Following are the advantages of this method :

- (i) The candidate's choice of the organisation being based on more realistic information about the job received from the recommender increases job survival i.e., his stay in the organisation.
- (ii) As the recommender rarely recommends an undeserving candidate because his reputation is at stake, the company mostly gets a qualified person.
- (iii) For organisations such as call centres which face difficulty in finding suitable candidates for certain positions, this method is an excellent means of finding potential employees.

The disadvantage of this method is that cliques of relations and friends may be formed within the enterprise.

(7) **Unsolicited Applicants.** These are persons who gather at the factory gates to serve as casual workers or who send in their applications without any invitation from the factory. Sometimes already employed people may seek additional jobs. This is called *moon-lighting*. The number of unsolicited applicants at any point of time depends on economic conditions, the image of the company and the job-seeker's perception of the types of jobs that might be available. Such applications are generally kept in a data bank and whenever a suitable vacancy arises, the company intimates the candidate to apply through a formal channel. One important problem with this method is that job-seekers generally apply to a number of organisations and when they are actually required by the organisation either they are already employed elsewhere or are simply uninterested.

(8) **Labour Unions.** Organisations with 'closed shop' agreements with their unions are required to recruit union members only.

Evaluation of Alternative Sources

A company cannot fill all its vacancies from one single source. It must carefully combine some of these sources, weighing their cost and flexibility, the quality of men they supply, and their effect on the present work force. Following are some of the measures which can be used to assess how good or how poor various sources have proved to be:

(i) **Time Lag between Requisition and Placement.** The basic statistics needed to estimate the time lag are the *time-lapse data*. To take an example, a company's past experience may show that the average number of days from application to interview is 15, from interview to offer is 5, from offer to acceptance is 7 and from acceptance to report for work is 21. Therefore, if the company begins its recruitment and selection process today, the best estimate is that it will be 48 days before the new employee is added to the pay-roll. With this information, the 'length' of the pipe-line for alternative sources of recruitment can be described and suitable recruiting sources chosen.

(ii) **Yield Ratios.** These ratios tell us about the number of leads/contacts needed to generate a given number of hires in a given time. To take an example, suppose a company is contemplating expansion and needs 10 additional engineers in the next 6 months. On the basis of its past experience the company predicts as under : We must extend offers to 2 candidates to gain one acceptance. If we need 10 engineers we will have to extend 20 offers. Further, if the interview-to-offer ratio has been 3 : 2 then 30 interviews must be conducted and since the invitees to interview ratio is 4 : 3 then as many as 40 candidates must be invited. Finally, if contacts or leads required to find suitable candidates to invite are in 6 : 1 proportion then 240 contacts be made.

(iii) **Employee Attitude Studies.** These studies try to discover the reactions of present employees to both external and internal sources of recruitment.

(iv) **Correlation Studies.** These studies tell us about the extent of correlation which exists between different sources of recruitment and factors of success on the job.

(v) **Data on Turnover, Grievances, and Disciplinary Action tabulated according to different sources of recruitment.** These figures throw light on the relative merits of each source.

(vi) **Gross cost per hire.** This is arrived at by dividing the total cost of recruitment by the number of individuals hired.

Selection

Selection, as the name implies, involves picking for hire a sub-set of workers from the total set of workers who have applied for the job. Selections are done comparing the requirements of a job with the applicant's qualifications. An attempt is made to find a round peg for a round hole. In doing so naturally many applicants are rejected. This makes selection a negative 'function'. In contrast recruitment is a positive function because in it an attempt is made to increase the number of applicants per job opening.

It is not always essential for an organisation to have a selection programme. The need to install such a programme arises only when there is a labour surplus or when there are individual differences

in job performance or when there is need to identify people with a *hobo syndrome*, i.e., tendency to frequently change jobs. This means that when there is a labour shortage or when the work is such that no large differences in job performance exist or when there is no problem of labour turnover there is no need to have a selection programme. The widespread notion that differences among workers in terms of job performance are always large is not true. For example, on a production line having a similarly paced activity there may be no differences at all in the output of workers. Further, social pressure of fellow workers may compel uniformity in their rate of production.

Selection Techniques

Following are some common selection techniques :

A relection technique is typically referred to as "predictor" because it helps in distinguishing between "good" and "poor" workers by prediction their future job success.

1. Application Scrutiny

The main purpose of application scrutiny is to identify those candidates who fit the job specification and can be called later for the interview and testing sessions. Organisations generally use different versions of the application form for different levels of workers. Thus, an organisation may have one application form for factory and clerical workers, another for middle level supervisors and still another for top-level managers. The items and their sequence on these forms vary. In deciding what items should be included in the application form one should answer the following questions :

- (a) Is the item necessary for identifying the applicant?
- (b) Does it help to decide whether the candidate is qualified—suitable for the job?
- (c) Is it derived from analysis of the job or jobs for which applicants are to be selected?
- (d) Has it been pre-tested on present employees and found to correlate with job success?
- (e) Will the information be used and how?
- (f) Is the application form the proper place to ask for it?
- (g) Does the question violate any State legislation?
- (h) To what extent will answers duplicate information to be obtained at another step in the selection procedure, for example, through psychological testing or medical examination?
- (i) Is the information needed for selection at all, or should it be obtained at induction or even later?
- (j) Is it probable that the replies of applicants will be reliable?

There is a high degree of similarity among the application forms of various companies. The type of information which they generally ask for is more or less the same. It relates to the applicant's sex, age, height and weight, his educational qualifications, experience and his participation in extracurricular activities. Still we can classify application forms as under :

(i) **Structured Application Form.** This is the usual stereotyped application form which structures information and tries to cram as much standard information into as little space as possible. (See Appendix).

(ii) **Unstructured Application Form.** In this form questions are so phrased that the applicant can respond to them by writing as he pleases. "Critical incidents" which the applicant considers illustrative of his performance at various times and under various circumstances are generally requested which reveal a great deal about the applicant's perception of himself, and of his responsibilities.

(iii) **Weighted Application Form.** Of the many items that may be included in an application form, some are frequently of more significance than others, in that they yield information that seems to distinguish good from poor employees in a particular job, and to correlate with established criteria of satisfactory performance. For example, a sales organisation may find that such items as age, previous experience, marital status, number of dependents, etc. are notably significant in distinguishing its good salesmen from those who are poor. These items may then form the core of the weighted application form. Different weights may be given to these items generally on the basis of past experience and a cut-off point established for the total. This permits rapid screening of all applicants by comparing their individual total scores with the cut-off point. Only those applicants whose total scores are above the cut-off point may be called for the interview and testing sessions. Others may be rejected. It should be noted, however, that there is no universal weighting which can be transferred *in toto* from one type of job to another. The system has to be tailored according to the need of the individual job. Further, the system can be developed only if fairly adequate personnel records are available in the organisation for its present and past employees.

2. Interview

An interview is a face-to-face, observational and personal appraisal method of evaluating the applicant where the interviewer who is higher in status is in a dominant role. If there were no differences of status and roles, it would be a meeting. Two interviews—preliminary and final—generally occur during the selection process. Where a large number of candidates are asking for application forms a preliminary interview becomes a necessity. Its purpose is not to make a detailed probe of qualifications but to refuse application forms to those who cannot be employed because of such reasons as overage, disqualifying physical handicaps, and lack of required experience or training. The final interview is generally conducted in two stages. In the first stage, some official of the personnel department makes a comprehensive appraisal of the candidates and recommends the successful ones to the line department which was made the requisition. In the second stage, the line official interviews these candidates and makes final selections.

Kinds of Interview

Interviews may be classified under 8 main categories, depending on their methods :

(1) **Direct Planned Interview.** This interview is a straightforward, face-to-face, question-and-answer situation intended to measure the candidate's knowledge and background. Although it also provides an opportunity for observing the candidate's personal characteristics and noting his attitudes and motivations but the penetration is usually superficial. The interviewer, however, does some advance planning. For example, he works out in his mind, if not on paper, what he hopes to accomplish, what kind of information he is to seek or give, how he will conduct the interview and how much time he will allot to a candidate.

(2) **Indirect Non-directive Interview.** In this type of interview the interviewer refrains from asking direct and specific questions but creates an atmosphere in which the interviewee feels free to talk and go into any subject he considers important. In such an atmosphere the information obtained by the interviewer is more likely to be an accurate representation of what the individual believes than if the employee is asked specified questions. The object of the interview is to determine what the individual himself considers of immediate concern, what he thinks about these problems, and how he conceives of his job and his organisation. The interviewer, therefore, plays mainly a listening role. He has to avoid expressing value judgments interrupting the applicant, and revealing his own attitudes and opinions. This type of interview is often used in situations other than hiring, such as counselling, processing of grievances, and exit interviews.

The difficulties of this type of interview keep many companies from using it. It requires a highly trained interviewer. It also requires more time than other methods. The advantage of this method is that the applicant tends to be more at ease, because he does not need to be so concerned about the right answers. There is usually no "right answer" to the non-directive questions.

(3) **Patterned Interview.** In this interview a series of questions which can illuminate the strategic parts of the applicant's background are standardised in advance and validated against the record of employees who have succeeded or failed on the job. Answers to these questions are compared with a critical score and used in determining who is to be selected. In the interview process these standard questions are asked as they are written; the order may be varied but not the phrasing of the questions.

(4) **Stress Interview.** In this interview the interviewer deliberately creates stress to see how an applicant operates under it. To induce the stress, the interviewer responds to the applicant's answers with anger, silence, criticism or a flurry of incisive follow-up questions. Events such as noise, interruptions, or change of schedule are introduced to see how determined and inventive an applicant can be. For sales candidates, the interviewer may play the part of a customer and have the applicant try to sell him some well-known products like soap, a blade, or a fan. The interviewer can add realism by acting uncooperatively and by raising objections.

(5) **Systematic Depth Interview.** In this interview the interviewer has a plan of areas he wishes to cover. Ordinarily, the interviewer exhausts one area before launching into the next so that he can be more certain of complete coverage. In this type of interview, an answer to any one question does not tell much about the applicant and can in fact be misleading. Each answer must be interpreted in the context of many other interrelated circumstances. So the interviewer must weigh the meaning of various answers.

