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# Job Analysis and Design

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## **Chapter Two**

# **JOB ANALYSIS AND DESIGN**

## **Introduction**

A typical human resource manager understands that for the organization (s)he is leading to succeed, questions about what must be done, how it must be done, the best person to do it, and how the person can find satisfaction doing it, must be given definite and appropriate answers. It is an attempt to give answers to these questions that the functions of job analysis and design comes in. In the following paragraph, these concepts shall be discussed as they pertain to human resource management.

## **Job Analysis**

Dissecting a job in order to give a general description of its component elements can be termed as job analysis (Holst and Pancoast, 1921). It is a detailed and systematic study and presentation of information such as skills, knowledge, abilities, and responsibilities relating to the operation of a specific job. It is this information that differentiates one job from another and determines the success of a worker in performing his or her duties (PPMS, 2018).

A comprehensive job analysis will show 1). The job-oriented activities, which is the description of the exact activities to be performed such as teaching, coaching, facilitating, mentoring, and so on. Such descriptions can also indicate how, why, and when a worker performs an activity. 2). who a worker is to report to as well as the relationship of a worker with others which include superiors, colleagues, and subordinates. 3). Behaviours performed during the work such as reading to students, writing on the board, explaining to students, checking students' notebooks, decision-making, etc. 4.) Equipment, materials, etc. to be used in performing the work such as interactive board, laptop, projector, maker, etc. 5). Job context like the physical working conditions, work schedule, organisational context, social context, incentives (financial and non-financial). 6). Personal data related to the job such as technical skills, special training, work experience, etc. 7). Personal attributes like aptitudes, physical characteristics, personality, interests, passion, values, etc. (McCormick, 1970).

Okunade (2015) divided job analysis into two subsets as shown below.

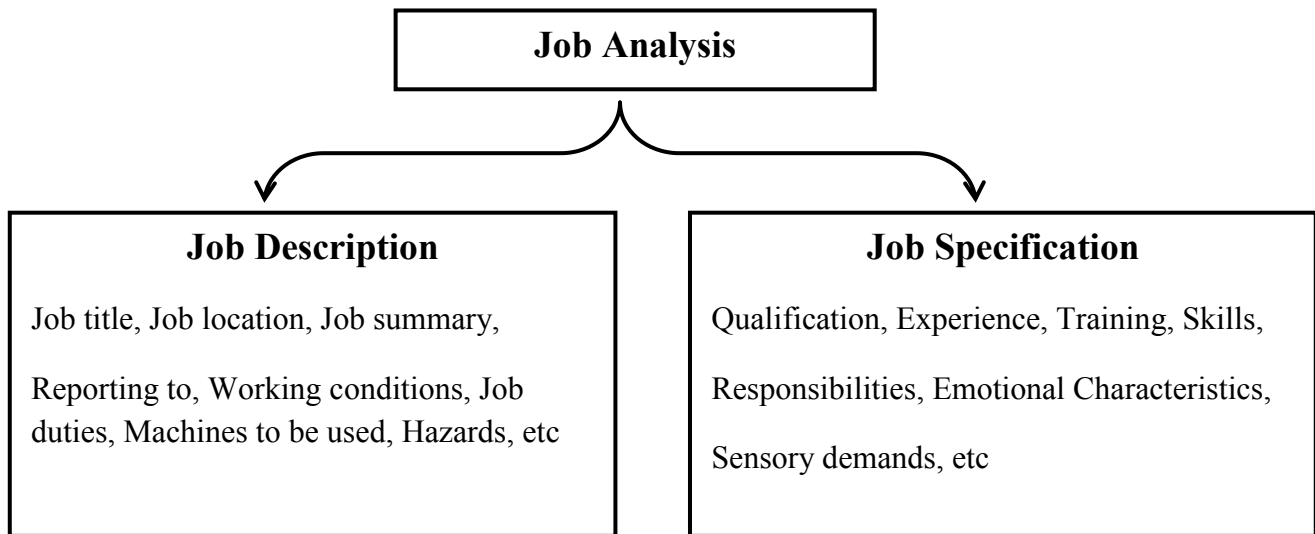


Fig. 2.1. An illustration showing the branches of job analysis. Adopted from Okunade (2015).