(6) **Panel or Board Interview.** In the board interview, more than one person interviews an applicant at the same time. Areas of questioning are allocated to each interviewer before the interview starts. One possible disadvantage of this method is that on being stimulated by each other's questioning, interviewers may start competing with one another and thus create conditions of stress for the candidate.

(7) **Group Interview.** In this interview 5 or 6 applicants are placed together in a situation in which they must interact. The situation may be structured or unstructured. It is usual for the selector to remain silent throughout the discussion and make notes of the applicant's interactions unobtrusively. The applicant who verbalises better and who has a better personality is likely to be selected under such circumstances. Sometimes the applicants and the selectors may live together for a few days thus providing a chance to the selectors to know about the personal idiosyncrasies of applicants better. This is known as the "house party" technique.

(8) **Walk-in Interview.** In this interview candidates are not required to apply for the post beforehand. They are asked to approach the employer for interview on the advertised date, time and place with their bio-data and a copy of their passport size photograph. Sometimes, more than one date is given for the interview and the candidate may walk in on any date of his choice after giving advance intimation of his choice to the employer.

Procedure for an Interview

Following steps are generally involved in an interview procedure :

(1) **Reviewing Background Information.** Pertinent information about the candidate should be collected and noted beforehand. This preparation saves time and mental effort during the interview and enables the interviewer to sketch in advance at least a general picture of the candidate.

(2) **Preparing a Question Plan.** Every interview should have a question plan. It is useful for inexperienced interviewers to have this written down in front of them so that questions can be ticked off as they are dealt with. The National Institute of Industrial Psychology (Great Britain) provides a 7-point plan for this purpose covering physical make-up, education and occupational attainments, basic intelligence, special aptitudes, intellectual and social interests, nature and domestic and social background.

(3) **Creating a Helpful Setting.** Most interviews have overtones of emotional stress for the applicant. Success in interviewing depends on reducing this stress. This can be achieved if the following conditions are present at the place of interview : privacy and comfort, atmosphere of leisure, freedom from interruptions, authentic feeling for and interest in the candidate.

(4) **Conducting the Interview.** Interviewing is much like fishing, where it is often necessary to change depth, lure and location in order to get a bite. It is, therefore, necessary to use a number of different approaches during the course of an interview.

(5) **Concluding the Interview.** In the final few moments the interviewer guides the interview to a close. After the candidate leaves, the interviewer looks over his notes, recalls his impressions, collates his observations and makes a provisional appraisal before seeing the next candidate. He fills up the interviewer's Rating Sheet meant for this purpose. A well-drafted Rating Sheet forces the interviewer

to think carefully on various factors relevant to the job. We give below a sample Rating Sheet. In this sheet the interviewer is required to evaluate the candidate on six traits relevant to the job. The form provides for the rating to be noted down in A, B, C and D for each trait along with brief notings. In some sheets the numerical equivalence of A, B, C, D for each trait is also given. In that case the interviewer is required to note down his rating in terms of this numerical equivalence. The scores against all traits are finally totalled.

SAMPLE Interviewer's Rating Sheet		
Name of Candidate.....		Position..... Deptt.
Give Ratings : A—Excellent, B—Good, C—Fair, D—Poor		
Traits	Brief Notings	Rating
Background		
Conversational Ability		
Personality		
Qualifications		
Experience		
Overall Suitability		
Special Remarks		
Recommended for the Position : Yes/No		Signature of Interviewer Date
Rejected/Active Consideration/Selected		PERSONNEL DEPARTMENT
<i>(Please return to Personnel Department after signing.)</i>		

Advantages and Limitations of Interviewing

Interviewing has two big advantages over other methods. These are as follows :

- (a) It can fill information gaps and can correct questionable responses.
- (b) It can effectively bring out the behavioural characteristics of the applicant. The interviewer can easily find out whether the applicant is likely to get along with others in the organisation or not, where can his talents be utilised most effectively, and so on.

It is sometimes contended that interview is an *unreliable tool of selection* because it has the maximum element of subjectivity. The same candidate may be rated differently by different interviewers. He may be rated as 'fit' by one interviewer and as 'unfit' by another. Hollingworth's study in which he found striking discrepancies in the rankings assigned by 12 sales managers to 57 applicants interviewed by them is cited in support of this contention. Following are some important reasons which generally account for this difference :

1. ***Interviewer's Bias and his Pseudo-scientific Premises.*** Interviewers differ in their bias related to sex, ethnic group, age, etc. Hence, they may match 'men and prejudices' instead of 'men and jobs'. Closely allied to bias are most of the premises of such pseudo-sciences as graphology, palmistry, phrenology, etc. Different interviewers may differently use their knowledge of these subjects in interviewing. The graphologist, on the basis of his interpretation of the candidate's handwriting, may reject a candidate and the phrenologist may on the basis of the candidate's shape of head, select him. The fact is that all such devices are unreliable.

2. Temporal Order of Interview Information. It has been found that interviewers typically make some tentative decisions about candidates early in the interview. Thus, if some 'unfavourable' information about a candidate comes up early before an interviewer, it may lead him to an early negative decision, and vice versa, although the total favourable and unfavourable information presented to him collectively may remain the same. In other words, the 'first impression' tends to persist. Thus, the same candidate may be rated differently by different interviewers depending upon the order in which the 'favourable' and 'unfavourable' information comes to them.

3. Temporal Order of Interview and Application Form Information. Where a candidate is being separately rated both on the basis of his application form and interview, the order in which the 2 informations are being rated is important. It has been found that when application forms are rated first, the ratings (whether favourable or unfavourable) are reflected consistently in the interview ratings—the reason perhaps being that the application form information is supposed to be relatively more objective. But when interview is rated first, the rating on the application form depends more on whether the interview rating is favourable or unfavourable : if favourable the rater is more likely to search for negative evidence in the application form rather than to confirm his earlier favourable rating; if unfavourable he is more likely to confirm his earlier unfavourable rating rather than to search for positive evidence.

4. Contrast Effect. An interviewer's rating of a candidate is also influenced by the impression of the preceding interviewee. Thus, what might be a good 'average' candidate may be rated as a better candidate if interviewed after a very poor candidate than if interviewed after a very good candidate.

5. Interview Structure. The same candidate may be rated differently by an interviewer in two different types of interviews—structured and unstructured. It has been found that in structured interviews, interviewers are more consistent in their ratings of a candidate than in unstructured interviews.

From the above description it is clear that only unsystematic and pseudo-scientific interviews have little dependability. In case of systematically planned interviews, the limitation of their being unreliable can be reduced. Newman, Bobbit and Cameron report correlations ranging from 0.8 to 0.89 between the ratings of pairs of interviewers when systematically planned interviews are used.

Despite the above statistical findings the fact remains that interviews cannot assess certain characteristics (such as creativity, dependability, honesty, punctuality, etc.) because these characteristics become manifest over a period of time. Nor can interviewer correctly know about a candidate's such acquired skills and abilities as ability to diagnose mechanical disorders, spell words correctly or assemble small parts.

3. Tests

Another important device used in selection is psychological test. A psychological test is designed to measure such skills and abilities in a worker as are found by job analysis to be essential for successful job performance.

Some important tests are : knowledge tests, ability tests, aptitude tests, personality tests and simulation exercises.

Knowledge Tests

Tests measuring knowledge or information are the easiest to develop and most appropriate to use for jobs that require knowledge of certain things. For example, test for measuring knowledge of taxation laws, audit regulations, accounting system, etc. could be constructed to gauge the knowledge of candidates for the position of Finance and Accounting Officer. Such knowledge tests become necessary when academic qualifications are not good indicators of the capability and knowledge of a candidate.

Ability or Proficiency Tests

Ability or proficiency tests are those which measure the skills and abilities already present in the testee at the time of testing. These tests check an applicant's claim that he possesses those abilities which are believed to be critical in the performance of his job. Ability tests are appropriate for lower level jobs where abilities are quantifiable. For example, a test of typing speed and stenography for stenographers, mechanical ability tests for mechanics, tests in research methods for researchers, etc. These tests are not suitable for assessing higher managerial abilities like planning, coordinating, organising, etc. These abilities can be assessed through simulation and other exercises.

Aptitude Tests

Aptitude tests are those which measure skills and ability that have potentiality for later development in the testee. These tests measure whether or not an individual has the capacity or latent ability to learn a given job quickly and efficiently.

Difference Between a Proficiency Test and an Aptitude Test

- (a) The purpose of a proficiency test is to find out what a testee can do now and how well he can do it. On the other hand, the purpose of an aptitude test is to find out what a testee can do in future. This test is a sort of prognosis about the testee' future accomplishment. There are a number of tests which may be termed both proficiency and aptitude tests depending upon their purpose. For example, a typing test is a proficiency test if it is used to measure an applicant's existing proficiency in typing. But the same test becomes an aptitude test if it is used to measure an applicant's potential to develop typing skill.
- (b) In the case of proficiency tests by closely reproducing the elements of the task in the test situation the proficiency of a testee can be easily and accurately measured. But in the case of aptitude tests an accurate measurement of aptitudes is somewhat difficult. The reason is that for evaluating the potential abilities of an individual such of his present abilities and characteristics are measured as are known to be significantly related to future achievement.
- (c) An individual's proficiency, being largely the result of his training and experience, varies from time to time. But this is not so with his aptitude or potentiality for learning. Being largely the result of an individual's heredity and growth, aptitude remains essentially the same regardless of the practice or use of the ability eventually learned. This does not mean that aptitude test scores of an individual will never change, but where they do, this represents a weakness in the test rather than a change in the person's aptitude.

Personality Tests

These tests, which are generally used in the selection of executives, measure the personality traits (such as honesty, cheerfulness, persistence, dominance, cooperativeness, etc.) of individuals. Three major types of these tests are Projective Tests, Interest Questionnaires and Preference Tests. Together these tests are called PIP tests.