For a specific job to be properly analyzed, there is need to apply appropriate techniques and methods in gathering information about such job. Such techniques and methods include personal observation, personal interview, data collection through questionnaire, and review of records.

1. Personal observation: Here, a human resource manager observes the employees who are actually doing the job. (S)he watches out for the materials and equipment used, takes note of the working conditions and probable hazards, and tries to appreciate all that the work involves. It is important to state that observation could be done directly by the human resource manager or indirectly through the employee's superiors (supervisors, mentors, foremen, etc) or external observers specially appointed to watch employees performing their job - trade job analysts or special job reviewing committees established for such purpose. Whether done directly or indirectly, the employees constitute the major source of getting information for job analysis.
2. Personal interviews: Interview method, though time-consuming and relatively costly, could be used in place of observation. It can also be used to complement personal observation in the case where observation does not provide the human resource

manager with sufficient information needed for analysis. Interview, (whether oral or written, structured or open-ended), carried out with an employee or group of employee, is the act of asking the employee(s) certain questions and the answers obtained is recorded.

3. Data collection through questionnaires: A questionnaire is a research instrument, which is usually divided into three parts: introduction, demographic variables and research questions. It contains questions with rating scale used to elicit responses from respondents for the purpose of finding answers to certain research questions or testing a set of hypothesis. In gathering information for job analysis, questionnaires, whether structured or open-ended, are sent out to job-holders for completion and are returned to the human resource manager for analysis, interpretation, and presentation.
4. Review of long records: Information for job analysis could also be obtained from the daily record of duties maintained by the employees. It is pertinent to note that this method is the least used method due to its limitation of not providing data on supervisor relationship, the equipment used, and working conditions. Moreover, it is time-consuming.

### **Purposes and uses of job analysis**

Before moving on to consider the branches of job analysis – job description and job specification, as presented by Okunade (2015) above, it is necessary to look into the usefulness and reasons for carrying out job analysis. Below are some uses of and reasons for job analysis.

1. Determination of labour needs: Job analysis allows an organization to evaluate its labour needs and make adequate preparation for it.
2. Recruitment and Selection: The information made available through job analysis forms the basis upon which an organization recruits, selects, orientates, places ,trains, transfers, and promotes employees.
3. Wage and Salary Administration: Employee information such as previous experience, educational qualifications and the risks and hazards involved in performing specific jobs, helps in salary and wage administration.

4. Job Re-engineering: Job analysis provides information which enables the changing of jobs in order to permit personnel with specific characteristics and qualifications to perform them. This, according to PPMS (2018:22-23) takes two forms:

(a) Industrial Engineering Activity, which is concerned with operational analysis, motion study, work simplification methods and improvements in the work place and its measurement. It aims at improving efficiency, reducing unit labour costs, and establishing the production standard which the employee is expected to meet;

(b) Human Engineering Activity, which takes into consideration human capabilities, both physical and psychological, and prepares the ground for complex operations of industrial administration, increased efficiency and better productivity.

5. Employee Training and Management Development: The management of training and development programmes uses information from job analysis to determine the content and subject-matter of in-training courses. It also helps in checking application information, interviewing, weighing test results, and in checking references.

6. Performance Appraisal: Human resource managers uses information from job analysis to establish precise standards against which the job and the employee is measured,

7. Health and Safety: Hazardous conditions and unhealthy environmental factors are usually discovered during job analysis. This enables corrective measures be taken to minimise the possibility of accidents, or eliminate accidents within the organization.

## **Job Description**

Job description is setting forth in clear terms and in writing the duties, functions, responsibilities, and demands of a specific job. It explains vividly the title and location of the job, details of the tasks the employee will do, hazards involved, the working conditions, relationships, as well as how (s)he will do the job. Job identification, job summary, relationships, responsibilities/duties, supervision, and working conditions are the highlights of a typical job description. These will be discussed below.

1. Job identification: This includes the job title, its code number, alternative title, department, division, and location. The job title identifies and designates the job properly. Example,

Assistant lecturer, registrar, director, operations manager, marketing officer 1, etc. The department, division, etc. indicates the name of the department and where it is situated. Example, administrative department, account department, research department, maintenance department, mechanical shop etc. The location gives the name of the place. Example, Lagos, Uyo, Kano, Enugu, etc

2. Job Summary: A concise statement of the major functions and activities of the job, which serves as additional identification information when a job title is not adequate (Emechebe, 2009).

3. Job duties/responsibilities: these may include responsibility for production process and equipment; supervision of others, responsibility for the safety of others; responsibility for generating confidence and trust; responsibility for preventing monetary loss. In a typical school system, this will include, for example, the subject to be taught by the teacher, the duration, the class or level to be coordinated, etc. (Okunade, 2015). It also specifies how a Job is performed, example, speaking, writing, lifting, handling, cleaning, washing, feeding, and so on. Materials and Equipment to be used are also indicated. Example, magnetic board, laptop, speakers, microphone, plastics, machines, punch presses, microscope, and so on. Therefore, This is regarded as the heart of a job because it specifies what a typical worker does; how (s)he performs it; the exact activity, tasks and operations that constitute an assignment; their relative timing and importance; their simplicity; routine or complexity; the responsibility or safety of others for property, funds, confidence, and trust.

4. Relation to other jobs: This is where a human resource manager clearly specifies the relationship of a worker with his/her superiors, colleagues, and subordinates. A proper description of relationship helps the organization in the creation of organizational chart, which shows the hierarchy, or chain of authority within the organization. This helps us to locate the job in the organisation by indicating the job immediately below or above it in the job hierarchy. It also gives us an idea of the vertical relationships of workflow and procedures (Emechebe, 2009)

5. Supervision: The supervisor of an employee, his/her title, the extent of supervision involved general, intermediate or close supervision are clearly stated.

6. Working conditions/environment: The terms of engagement of a worker are put forth here. Example of these include opening and closing hours, benefit for over time, off days,

pay/grade level, allowances (housing, transportation, health, wardrobe, etc), conditions for leave, opportunities for advancement, patterns of promotions, essential co-operation, direction, or leadership from and for a job, and so on. The working environment specifies the weather condition (cold, heat, dust, wetness, moisture, etc), the level of pollution, temperature, etc.

A proper job description helps an organization to overcome the problem of confusion/overlapping of functions. Also, it constitutes the foundation for a successful interview exercise as it allows for the construction of appropriate interview questions as well as application form especially if the application form is to serve as the first screening tool. In addition, job description allows for job grading and classification; transfers and promotions; adjustments of grievances; defining and outlining promotional steps; establishing a common understanding of a job between employers and employees; investigating accidents; indicating faulty work procedures or duplication of papers; maintaining, operating and adjusting machinery; time and motion studies; defining the limits of authority; indicating case of personal merit; facilitating job placement; studies of health and fatigue; scientific guidance; determining jobs suitable for occupational therapy; providing hiring specifications; providing performance indicators; etc. (PPMS, 2018).

Before considering job specification, it is important to look at examples of job descriptions extracted from the job advertisement of certain organizations. Below are two job descriptions – one from a private individual and the other from a corporate entity. The different parts of the description are explained in parenthesis.

**Example 1:** Job description for the position (job title) of a “Live-in nanny” (Facebook advert by private individual)

The work arrangement is very flexible and allows to study or have another job during the day (this is part of working conditions). The person would be helping me with my two boys age 3 and 6, who are both in nursery/school/after-school clubs full time from 8am until 5pm (this is job summary). You will have free boarding (room and meals), and £75 per week, your own room, and a free bicycle to use during the time you are with us (this is working conditions). We live near Churchill college in Cambridge (this is job identification: location, to be specific). You will get the kids ready for school in the morning, picking them up from Nursery/school at the end of the day, help with light household duties when they are not

home. Must be there all evenings of the week (this is job duties/responsibilities). Weekends are free of work unless separately negotiated for babysitting and paid at hourly rate of £7/hr (this is working conditions). Activities with the kids include giving breakfast and dressing the children, taking them to nursery and to school (both in less than 10 minutes walking proximity to home), taking the oldest swimming or tennis and keeping our small flat tidy and clean. You must be willing to do some light household chores: doing their beds, washing their clothes etc. (this is job duties/responsibilities).