- (a) *Projective tests* require the testees to respond to ambiguous stimuli. For example, in the Thematic Apperception Test they are asked to respond to rather indistinct drawings by writing a story telling what has led to the present scene, what is now happening, and what the outcome will be. It is hoped that in so doing the testees project themselves into the situation and reveal their innerself. These tests are commonly used in Assessment Centres. One important limitation of these tests is that they require the services of experienced psychologists.
- (b) *Interest tests* try to know how far the testees' interests match with the interest patterns of successful persons actually in that job. If the matching is good, it is hoped that the testee will get more satisfaction from his job. One important limitation of these tests is faking i.e., testee usually giving wrong responses in order to appear to be the kind of person for which the employer is looking. Faking is reduced to some extent by *forced choice technique* which is described in the chapter on Performance Appraisal.
- (c) *Preference tests* question testees about the characteristics which they would prefer to be present in their jobs. The Job Diagnostic Survey Questionnaire developed by Hackman and Oldham is an example of this type of tests.

Simulation Exercises

Since men who wish to obtain employment frequently claim experience they do not have, it is desirable to have tests which differentiate among them. The most accurate way to measure experience is to try men out on the work. One method to do this is to give temporary employment for a probationary period. This method is obviously costly, both because it involves excessive employment and because of the damage of machinery and injury to workers which it entails. The next best method is simulation exercise. Simulation exercise is a test which *duplicates* many of the operations and problems confronting the work on the job. Thus testing punchpress operators by means of a miniature and hazardless *fascimile* of the actual machine or managers by means of role-playing is a simulation test.

Advantages and Limitations of Psychological Tests

Psychological tests as a selection technique have definite advantages over other methods of selection. These are as under :

- (a) They are less time-consuming and costly compared with interviews.
- (b) They are more objective and impartial.
- (c) They yield quantitative descriptions of aptitudes and characteristics. This enables the employer to quietly eliminate those candidates who possess too much or too little of a required characteristic.
- (d) They uncover the whole pattern of a candidate's abilities and characteristics which is not easily detected by other selection techniques. This helps the employer in making the candidate's correct placement in the organisation.

One common weakness of all psychological tests is that unlike the scales used in the measurement of such physical characteristics as height, weight, etc. here we cannot have a zero point and equal intervals. For example, in a test of intelligence a person who does not answer any question correctly is not necessarily totally lacking intelligence. Similarly, a person who answers the first two questions correctly cannot be called twice as intelligent as someone who answers only the first question correctly.

Personality and interest tests suffer from one additional weakness. It is difficult in their case to obtain truthful answers from the applicant. An applicant's desire to get a certain job may force him to claim certain interests or personality traits which he does not possess. Even in the matter of proficiency tests they indicate only what a man should be able to do—they cannot measure what he *will* do.

In brief, tests alone are inaccurate predictors of job success. Tests are designed to supplement other screening methods, not to replace them. They are like a barometer which may provide an accurate measure of air pressure, but a prediction of future weather conditions based solely on this measure, may be relatively unreliable.

Use of Psychological Tests

Traditionally most of the industrial testing has been confined to blue-collar, sales and clerical jobs. Some important factors that have favoured the use of psychological tests for these jobs are as follows :

- (a) Applicants for such jobs usually run in hundreds and sometimes in thousands. Tests can efficiently (at least in terms of time and cost) help in selecting or rejecting a proportion of applicants thereby reducing the number for interviews and other subsequent selection techniques.
- (b) These jobs are easy to define and operationalise and the skills to be tested are of a routine and mechanical nature. Hence, the choice of selection tests poses no major problem.
- (c) Because of continuous research in this area a body of knowledge is available that has been utilised for improving the testing programmes for these jobs.

The use of psychological tests in the selection of persons for managerial and supervisory jobs is very small. There are two reasons for this. *First*, The sample size of this category has remained so small that researchers have been unable to apply sophisticated statistical measures; this has created lack of confidence in the results. It has also retarded generalisability of the results. *Second*, it has been difficult to develop for these jobs adequate indices of success. Unlike the blue-collar jobs for which the performance measures are more clear-cut, the executive group has no commonly agreed upon performance indices. Some feel that the trait of "consideration" (the degree to which executive is considerate to the feelings of others) is important. Others utilise "initiation of structure" as an index of performance. For some the satisfaction of subordinates is important, and for others it is actual output.

4. References

Requesting references is a widespread practice with substantial doubt as to its validity. References are usually obtained from the candidate's friends or from his previous employer. In as much as most people are reluctant to make reports that may hinder the chances of others, their opinions are not likely to result in accurate appraisals unless carefully controlled. Some organisations have found that by assuring the referee of absolute confidentiality and by informing him that one adverse vote in three does not disqualify, frank, reliable and valid references have been obtained. The telephone can serve as a useful

source of contribution. Men may give specific answers, on phone, to specific questions and their slight hesitations and pleasant evasions may convey significant information. Following is a Sample of Reference Check Form:

Sample Reference Check Form

Name of candidate :

Name of referee :

Position being considered for :

Designation :

Location :

Organisation :

1. HOW LONG DID THE CANDIDATE WORK FOR/WITH YOU?

2. WHAT WAS THE POSITION HELD?

3. WHAT TYPE OF JOB WAS HE/SHE PERFORMING?

4. WHAT WERE HIS/HER REASONS FOR LEAVING THE ORGANISATION?

5. WHAT ARE THE STRENGTHS OF THE CANDIDATE?

· TECHNICAL:

· MANAGERIAL (IF APPLICABLE):

6. ANY AREAS FOR IMPROVEMENT?

7. WOULD YOU RE-HIRE HIM/HER IF THE OPPORTUNITY ARISES?

8. ANY COMMENTS ON HIS/HER MORAL CHARACTER?

For Official Use:

REFERENCE CHECK CONDUCTED BY:

5. Physical Examination

Physical examination reveals whether or not a candidate possesses the required stamina, strength and tolerance of hard working conditions. Major deficiencies may serve as a basis for rejection but minor deficiencies serve as a positive aid to selective placement and as indicating restrictions on the candidate's transfer to other positions. The basic purpose of a physical examination is to place selected candidates on jobs which they can handle without injury or damage to their health.

Combining Selection Techniques into a Battery

No single selection technique can measure all the abilities required on any job. Even the simplest of jobs is complex if one considers the combination of abilities required of an individual who is to remain on the job and do it well. Hence the need to use a battery of selection techniques rather than a single technique. This may be done in any one of the following ways:

1. **Profile Matching.** In this method the known "successful" employees are made to pass through each of the selection techniques. Their scores on each technique are then averaged to obtain the *ideal* profile of a successful worker. This profile is then used as a standard against which the individual profiles of all new applicants are compared and selections made. This may be done in any one of the following ways. It should, however, be remembered that each way results in different individuals being selected for the job.

- (a) Individuals whose scores on all techniques are above the standard scores may be selected.
- (b) Individuals whose scores show minimum deviations from the standard scores may be selected. For this purpose the deviations of an individual's scores from the ideal scores are first calculated. They are then squared and totalled. The lesser this total, the better the match.
- (c) Individuals whose scores show maximum covariation with the standard scores may be selected. For this purpose the coefficients of correlation may be calculated between the scores of each individual and the ideal scores. The higher the coefficient, the better the match.

2. Multiple Cut-off. In this method a cut-off score, i.e., a minimum acceptable score, is established separately for each technique. Unless an applicant scores above this point on each technique he is not selected. In other words falling below the minimum on any technique disqualifies the individual. The cut-off scores usually vary with tightness or looseness of the labour market. The tighter the market the lower the cut-off score; the looser the markets, the higher the critical score can be. Individuals who score above all cut-off points are ranked on the basis of their total scores. This method thus seems to assume that for job success there is a certain minimum score which is needed in respect of each technique but beyond this minimum the scores become interchangeable so that if an individual has secured poor scores on one technique he can compensate them by securing rich scores on some other techniques.

3. Multiple Regression. In this method the multiple regression model is used for making selection decisions about individuals. With the help of data available on job performance and the performance in several selection techniques, the relative contribution of each technique in predicting job performance is found out. For example, in the equation $y = 2x_1 + 4x_2$ (where y stands for predicted job success and x_1 and x_2 stand for the different selection techniques) it is shown that the selection technique x_2 makes twice as much contribution as the selection technique x_1 in predicting job success (y). Hence an applicant whose scores on x_1 and x_2 are 5 and 10 respectively will be considered on the same footing as another applicant whose scores are 15 and 5. Each of them has a total score of 50.

4. Multiple Hurdle. In this method, the various selection techniques are arranged in a sequence as so many hurdles and an applicant must clear all these hurdles to reach the final stage where he is considered for selection. An applicant must secure above the given minimum score at each stage before he is considered for the next stage. Every stage is thus a device for weeding out applicants. At every stage the selector has to pause and think in terms of sequential decisions. At each stage he has to review the situation and decide whether to continue with the process and to continue consideration of the applicant or to reject him. In this way he goes on eliminating a certain number of applicants at each stage until the required number of candidates is selected. This can be shown by an inverted triangle as given below.

Successive Hurdles¹

1. Preliminary interview
2. Application scrutiny
3. Tests
4. Interview by Personnel Deptt.
5. References
6. Physical examination
7. Interview by line supervisor.

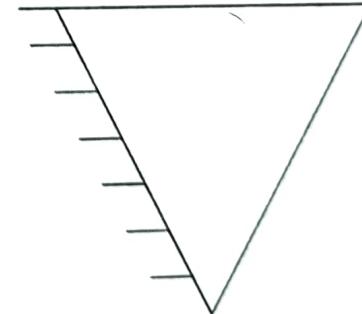


Fig. 10.1. Declining Number of Applicants at each stage.

The above method has the advantage of progressively decreasing the cost of selection as the number of applicants continuously goes down from one stage to the other. The disadvantage of this method is that an applicant is rejected simply because he does not perform above the minimum cut-off point at a given stage, although it is possible he might have done really well in the next stage. It is this characteristic of taking sequential decisions which distinguishes this method from the multiple cut-off method in which a decision to select or reject a candidate is taken after he has been through all the techniques.

¹. The number and arrangement of these hurdles may differ from organisation to organisation.