**Example 2:** Job description for the position (job title) of Program Specialist-Emergency Response and EOC operations (WhatsApp Advert by The World Bank Regional Disease Surveillance Systems Enhancement (REDISSE) project for West Africa).

Reports to: Project Coordinator (this is job relationship)

The role involves planning, monitoring, assessing, and supporting activities focused on improving emergency operations and effective response to infectious disease outbreaks in the country; supporting and coordinating the activation of the Contingency Emergency Response Component (CERC) of the project (this is job summary).

Specific duties include the following (this is job duties and responsibilities):

- Keep abreast of all ongoing human and animal health outbreak responses including but not limited to NCDC and FMARD emergency responses to zoonotic and epidemic prone disease outbreaks – from the national to the state and local government levels.
- Support the development and review of REDISSE work plans ensuring that all REDISSE interventions and proposals align with the National Action Plan for Health Security (NAPHS) and REDISSE project appraisal document (PAD), address areas that need to be improved within existing All hazard or disease specific emergency response plans and contribute the achievement of the Program development objectives/indicators.
- Propose and implement evidence based, culturally appropriate and feasible emergency response strategies and interventions for inclusion in the REDISSE annual work plans.
- Work closely with the HH/AH sector coordinators to facilitate joint/ inter-sectoral collaboration for emergency response particularly between human health, animal health and environmental health.



- Support to the activities of EOC at the state and national levels (as delegated) as part of the REDISSE related activities.
- Contribute to preparedness related activities for human and animal health including but/ not exclusive to training emergency response team personnel, communication with local, state, and federal RRTs as part of REDISSE supported interventions.
- Facilitate collaboration with other partners to align REDISSE interventions with other preparedness interventions proposed by other international partners.
- Produce quarterly M&E reports for submission to the Steering committee, Technical committee, World Bank and WAHO.
- Produce Monthly activity updates for Component 3 (Emergency Response) activities.
- Other activities as delegated by the animal health coordinator, the human health coordinator and the project director

## **Job Specification**

For the job duties/responsibilities described under job description to be properly performed with regard to the prevailing job relationships and working conditions/environment, persons with certain skills, experience, attitude, physical attributes, etc. are needed. The act of stating in precise terms what constitute these skills, experience, attitude, physical attributes, etc. is referred to as job specification Therefore, job specification is simply the expression of job description in terms of personnel qualities. It is a list of human requirements needed to perform the job well (Okunade, 2015). In other words, it is the minimum acceptable personnel characteristics or qualities necessary for the efficient and effective performance of a job. The physical, psychological, demographic, and personal constituent of these personnel characteristics shall be considered below.

(a) Physical characteristics: These could include but not limited to health condition, strength, endurance, age-range, body size, height, weight, vision, voice, poise, hand and foot co-ordination, motor co-ordination, and colour discrimination.

(b) Psychological characteristics or special aptitudes: Qualities under here include manual dexterity, mechanical aptitude, ingenuity, judgment, resourcefulness, analytical ability, social skills, mental concentration and alertness.

(c) Personal characteristics: traits of temperament such as personal appearance, good and pleasing manners, emotional stability, aggressiveness or submissiveness, extroversion or introversion, leadership, co-cooperativeness, initiative and drive, skill in dealing with others, unusual sensory qualities of sight, smell, hearing, adaptability, conversational ability, etc.

(d) Demographic variables like age, sex, education, language ability, etc. (PPMS, 2018:25).

From the foregone, it is evident that job specification is a comprehensive written explanation of the ideal person for a specific job. To further the discussion on job specification and for a deeper understanding, three examples are given below. Two are the job specifications for the two job descriptions above. For each of the example below, a table of analysis will be presented to show requirements in terms of physical, psychological, demographic, and personal characteristics.

**Example 1:** Job specification for the position (job title) of a “Live-in nanny” (Facebook advert by private individual)

The ideal person: You are someone flexible, and preferably a uni/college student or young person who also works other shifts/jobs. International students are highly encouraged to consider this job, particularly if you speak French. You must love children, are patient and kind. You must be RELIABLE, honest, respectful, active, fun and open minded.

Table 1: showing in category the employee requirements of example 1

Characteristics	Example
Physical	Active
Psychological	
Demographic	Student, part time worker, French speaking,
Personal	Flexible, love children, kind, patient, reliable, honest, respectful, active, fun and open minded.

**Example 2:** Job specification for the position (job title) of Program Specialist-Emergency Response and EOC operations (WhatsApp Advert by The World Bank Regional Disease Surveillance Systems Enhancement (REDISSE) project for West Africa).

- Medical qualification / degree (MBBS or equivalent)
- Master’s Degree in Public health or epidemiology with experience in Infectious Disease Control, Epidemiology, emergency response operations, membership of GOARN or rapid response team.
- Professional Experience: at least 3-5 years’ professional experience in a comparable position.
- Knowledge of health systems in Nigeria and previous rapid response team experience.
- Willingness to up-skill others within NCDC and FMARD as part of routine technical support to the organisations.
- Good communication skills and excellent report writing skills.
- A good team player who is willing to take on responsibility and possesses an Innovative mind and a positive attitude to change

Table 2: showing in category the employee requirements of example 2.

Characteristics	Example
Physical	
Psychological	Innovative mind, writing skills,
Demographic	3-5 years experience, master’s degree, MBBS
Personal	Positive attitude, communication skills, team player.

**Example 3:** Job specification for the position (job title) of Professor (WhatsApp advert from Precious Cornerstone University (PCU), Ibadan, Nigeria.)

Candidates must possess a good Honours degree with at least second class (lower division) plus a Ph. D Degree from recognized universities with at least ten (10) years post Ph.D teaching, research and administrative experience in a tertiary institution.

Candidate must be a specialist in core areas of departmental disciplines of study with evidence of many scholarly publications in both local and international reputable learned journals.

In addition, he must demonstrate ability to initiate and direct research projects and proven evidence of academic leadership. Computer literacy is mandatory. Page | 11

Table 3: showing in category the employee requirements of example 3.

Characteristics	Example
Physical	
Psychological	
Demographic	Bachelors (2:2), Ph.D., 10 years post Ph.D teaching, administrative experience, computer literacy.
Personal	Leadership, initiative

## Job Design

Having considered job analysis, which comprises of job description and job specification, it is important to consider a closely related concept – job design. What exactly is job design and how does it differ from job analysis? In the following paragraph, an attempt would be made in providing answers to these questions.

Job design is the process of deciding on the contents of a job in terms of its duties and responsibilities; techniques, systems, procedures, and methods to be used in carrying out the job; and the relationships that should exist between the jobholder and his superiors, subordinates and colleagues (PPMS, 2018). Davis (1966, as cited in Okunade, 2015) maintained that job design is the specification of the contents, methods, and relationships of jobs to satisfy technological and organizational requirement as well as the social and personal requirement of the jobholder. In other words, it is a deliberate and systematic attempt to structure the technical and social aspects of work so as to improve technical efficiency and job satisfaction.

From the foregone, it is clear that job design is the strategic structuring of a specific job so that the employee performs the job efficiently and at the same time finds satisfaction in doing the job. Therefore, a properly designed job achieves two things simultaneously – on the one hand, improved performance, productivity, and technical efficiency of the organization while on the other hand intrinsic motivation, job-satisfaction, and improved quality of working life of the employee. The main objective of job design, which leans support on job analysis, is to integrate the wants or needs of the employee and that of the organization.

There are certain factors that influence job design, or rather, that must be taken into consideration when designing a job. These include but not limited to intrinsic motivation; the characteristics of task structure; the motivating characteristics of jobs; and the job characteristics model. Below is a brief consideration of some of these factors.

#### **a. The Process of Intrinsic Motivation**

In the corporate world, different workers find satisfaction or motivation in certain jobs than others. For example, a police officer was asked, “What motivated you to join the police?” He replied, “I was attracted by the beauty of the uniform and the discipline within the formation”. There are people whom the title “professor” makes so much meaning to them such that they would want to be in the teaching profession irrespective of the pecuniary benefit. A medical laboratory scientist affirmed that the logical and rational demands of his profession in the quest to find solutions to the numerous medical problems in the world constitute his major satisfaction in the profession.