Factors Determining the Functional Value of a Selection Technique

Following are the factors which determine the functional utility of a selection technique:

1. Reliability,
2. Validity,
3. Selection Ratio, and
4. Ability to increase the percentage of satisfactory employees.

Our discussion of these factors in the following pages, though primarily related to psychological tests is, in a general sense, applicable to other selection techniques also.

1. Reliability. This means that the test should give consistent results in repeated trials. If a person achieves a test score of 50 on one day and a score of 100 on the next, the test results are inconsistent and, therefore, unreliable. The unreliable test has little merit because it is as undependable as an elastic ruler. Of course, some difference in the individual's two scores is to be expected due to difference in his physical condition, incentive and attitude, distractions present during the testing and other similar factors on the two occasions.

The reliability of a test is determined in one of the following ways:

- (a) By giving the test to the same group at separate times and correlating the resultant series of test scores;
- (b) By giving 2 or more different (but equivalent) forms of the same test and correlating the resultant test scores; or
- (c) By the so-called split-half or odd-even method. In this method the test is given only once but the items are divided and scores on one half of the items are correlated with scores on the other half.

2. Validity. This means that the test should be able to measure what it purports to measure. There are basically four types of validity: face validity, content validity, construct validity, and criterion-related validity.

(a) **Face Validity.** This means that the test should 'look right' to the test taker. If the test-taker fails to see the relevance of the test to the job for which he has applied he may become derisive or may even feel insecure. Thus, a test designed to measure supervisory skill would lack face validity if it contained items which assess arithmetic knowledge.

(b) **Content Validity.** The test should be *fully representative* of the relevant domain. Content validity of a test would suffer if it under-represents the domain. Thus, a test of typing proficiency that requires the test taker to type only numbers would lack content validity since typing generally involves the use of almost all type writer keys not just those associated with numbers.

(c) **Construct Validity.** Abstract variables which cannot be directly observed, e.g., intelligence, aptitude, etc. are known as constructs. The value of such variables cannot be directly observed but can only be inferred from other observable variables. These other observable variables then become our operational definitions of these constructs. By construct validity of a test is meant the appropriateness of the operational definition of the construct.

(d) **Criterion-Related Validity.** This is the most important type of validity to look for or to achieve in a test. Criterion-related validity is the ability of a test to successfully predict an applicant's performance on a specific job as measured by a particular index of job success. A test that has been shown to predict successfully an index of job proficiency is said to be a valid test. Following is the procedure to judge the criterion-related validity of a test :

(i) **Job Analysis.** First of all, an analysis of the job is done in order to identify the known traits and skills required to perform its various components. For example, the human traits and skills required to perform the major components of a stenographer's job are ability to take dictation in shorthand, ability to transcribe it on a typewriter with accuracy, neatness and speed, ability to file letters and so on.

(ii) **Selection of a Test (or Predictor).** In the second step a few such tests are selected as can measure the attributes important to job success. This choice is usually based on experience and previous research.

(iii) **Selection of a Criterion.** The third step involves choosing an indicator which measures the extent of how "good" or successful a worker is. This indicator is typically referred to as the criterion. Guion defines the criterion as simply "that which is to be predicted". A detailed description of criterion is given in the chapter on Performance Appraisal.

(iv) **Administering the Test.** In the fourth step, the selected test is administered to the employees. There are two ways of doing this : present employee method and the follow-up method. In the 'present employee method' test is administered to employees already on the job. The test scores of these employees are then compared with their current criterion scores. This is called *concurrent validation*. Its main advantage is that data on performance are readily available. There is no time lag between the obtaining of test scores and criterion scores. The disadvantage is that the current employees who are already selected and trained may not be representative of new job applicants (who are really the ones the personnel officer is interested in screening with his test).

In the 'follow-up method' test is administered to the applicants for the job in question. However, the test is not used as a basis for selection at this time. The applicants are selected on the basis of whatever procedure is already prevailing at that time. The test score of these applicants are also not disclosed to them and are filed away to be compared with their performance scores later on after they have been on the job for some time. This kind of validity is called 'predictive validity'. The reasoning behind this procedure is that if we use the test as a basis for selection and take in only those with high scores then we would never know the eventual performance of those with low scores. Who knows that this unselected group of low scores, if taken in, would have done better than the selected group? We can discriminate between them only when we afford to both the groups the opportunity to work.

(v) **Finding out the Relationship Between Test Scores and Performance Scores.** This is done by computing a correlation coefficient (called a validity coefficient). If the coefficient is very low it indicates that the predictor cannot discriminate between the good and poor performers and hence it should be rejected. On the other hand, if the coefficient is high, it indicates that the predictor can make the above discrimination and hence it should be accepted. However, before one may proceed to use the predictor the coefficient must be tested for significance. The test of significance indicates whether the relationship that we have found to exist between predictor and criterion is the result of chance or is a true relationship. If it is a chance relationship, the personnel department certainly has no justification for using the selection device to decide the fate of future job applicants.

(vi) **Cross-validation and Revalidation.** Finally, before a test is put to use it is cross-validated by again performing the fourth and fifth steps on a new sample of employees. A periodical revalidation of the test is also done to make sure that it continues to accurately distinguish between high and low performers.

There are a few other points which should also be remembered about validity. These are as under :

1. The validity of a selection test ensures only that the selected group, on the average, will surpass the larger group of applicants in performance. This means that the predictions about performance made by the test are valid only generally and may be dead wrong if used for any given individual.
2. The validity of a test should always be expressed together with the index of job success because a test is valid or invalid not in general but only in regard to a given index of job proficiency. The test can be a valid predictor of one index of job success and not of another.

3. Although a test can be reliable without being valid but it cannot be valid without being reliable. The coefficient of reliability of a test imposes a theoretical maximum on its possible coefficient of validity. Thus, a test that on repeated testing gives scores that correlate with the first testing only 0.3 is not likely, except by chance, to relate higher with employee performance. To put it differently, if a test is not correlated with itself it should not be expected to be correlated with anything else. It is primarily for this reason that the reliability of a selection test should be checked first of all.

(3) Selection Ratio. It should be remembered that in personnel testing a manager is more interested in the capacity of his selection device to improve the overall performance of the selected group than in its capacity to accurately predict the performance of any single individual. As such, he does not mind even if a few potentially unsuccessful candidates pass through his selection device as successful ones so long as the selected group's overall performance remains higher than what it would have been had the device not been used.

One important factor which helps in improving the overall performance of the selected groups is the selection ratio. The selection ratio is the ratio of the number of applicants to be selected to the total number of applicants available. It is expressed as n/N where n is the number of jobs to be filled and N is the number of applicants for those jobs. When this ratio is greater than 1, that is, when there are more jobs to be filled than the number of applicants available the selection device, if any, has no functional utility because even applicants of mediocre ability must be hired. But when this ratio is less than 1, that is, when the applicants are more than jobs, the manager can afford to raise the standards and select only those who hold very high promise. This can best be demonstrated with the help of the following figure (Fig. 10.2). In this figure there are 3 scatterplots of the predictor and criterion scores of a large sample of employees with a validity coefficient of 0.7. However, the selection ratio in each scatterplot is different. It is 1 in the first figure, 0.8 in the second figure and 0.2 in the third figure. This is represented by the shaded proportion of the oval in each case.

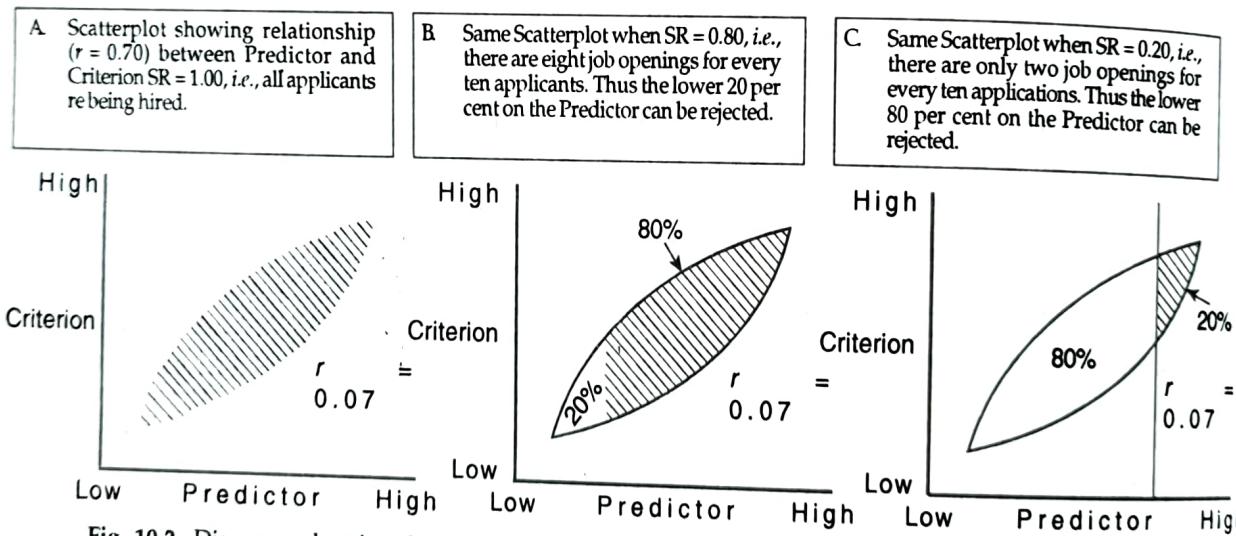


Fig. 10.2. Diagrams showing the effect of selection ratio on the average quality of those being hired.

Now in the first case since every applicant is being hired, the selection device has no functional utility. In the second case since only 80% of the applicants are being hired, the employer will logically hire the 80% having the highest test score. It is easy to see how the average performance of these hired persons would be higher than that of persons in the first case. This average can be further increased by reducing the selection ratio to 0.2 as shown in the third figure.

The general principle that a lower selection ratio will always result in better quality employees being hired holds as long as the selection technique has any significant validity, however small. If the

1. It should be remembered that the higher the correlation between the predictor and the criterion, the more nearly the oval will approach a straight line; the lower the correlation, the more nearly the oval will approach a circle.

selection technique has no validity at all lowering the selection ratio will not ensure better quality employees.

(4) Ability to Increase the Percentage of 'satisfactory' Employees on the Job. In the above discussion we have assumed that all workers above a certain predictor cut-off are satisfactory. But if there exists in the organisation a certain criterion cut-off also for separating workers into satisfactory and unsatisfactory categories we would find that all applicants are divided into 4 groups thus:

- (a) Applicants whom we selected because they were above the predictor cutoff and whom we later on found to be above the criterion cutoff also. These are called true positives and are designated as 'A' in Fig. 10.3.
- (b) Applicants whom we rejected because they were below the predictor cutoff and whom we later on found to be below the criterion cutoff also. These are called true negatives and are designated as 'B' in the Fig. 10.3.
- (c) Applicants whom we selected because they were above the predictor cutoff but whom we later on found to be below the criterion cutoff. These are called false positives and are designated as 'C' in Fig. 10.3.
- (d) Applicants whom we rejected because they were below the predictor cutoff but whom we later on found to be above the criterion cutoff. These are called false negatives and are designated as 'D' in Fig. 10.3.

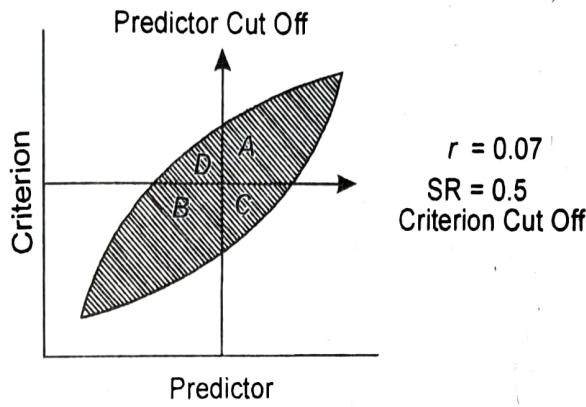


Fig. 10.3. Effects of establishing criterion and predictor cutoff points on a bivariate distribution of scores.

It would be seen from the above figure that whereas its A and B parts represent correct decisions based on the selection device, its C and D parts represent wrong decisions. If no selection device were used the proportion of satisfactory workers to total workers would have been $\frac{A + D}{A + B + C + D}$.

By using the selection device this proportion should increase. In other words, $\frac{A}{A + C}$ should be found greater than $\frac{A + D}{A + B + C + D}$. If it is not so then the selection device has no functional utility.

Now tables have been devised (called after the names of their authors the Taylor-Russell tables) which make it possible for anyone to predict how much improvement in the percentage of satisfactory employees will result from using a reasonably reliable test under different combinations of validity, selection ratio and percentage of present employees considered satisfactory.

Placement

So far we have focused on selection, that is, a decision to accept or reject each applicant on the basis of his performance in some selection techniques. Now we are going to focus on placement, that is, a decision to place a selected individual in one job than in another. In selection the task is to match people with the positions. In placement the task is to match positions with people so that each individual is assigned to that position where he is likely to make the best use of his abilities consistent with the requirements of his total working group. Selection is best done where the number of applicants is large

relative to the number of available jobs. Placement is best done where the number of available jobs is large relative to the number of selected individuals.

At the time of employment, selection and placement are often inseparable parts of a single process. As a rule, a small company has only a few vacancies at any one time, and consequently it selects people for specific jobs. In large companies, however, where there are a number of vacancies, selection and placement may become distinct processes.

Placement problems arise when large-scale transfers or promotions are being made or when some people rendered surplus from some parts of the organisation are being placed elsewhere in the organisation or when executive trainees on completion of their general training programme are being assigned to jobs in production, sales, marketing or some other functional area and so on. In such situations the individual is already 'employed' and the placement decision is then made to assign him to the job for which he is considered to be best qualified.

In making placements of individuals the principle that each individual should be placed on that job for which he has the greatest ability should *not* be rigidly followed because this may result in some jobs being filled by unqualified persons. The aim should be to realise the abilities and talents of the largest number of individuals. This may involve some workers being assigned to jobs for which their talents are secondary. But the composite assignments collectively are optimum.

Proper placement helps to : (a) get along with co-workers easily, (b) improve employee morale, and (c) reduce employee turnover, absenteeism and accident rates.

Induction

Induction is the process of inducting a new employee into the new social setting of his work. The step should take into account two major objects : (i) familiarising the new employee with his new surroundings and company rules and regulations, and (ii) developing in him a favourable attitude towards the company. To achieve these twin objects the complete induction process is generally divided into 2 phases. In the first phase, induction is done by the personnel department which supplies to the new employee all sorts of information relating to the company. Sometimes too much is given about too many subjects in too short a period and this may create confusion in the mind of the new employee. The information which is commonly passed on to the new employee covers the following subjects :

1. Company history, products and major operations.
2. Geography of the plant.
3. Structure of the organisation and functions of various departments.
4. General company policies and regulations regarding wages and payment, hours of work and overtime, safety and accidents, discipline and grievances, uniforms and clothing and parking.
5. Economic and recreational services available.
6. Opportunities for promotion and transfer, performance appraisal and suggestions system.

The techniques usually include group lectures, individual interviews with key people, and company films. Most programmes include a tour of the plant or office.

In the second phase (called the buddy system or the sponsor system) induction is done by the supervisor. He has the responsibility of seeing that both the new comer and the work team accept each other. He has the responsibility of achieving the more difficult second objective of creating a favourable attitude in the newcomer. It should be remembered that even though the first impression made on the mind of the new comer in the first phase is always a lasting impression, the treatment which he receives during the early days from his supervisor and members of his work group is equally important in conditioning the nature and degree of his assimilation and adjustment. In some organisations the practice of appointing some senior person other than the new comer's immediate supervisor to act as his friend, philosopher and guide is followed. This is known as *mentoring* and is described in the chapter on Labour Welfare and Social Security. The supervisor should follow a set induction procedure.

A seven-step procedure provides for :

- greeting the new-comer cordially. (Hotels in Bangalore follow a simple, yet touching ritual. Every time a fresh recruit joins the organisation, a brief letter of welcome with the individual's photograph is pinned up on the notice board at the staff entrance for all to see. Imagine the individual's delight at seeing this letter greet him as he takes his first step into his place of work.)
- telling the new-comer his duties.
- explaining the importance of his job in relation to other jobs of the department.
- introducing the new-comer to the rest of the work team and the trade union representative where appropriate.
- introducing the new-comer to the person with whom he will get training.
- telling the new-comer what to do if he :
 - has a problem in understanding the wage/salary system
 - has a medical problem
 - feels that working conditions are unsafe or unwelcome
 - does not get on with his co-workers
 - has difficulty with the work
 - is bullied or harassed
 - has a complaint
 - does not receive adequate training
- checking frequently the newcomer's progress.

At some point of time the newcomer will also have to be told about the expected performance and quality standards and the norms of behaviour and protocol in the organisation. Here it should be remembered that the informal organisation of the newcomer will also acquaint him with its own norms and practices. The personnel department and the supervisor can do little to prevent this.

Some indicators of faulty induction are : low morale, low productivity, more accidents, quits, requests for transfer, absenteeism and various sorts of complaints. The programme should be corrected after interviewing the new employees.

Recruitment and Selection in India

We have discussed this topic under the following heads :

1. Sources of Recruitment;
2. Use of External Screening Agencies;
3. Use of Multiple Hurdle Techniques/Tests;
4. Reservation in Employment for S.C., S.T., and Physically Handicapped persons; and
5. Prohibition to Employ Child Labour.

Sources of Recruitment in India

The different sources from which people are recruited in our country are as follows :

Internal Sources

In many organisations in India at the time of new vacancies preference is given to people from within the organisation. Thus, at the Tata Engineering and Locomotive Company and at Hindustan Lever, outside recruitment is resorted to only when requirements for trained personnel cannot be met from

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the resources generated by the company's training scheme or by internal promotion or when the vacancy has to be filled quickly. This ensures that in the company there is always a ladder by which men with the right qualities can climb to higher levels.

External Sources

1. Badli Workers. Many organisations keep *badli* lists or a central pool of personnel from which vacancies can be filled. This has the advantage that the personnel can be tested out in different jobs and listed according to the type of job for which they are best fitted. The disadvantage is that the pool may create disputes regarding wages, holidays, permanency, etc. In this connection it is significant to remember that any person employed for 240 days in a year is deemed to be in continuous employment for one full year which entitles him to claim compensation on being retrenched by the employer under Section 25-C of the Industrial Disputes Act.

2. Employment Exchanges. The Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959 which applies to all establishments including factories employing 25 or more persons casts an obligation on the employer to notify all vacancies but does not impose any obligation upon him to recruit any person through the Employment Exchange. Further, the Act does not apply to temporary vacancies of less than 3 months, duration and to vacancies involving unskilled office work or to vacancies proposed to be filled by promotion or absorption of surplus staff. There are about 1,000 employment exchanges in the country. They together place 1.10 lakh employees per annum in various government jobs.

3. Advertisement in Newspapers. Senior posts are largely filled by this method. Box number advertisements sometimes do not draw good candidates who feel that it is not worthwhile to apply without knowing employer's name. In ports and docks advertisement is the normal mode for recruiting skilled and semi-skilled workers.

4. Labour Contractors. Almost all the companies engaged in oil-processing including ONGC follow the contract labour method to carry out jobs which are of temporary and non-recurring nature. In mines of West Bengal, Bihar, Madhya Pradesh, Orissa and Andhra Pradesh recruitment through contractors is still very common. The system is, however, on the decline in the plantations. The Second NCL has recommended that contract labour should not be used for core perennial services. It can be used only for non-core perennial services like canteen, watch and ward, cleaning, etc.

5. Institutes and Colleges. Some establishments make arrangements with the Industrial Training Institutes of the Directorate General of Employment and Training under which it supplies their trainees in accordance with the specifications of the employing agency. For managerial positions the practice of recruiting MBAs through campus interviews is increasing in India. Many recruiters, however, complain that this method does not give them enough time to get evidence of candidates' competencies.

With the coming into being of many new front line jobs in many new sectors such as retail, insurance, telecom, hospitality, entertainment etc. companies are now spreading their recruitment net wider to colleges. They see young fresh minds to be *more adaptable* and *easily trainable*. Moreover hiring a young work force is always *cost effective*. War for talent on college campuses is forcing many companies

(such as Bharti and G.E.) to forge deep ties with colleges and their students in several ways such as sponsoring college festivals, conducting on-campus workshops and marketing presentations, supplying visiting faculties to help upgrade course structures and offering free training and college-like job environment.

Following are some important differences between hiring from a college and a professional institute:

Hiring from a college	Hiring from an Institute
1. Number of candidates being huge, written test is used as a mass filtering mechanism	1. Number of candidates being less, no written test is administered.
2. Candidates are tested mainly for their aptitude for the job and not for their functional or problem solving skills. The common mechanisms used for this purpose are aptitude tests and interviews. Group discussion is used only where the job profile needs a great deal of client interaction as in marketing	2. Candidates are tested for their functional and problem solving skills and their knowledge about the subject through case studies, business simulation games and interviews
3. Jobs offered attach little premium to experience	3. Candidates with experience and aspiring for lateral placements need to prove the relevance of their experience for the new job.
4. The entire recruitment process is wrapped up in a day.	4. The entire process of hiring takes few days to complete.

6. Relations of Existing Employees. Some companies have agreements with recognised unions to give prior consideration to relatives of deceased, existing or retired employees if their qualifications and experience are suitable for vacancies. For example, the collective agreement between union and management of the Tinplate Co. of India Ltd., Jamshedpur reserves 25 per cent of the total number of vacancies for the dependants of deceased or medically unfit employees. In another 20% of the vacancies suitable ex-employees or relatives or dependants of the existing employees may be given preference. In Tata Iron and Steel Co. Ltd., the Standing Order clearly mentions the following order of priority of recruitment:

- (a) Ex-employees or temporary employees with a clear record of service;
- (b) A dependant of an employee who has been permanently disabled, either totally or partially, by reason of an accident met with during the course of his employment, provided a job suitable to his qualification is available;
- (c) People of the State;
- (d) A near-relation of an employee who has completed 25 years of continuous service if no other relation of that employee is in employment. The term 'relation' for this purpose is defined as husband, wife or wives, widow, son, daughter, brother, sister and son-in-law, in order of priority;
- (e) In each category, members of Scheduled Castes and Scheduled Tribes should receive preference over others; and

(f) A relation of an employee who dies as a result of an accident should be given, on compassionate grounds, top priority for permanent employment suited to his qualifications.

7. Walk in Interviews. This source is becoming popular among many companies in the services and BPO sectors where there is a huge demand-supply mismatch in quality. These companies are popularising this source through several techniques such as:

- by setting up kiosks at important points for screening candidates;
- by announcing surprise gifts to every 50th or 100th applicant;
- by giving cash incentives and expensive gifts to the selected candidates; and
- by hiring even border line candidates and imparting to them 2-8 weeks training after which they have to clear a round of interviews before they can get the appointment.

8. Employee Referrals. This source is also becoming popular among many Indian companies for recruiting people at junior or middle levels. The way a referral works is simple : if a job opening is advertised, the company's employee can recommend a friend or an ex-colleague. If the candidate is hired, the referring employee gets a reward. Citibank, for instance, pays a flat fee of Rs. 50,000; Hewlett-Packard pays Rs. 4,000 and in some cases, upto 30 per cent of the employee's gross annual salary; and Hughes Software pays from Rs. 5,000 to Rs. 15,000.¹ At Sapient India it goes up to Rs. 1,50,000 depending on the title.

9. Bureau of Public Enterprises. One important agency in respect of first and second class employees of public sector undertakings is the Bureau of Public Enterprises which makes direct recruitment to various positions in these categories. Recruitment to class III and class IV positions is generally undertaken by the heads of concerned departments because centralised recruitment is difficult in view of the numbers involved.

10. Poaching or Head-hunting. Also known as "cherry picking," this method is becoming very common nowadays for tracking people for key positions. Under this method a leading executive search firm employs number of ploys to obtain the bio-data of candidates who are already working on senior positions in certain organisations and are rather unwilling to move to other organisations. After a careful evaluation of the fit between the candidates and the positions, the firm persuades them to accept the positions in the new organisations. Some recruiting companies use video-conferencing facilities to connect the candidate and the employer. Most executive search firms act on 'contingency basis', i.e., they get their fee on a candidate joining the client organisation. Some firms also act on 'retainer basis' where they get their fee irrespective of the outcome of the search.

11. Advertisement on the Net. Following their counterparts around the world a number of Indian companies have now started looking at the web as a means of recruiting professionals. Companies like Hindustan Lever have a website of their own, which not only provides complete information on the company, but also has an application form which can be filled and sent directly to the company through the Net. This method has the following advantages :

- (a) It is possible to give more information at a lower cost, about the company on the Net than in a conventional advertisement.
- (b) It is possible to easily reach those professionals abroad, mainly in the U.S., who are planning to come back to India in the near future and are looking for good job opportunities here.

Notwithstanding the above advantages this method is still in its infancy. The percentage of our target audience who surf the Net is very low. One reason which has hindered the growth of this medium is the lack of proper infrastructure. Another reason is fear of disclosure. Candidates fear that by posting applications on the Net they will not be able to maintain confidentiality of their curriculum vitae.

Are Expatriates Keen on coming to India?

An expatriate is an individual who works in a country in which he is not a citizen of that country. Thus all foreign citizens coming for work to India are expatriates. There are several considerations which make these individuals keen on coming to India. Important among these are as under;

- (a) Employers in India are *more open* to new and fresh ideas. Here one is free to try out new things. In developed markets employers are getting more conservative.
- (b) India offers the *entire spectrum*, from very smart and savvy consumers to those who are at the starting point of the consumption curve. Other markets do not offer this range.
- (c) India's big and emerging economy offers better *opportunities for growth and learning*. Here one gets to work on start-up projects that demand time and attention from scratch which one never gets in mature markets.
- (d) In terms of absolute salaries India has achieved parity at least with large parts of Asia.
- (e) Indians are able to speak in English.

But India can also offer expatriates a wide range of nightmares:

- (a) There is unsurity of the infrastructure available in India.
- (b) One has to reconcile with the low quality of Indian goods .
- (c) It is hard to come to terms with cultural quirks.
- (d) It is hard to run a household here. Finding property is a major problem.

12. Outsourcing. Some companies now show least interest in directly recruiting people for peripheral, one-time or temporary jobs. Instead, they ask external staffing firms to provide them personnel of the required quality for a contracted period. These personnel are on the staffing firm's pay roll and enjoy benefits like provident fund, ESI and medical insurance.

There are more than 19,000 staffing firms in the country. Companies such as Hindustan Lever, Colgate-Palmolive, Nestle, Cadbury, Coca-Cola, Britannia, etc. now ask these staffing firms to supply people to work as salesmen for their new product launches.

Temporary jobs are opposed by the vocal minority of organised labour which believes that the only job worth having is permanent, unionised, full-time and subject to all labour laws. But this is not correct. Temporary jobs have many **advantages** such as the following:

- They increase the strategic flexibility of employers by lowering their fixed costs. Employers can hire and fire temporary people without any technical hassles and focus their attention to core activities.
- They provide employment (albeit temporary) to many traditionally disadvantaged labour market outsiders such as less skilled and less educated individuals, small town residents, first time job seekers, women, retired persons and so on for whom temporary jobs are better than no jobs.
- They act as substitutes for the shameful performance of employment exchanges.

- They are a non-fiscal substitute (albeit short-term) for social security and unemployment insurance.
- They reduce frictional unemployment (temporary mismatch of demand and supply) by providing labour market liquidity.
- They act as a bridge to full employment.

The only *disadvantage* of this source is that these people seldom identify with the values, discipline and processes of the client organisation and often look at moving into permanent jobs in other companies.

Use of External Screening Agencies

A KPMG study—India Fraud Survey Report 2006, which covered over a thousand organisations across India, says that 15-24% of resumes in India are fake and one out of three resumes misrepresents facts. The study has found that IT, financial, entertainment and telecom sectors face the highest risk. This has led companies to seek the help of external screening agencies which undertake verification of the educational and professional qualifications, pre-employment status and past criminal record of job applicants. One such agency is Quest Research.

Employers have now realised that the risk of hiring a wrong person is far more expensive than conducting a pre-recruitment screening check which helps them :

- (a) to make certain that there are no discrepancies in the applicant's background and that he has not used fake or overstated resume;
- (b) to ensure that the applicant has left his previous employer on the right note;
- (c) to avoid organised crime in the B.P.O. sector where employees at the middle and junior levels have access to sensitive information; and
- (d) to comply with the regulatory requirements of customers in the United States.

Use of Multiple Hurdle Techniques/Tests

Many Indian companies (e.g., ICICI Bank, Colgate Palmolive, Asian Paints) use multiple hurdle technique for recruiting people for managerial positions. The tests which they use generally focus on problem solving, trouble shooting, quickly understanding and adapting theory to practice, putting in place processes and systems, etc.

Psychological tests which are extensively used in the United States are rarely applied in India. It may be noted that as between the public and private sector industries the support for psychological selection processes in Indian industries comes mostly from the former. In one survey¹ conducted in 1965 it was found that 50 per cent of the government and only 14 per cent of private units were making use of psychological tests to some extent.

Some important reasons which account for the unsatisfactory use of psychological tests in Indian industries are as under :

1. There are still few tests in use in Indian industry which are standardised by Indian psychologists for Indian subjects with national or at least regional norms. Most of the tests used are foreign

1. N.R. Chatterjee : *A Study of Some Problems in Indian Industry*, Deptt. of Business Management & Industrial Administration, University of Delhi, 1965.

which have been adapted to Indian conditions on the basis of insufficient data. Several tests developed by Indian researchers at the Psychological Research Wing of the Ministry of Defence lie unpublished within the covers of the Ph.D. dissertations for which they had been submitted or in government files on grounds of secrecy.

2. Tests are sometimes devised by persons who have inadequate knowledge of psychology. This always proves disastrous to the enterprise and detrimental to the subject. Management's faith in the efficacy of test is lost.
3. There being an unusually high number of applicants for every vacancy the main problem facing an employer in India is how to reject a majority of them without opening himself to the charge of favouritism. The *raison d' etre* of employing psychological tests in such cases is very often to have a device for rejection rather than a device for scientific selection on the principle of the best man for the job. This emphasis on rejection has prevented an appreciation of the positive virtues of psychological tests.
4. The rise of trade unions and gradual realisation that for most skilled and semi-skilled jobs in factories group factors rather than variations in individual abilities and aptitudes are largely responsible for worker productivity, have given practically a death blow to the psychological selection procedure in India.

Reservation in Employment for Scheduled Castes, Scheduled Tribes and Physically Handicapped Persons

In order to encourage the economic rehabilitation of the above categories of persons, a certain percentage of seats have been reserved for them by the Central and State Governments for all categories of posts. Thus, 15% of all Central Government vacancies are reserved for SC candidates, 7.5% are reserved for ST candidates and 3% are reserved for the physically disabled candidates. Reservations for the last mentioned candidates are made only for group C and D posts. Further, out of 3% reservations in this category 1% are for visually disabled, 1% are for those suffering from hearing and speech disability and 1% are for those suffering from orthopaedic disabilities. State percentages for all the above categories might differ.

SC/ST candidates are given relaxation of 5 years in age limit. They are also given relaxation in experience if it is not inconsistent with efficiency and are interviewed separately from the general candidates according to relaxed standards.

Prohibition to Employ Child Labour

Article 24 of our Constitution prohibits employment of children below the age of 14 years in any factory or mine or any hazardous employment. Similar prohibition is imposed by the *Child Labour (Prohibition and Regulation) Act of 1986*. Serious efforts are needed to prevent hiring child labour in the country which as per 2001 census is 1.26 crore-highest in the world.

Child Labour (Prohibition and Regulation) Act, 1986

The salient features of this Act are that it

- (a) Defines "child" as a person who has not completed 14 years of age.
- (b) Prohibits the employment of children below 14 years in specified occupations and processes.

- (c) Lays down a procedure to make additions to the schedule of prohibited occupations or processes;
- (d) Regulates the working conditions of children in occupations where they are not prohibited from working; and
- (e) Lays down penalties for violation.

Following are some important *shortcomings* of this Act :

1. It is limited in scope. It covers only some hazardous occupations and processes—a list of which is given in the Act. It does not define what constitutes hazardous work. As a result, it leaves a loophole for employment of children in hitherto unidentified hazardous occupations and processes.
2. The Act does not make it mandatory for the employer to keep lists of employees containing their dates of birth based on approved birth certificates. As a result, managers employing children either register their age as being above 14 or do not register at all.
3. Under the Act, it is for the employer to notify the Labour Department whether any children are working in his establishment. This means that one expects those who may be guilty or proven to be guilty to notify their illegal acts to the authorities.
4. The Act does not say what should happen to the child labourer once the employer is prosecuted.

Recruitment for overseas positions

Generally speaking, all production, office, and clerical positions are filled from the local labour market of the host country. It is only in the case of higher managerial positions that an Indian organisation needs to decide if it wants to send Indians overseas, recruit in the host country or ignore nationality and do a global search for the best person available.

Indian organisations may Prefer Indian Nationals for Overseas positions:

- (a) When there is lack of qualified host country nationals, or
- (b) When there is need to control all strategic decisions, or
- (c) When the organisation requires some one with extensive company experience to launch a very technical product in a country where it has never sold before.

It will be more advantageous to recruit a host country national when an uncomplicated *consumer product* is being launched. This is because he will have a better knowledge of the local tastes, habits and fashions and will be able to follow the best way to market the product. This will also enable the subsidiary to acquire its own distinct identity.

Sometimes the choice may not be entirely left to the Indian organisation due to local laws in some countries, such as most African nations requiring a certain number of host country nationals to be employed for every Indian expatriate sent by the Indian organisation.

The third option, recruiting regardless of nationality, develops an international executive cadre with a truly global perspective. This type of recruiting may, however, create internal status difficulties through its different treatment of each country's employees.

Discussion Questions

1. What is job analysis? Describe various methods which may be used to collect information for job analysis.
2. How does a job description for workers differ from that of an executive? What is Role Analysis Technique?

3. What is Manpower Planning? Describe the various steps involved in manpower planning process.
4. Is outsourcing a strategy for Human Resource Planning (HRP)? When a firm decides to outsource some of its processes, is it no longer responsible for HRP relating to outsourced processes? Discuss the importance of HRP throughout the outsourcing process.
5. "Recruiting the employee is only the beginning—the problems commence with his induction". Comment. (Delhi Univ., MBA, Dec., 1976)
6. What are the principal patterns of interview practised in various industries? Explain. (Delhi Univ., MBA, Dec., 1976)
7. Write short notes on:
- (i) Aptitude tests as Selection Tools
 - (ii) Induction.
8. (a) Should we give more weightage to psychological test scores in selection of shop-floor level employees or of executives? Explain. (Delhi Univ., MBA, Dec., 1979)
9. In the context of globalisation and increasing competitiveness, many organisations find that they not only have excess manpower, but also inadequate supply of human resources. Explain the reasons why organisations find themselves in such situations and examine how HR planning could have helped them to avoid such a scenario.
10. You have been asked to organise recruitment and selection of office staff for a new branch office. Indicate the possible sources of manpower supply. How can the relative merits of alternative sources of manpower supply be measured objectively?
11. What are the sources of manpower supply for an industrial organisation in India? Explain with reference to statutory provision for compulsory notification of vacancies?
12. Highlight the contributions of psychological tests in improving the selection of employees. What are the requirements of a psychological test which make it suitable for use in selection procedure?
13. If you were to interview a candidate for employment, what preparations would you make and with what type of information would you first acquaint yourself?
14. Since tests are objective in nature and interviews are subjective, why not eliminate all the selection procedures with the exception of psychological tests?
15. Make a correct choice of words from each pair within brackets :
- (a) Recruitment is _____ of applications. (elimination/generation)
 - (b) _____ have the maximum element of subjectivity. (Tests/Interviews)
 - (c) The purpose of an aptitude test is to find what a testee can do _____. (Now/in future)
 - (d) Reliability of a test is its ability to measure _____. (what the test is supposed to measure/consistency in results)
 - (e) Very low correlation between the test scores and performance scores indicates that the test _____ discriminate between the good and poor performers. (can/cannot)
 - (f) In personnel testing, the employer is _____ interested in accurately predicting the performance of any single individual than in improving the overall performance of the selected group. (more/less)
- [*(a) generation, (b) Interviews, (c) in future, (d) consistency in results, (e) cannot, (f) less.*]
16. **Andrew Oil Company Ltd.**
 Andrew Oil Company was engaged in storing, distributing and selling oil and petroleum products like gasoline, fuel oils, motor oils, lubricating oils, grease, etc. The company employed nearly 3000 workers besides a large number of technical and clerical staff. Established in 1980, the Company had grown steadily and its products were widely popular throughout the country. In the past, the Company had earned sizable profits and had declared substantial dividends to its share-holders.
 The company had its Branch Offices in five big cities of the country. The Board of Directors at the Head Office formulated policies and issued instructions to the Branch Offices from time to time. Sales of the Company's products were made through its 230 depots located in different parts of the country, which functioned under the direction and control of the various Branch Offices.

Each depot was under the control of a Depot Manager who was directly responsible to the Technical Manager at the Branch Office for his performance. The duties of the Depot Managers were both technical and administrative. They included maintaining adequate facilities in the depot for providing efficient and satisfactory service to the Company's customers, maintaining pipelines for different products, proper handling and storage of petroleum products, maintaining and repairing delivery equipment, observing the Regulations under the Explosives Act, giving technical service and advice to the Company's customers, maintaining good public relations with the postal and transport authorities and octroi officials and performing such other services as the Branch Office may require to be done.

For long time the Company had no well-defined policy of recruitment with regard to the staff managing these depots. Several employees who possessed no technical qualifications (some of them were not graduates) were promoted to the posts of Depot Managers. Subsequently, when these persons demanded promotion to higher ranks, management had also conceded the request and promoted them even to the posts of Technical Managers at the Branch Offices. In the opinion of the management, this policy did not affect the progress of the Company since it enjoyed almost a monopolistic position in the field. Even the depots which were considered to be operating below average efficiency secured a sufficient volume of business and continued to prosper.

In recent years, however, with changing economic conditions, growing competition and consequent marketing difficulties, the management felt the need for 'imparting vitality to the organisation by improving the quality of its staff'.

After reviewing the working of the various depots, the management decided in 1999 to recruit only well-qualified persons to the various posts of Depot Managers. The Company felt that qualified young engineering graduates would be most suitable persons for these posts. In their opinion "such young people would not only bring more vitality to the organisation but they would also have the necessary scientific bent of mind to conduct the operations of the various depots in an efficient manner. They would be up-to-date in their knowledge of modern scientific techniques and would not follow the old beaten track. If properly trained, after a few years when they reach higher positions they would be able to put the whole organisation on a sound footing." Further, the management also contemplated mechanisation of certain operations in the various depots with the help of these young graduates.

However, before recruiting the young graduate engineers, the Company also took into consideration the position of the old depot managers who had been associated with the Company for a number of years. Since the management strongly believed that most of the 'old-timers' would not be in a position to answer the Company's new demands on their ability, they decided to give a 'special voluntary separation offer' to them. According to this offer, those depot managers who agreed to retire from the service of the Company even before their age of superannuation would be given a special lumpsum or a life-time pension. Fifteen of the old depot managers accepted the offer and voluntarily retired. The rest of them were not willing to consider the offer.

In February, 1999, the Company advertised in all the leading newspapers inviting applications from First Class Engineering Graduates for appointment as Depot managers of the Company at various places. In order to get bright and promising young men Company solicited the cooperation of various Universities and Technical Colleges. The selected candidates were to get a starting basic salary of Rs. 6,000 per mensem (which was higher than that of old depot managers whose scale of pay started at Rs. 5,500), in addition to dearness allowance and an outstation allowance of Rs. 100 per day. The candidates would be required to serve in any part of the country. They would be on probation for a period of one year after which they would be confirmed in their posts.

Nearly three hundred candidates responded to the advertisement. The management selected fifty out of them after written examination and an oral interview by a Selection Board. The selected candidates were given both theoretical and practical training for a period of six months. During the period of training the trainees were provided with excellent living conditions and outstation allowances.

On completion of the training all the candidates were posted as depot managers at various places. Some of them were posted to the newly established depots while others were assigned jobs in the old depots. The newly established depots of the Company were twenty in number and some of them big in size requiring two depot managers.

During the next year the management watched the working of the various depots that were run by the new depot managers with the help of a performance-rating panel which consisted of the Technical Manager

at the Branch Office and two of his subordinate officers. Much to their dissatisfaction, the management found no improvement in the efficiency of the working of the various depots. They received reports that team spirit was lacking among the staff working in them. There seemed to be growing discontent among the 'old-timers' who protested that their promotion opportunities had been blocked by the management's new recruitment policy. On the other hand, the senior executives of the Company during their occasional visits to the various depots received complaints from the new depot managers that they were not satisfied with their job.

Subsequently, the management were very much perturbed when 17 of the new appointees submitted their resignation one after the other requesting to be relieved as early as possible from their jobs. At the time of their resignation some of them had already completed their probationary period. The management were informed that the remaining new depot managers were also looking for better prospects elsewhere.

The Chief Personnel Officer of the Company conducted an 'exit-interview' of the Managers leaving their jobs to find out the real causes of such a spate of resignations. It revealed the following:

1. Many depot managers complained that they were not able to derive any satisfaction out of their job. They said that they were not able to utilise their special knowledge and training to the fullest advantage.
2. They complained that their working conditions were not satisfactory. They had to work at odd hours and sometimes even on holidays owing to irregularities in transport and supply of the Company's products.
3. They said that there were no transport or hotel facilities near the depots since most of them were situated far away from the city area.
4. They said that they missed the amenities of social life; they were not able to keep in touch with current trends in their specialised field because of the remoteness of their place of work.
5. Some complained that they were not able to put up with the unfair practices and pressure tactics adopted by some of the agents and dealers.
6. They complained that they had no prospects of reaching senior executive positions and stated that they did not want to approach the agents and dealers.
7. It was said by most of the depot managers that the attitude of their superiors towards them was not encouraging. The superior officers hardly appreciated their genuine difficulties and seldom gave a patient hearing to their suggestions. They complained that their recommendations for the improvement of the working of the various depots were very often turned down by their superiors as 'merely academic and not practical'.

In the second week of April, 2001 the management called for a conference of the senior executives of the Company to review the Company's policies of selection, recruitment, training and induction. Analyse management's strategy in the above case.

17.

Godha Chemical Factory

Godha Chemical Factory engaging about 35 workmen was established 15 years ago. It originally started with 10 workers and when additional workers were necessary, the management used to tell the workmen to bring new workers either their relatives or friends and they were appointed. After 15 years the company prospered and also expanded. The management wanted to prescribe certain qualification for each category of workmen and make recruitment either through the Employment Exchange or by means of Newspaper advertisements. The workers resisted this move and demanded that recruitment should be made as per existing practice and usage. They also relied on a settlement reached between the parties wherein the management had agreed to continue the existing practice and usages in case of recruitment. The management, however, approached the Employment Exchange and the workers resorted to go-slow tactics in their work. The management suffered heavy losses as export orders could not be fulfilled. The management approached the Conciliation Officer who suggested a recruitment policy wherein the workers' direct dependents or family members should be given preference, if they have necessary qualification. He also suggested that out of 3 vacancies in each category one should be reserved for workers' dependents and relations. The management was agreeable to this suggestion but the workers insisted that the existing practice should be continued and hence go-slow continued, which resulted in lock-out of the factory.

Please discuss the following in brief:

1. Whether the management's old policy of making recruitment through workers was correct.

2. Whether management was justified in not prescribing minimum qualification in the beginning.
3. Whether the management's above action amounts to a change in custom, usage and practice.
18. ABC Company is a leading concern in the chemical industry. The company is currently in the process of expanding and diversifying its product range. It has also finalised an agreement to enter into a joint venture with DEF Ltd. a multi-national corporation. If you were asked to prepare a plan for the manpower requirements of the new joint venture company, what steps would you suggest? Illustrate your answer with appropriate concepts and examples. Also discuss the relevance of training in Human Resource Planning.
19. Smith & Jones, a medium-sized manufacturer of medical devices, that started operations in 2004, has its headoffice in Bangalore. Because of a recent downsizing of a public sector aeronautical firm, each job opening at Smith & Jones attracts five times more applications than it did just two years ago. An engineering position is likely to generate as many as 300 applicants. It is expected that under these conditions, finding employees would be easy. However, the selective layoffs during downsizings and the need for people to seek new career paths have created a pool of less-than-qualified applicants.

Suppose you have the major responsibility for filling the job openings for engineers at Smith & Jones. How you would go about recruiting and selecting the best people in such a scenario? Illustrate the tools and techniques you would use for selection. Give rationale for your answer.

20. Metropolitan Hospital was built two years ago and currently has a work force of 215 people. The hospital is small, but because it is new, it is extremely efficient. The board has voted to increase its capacity from 60 to 190 beds. By this time next year, the hospital will be over three times as large as it is now in terms of both beds and personnel.

The administrator, Clara Hawkins, feels that the major problem with this proposed increase is that the hospital will lose its efficiency. "I want to hire people who are just like our current team of personnel—hardworking, dedicated, talented, and able to interact well with patients. If we triple the number of employees, I don't see how it will be possible to maintain our quality patient care. We are going to lose our family atmosphere. We will be inundated with mediocrity and we'll end up being like every other institution in the local area—large and uncaring!"

The chairman of the board is also concerned about the effect of hiring such a large number of employees. However, he believes that Clara is overreacting. "It can't be that hard to find people who are like our current staff. There must be a lot of people out there who are just as good. What you need to do is develop a plan of action that will allow you to carefully screen those who will fit into your current organisational culture and those who will not. It's not going to be as difficult as you believe. Trust me. Everything will work out just fine."

As a result of the chairman's comments, Clara has decided that the most effective way of dealing with the situation is to develop a plan of action. She intends to meet with her administrative group and determine the best way of screening incoming candidates and then helping those who are hired to become socialised in terms of the hospital's culture. Clara has called a meeting for the day after tomorrow. At that time she intends to discuss her ideas, get suggestions from her people, and then formulate a plan of action. "We've come too far to lose it all now," she told her administrative staff assistant. "If we keep our wits about us, I think we can continue to keep Metropolitan as the showcase hospital in the region."

- (i) What can Clara and her staff do to select the type of entry-level candidates they want? Explain.
- (ii) Could Clara use this same approach if another 200 people were hired a few years from now?

**APPLICATION BLANK
RECRUITMENT SECTION
PERSONNEL DIVISION
XYZ Co. Limited**

POST APPLIED FOR :

PAY SCALE :

APPLICANT'S NAME :

APPENDIXAffix your recent
Photograph in
passport size**PLEASE NOTE THE FOLLOWING**

- You should apply only if you fulfil the advertised eligibility conditions.
- The application form should be filled in neatly and legibly.
- Attested copies of educational and experience certificates be enclosed with the form.
- If any information furnished in the application is found to be false, the candidate, if he is appointed, will be liable to be removed from service.
- Any change of address must be communicated to us.
- Canvassing or bringing of pressure for selection may disqualify a candidate.
- Only Indian nationals are eligible to apply.
- If you are working with a Government department or undertaking send your application through proper channel. Advance copies can be entertained in exceptional cases, but you must produce permission of your employer at the time of interview.
- The enclosed bio-data summary sheet is also to be filled up and sent along with the application.

Name [in full and block letters]

Miss/Mrs/Mr

Nationality

Age & Date of Birth

Present Address [Capital letters]

Permanent Address

Father's/Husband's name

[Capital letters]

Marital status

Single

Married

[Capital letters]

[Tick-mark]

No

Widow Divorcee

Do you belong to Scheduled
Caste/Tribe [Tick mark]

Widower Separated

Height [cm]

Weight

Yes [Give details and
attach certificate]Have you been a candidate for
any post in the Company in
the past?

No

Identification mark

Have you ever been discharged/
dismissed/removed/terminated
from service

Yes [Give details]

Details of departmental disciplin-
ary action or punishment for any
misconduct in previous jobs?

No

Have you ever been tried/
convicted in a court of law

Yes [Give details]

Languages you can speak,
read and write

No

Read Write

Speak

EDUCATION (Academic & Professional)

Examination passed	Subjects	School/College/ Board/ University	Year of passing	Class, Division % of marks	Rank, Remarks, etc.

TRAINING**MEMBERSHIP OF PROFESSIONAL BODIES****EXTRA—CURRICULAR ACTIVITIES****EMPLOYMENT DETAILS (First employment at the top)**

Name & Address of employer	Post held & Period	Nature of functions	Pay-scale and emoluments with break-up	Reasons for leaving/ Other remarks

Name and address of two references who know you professionally

1.

2.

Salary you expect

For those working in Government
[Tick-mark] Departments/
Undertakings

*This application is being made through my present employer

*This is an advance copy, and application through my present employer has been submitted separately

Date**Signature of the candidate**

Details of enclosed postal order [if required as per the advt.] It should be crossed and drawn in favour of XYZ Co. Limited, Udaipur

No.

Date

Value

Place of issue:

FOR OFFICE USE

Eligible

Not Eligible

Bio-data Summary Sheet

Name Miss/Mrs./Mr.	Age & date of Birth		Whether SC/ST	
EDUCATION (academic as well as professional)				
Exam. passed	Subjects	Institution	Year	Class, Divn. & % of marks
Training, if any				
JOB EXPERIENCE (first job at the top)				
Name & address	Post held & Period	Nature of job	Emoluments, with pay-scale & allowance	Remarks
Date	Signature			
For office use				