Deducing from above, one underlining premise in job design is that the effective performance and genuine satisfaction in work follow mainly and fundamentally from the intrinsic content of the job. Despite the pecuniary benefit from work, which serves as extrinsic reward and allow for the satisfaction of higher-order needs, the motivation from the work itself remains fundamental to job design. The intrinsic ingredients that make a job motivating are numerous and vary from one job to the other. However, there are certain ingredients that most jobs share in common. For example, when workers get feedback (either through self-evaluation or through external evaluation) about their performance, they feel motivated. Also, employees get motivated when they feel that the effective performance of the job is due to the best use of their abilities. Again, the awareness of having the liberty to set own goals and pursue them brings satisfaction to employees. In synopsis, feedback,

utilization of abilities, and liberty or self-control are common ingredients that offers intrinsic motivation in jobs.

### **b. Characteristics of task structure**

Paying attention to number and nature of tasks is essential in job design. This will inform the allocation of tasks among employees. While some tasks may be assigned to a team of employees, others may be delegated to individual employees. It is important to note that there are employees who are more effective, efficient and satisfied when working in teams than when working alone, conversely. Some are less effective, less efficient, and less satisfied when faced with multi-skill nature of task than when faced with single-skill nature of task. Therefore, the components of the structure of tasks should inform the design of jobs.

### **c. Motivating characteristics of jobs**

The postulation here is that job design should be influenced by the need to give employees the freedom to participate in planning and control while performing their major function of execution of plans and instructions. In other words, the responsibility of workers should include to a certain degree the functions of planning and control. This can be achieved through empowering the employees. That is, by giving individuals and teams more responsibility as well as autonomy to exercise discretion and make decisions and ensure that they have the training, support, guidance, and feedback needed for maximum utilization of their abilities and significant performance of task.

### **d. The job characteristics model**

The job characteristic model provided three paramount factors (critical psychological states) that influence job design. These are: ‘experienced meaningfulness of work’, ‘experienced responsibility for outcomes of work’, and ‘knowledge of the actual outcomes of work’. These three strongly underscore motivation, job satisfaction and performance. Robertson et al (1992, as cited in Okunade, 2015) submitted: ‘this element of the model is based on the notion of personal reward and reinforcement... Reinforcement is obtained when a person becomes aware (knowledge of results) that he or she has been responsible for (experienced responsibility) good performance on a task that he or she cares about (experienced meaningfulness).

## **Approaches to job design**

In a bid to integrate the wants or needs of the employee and that of the organization, there is need to pay careful attention to the influence factors discussed above while at the same time approaching the task within a theoretical framework. Below are some of the theoretical frameworks within which job design can be approached.

### **The classical approach:**

The classical approach to job design is based on the scientific management theory in which the management takes all the decision and the workers' responsibility is to perform the instructions received from the management. This approach to job design is obsolete as it hampers the participatory role of employees and this in turn lowers job satisfaction derive by workers through participation in planning and decision making.

### **The behavioural approach:**

The limitations of the classical approach to job design led to the search for alternative ways of designing jobs. This search brought about redesigning of jobs, work structuring, job enrichment, participative system, etc in order to improve the quality of work life. Unlike the classical approach, the behavioural approach to jobs design is not only concern with the technical aspects of jobs but also takes care of the social aspects of jobs. One most popular behavioural approach to job redesign is the Job characteristics model discussed above.

In addition to these two major approaches to job design, Okunade (2015) listed five peripheral approaches to job design. They include:

**a. Job rotation:** This comprises the movement of employees from one task to another to reduce monotony by increasing variety.

**b. Job enlargement:** This means combining previously fragmented tasks into one job, again to increase the variety and meaning of repetitive work.

**c. Job enrichment:** This goes beyond job enlargement to add greater autonomy and responsibility to a job and is based on the job characteristics approach.

**d. Self-managing teams (autonomous work groups):** These are self-regulating teams who work largely without direct supervision. The

philosophy on which this technique is based is a logical extension of job enrichment.

**e. High-performance work design:** This concentrates on setting up working groups in environments where high levels of performance are required.

The above five approaches listed by Okunade (2015) can find application when utilizing the behavioural approach to job design which stands tall in the contemporary human resource management. In as much as a human resource manager approaches job design within a theoretical framework and also gives attention to the factors that influence job design, it is also important to be guided by certain principles which include variety, (that is, employees should be given opportunities to do several tasks and combine tasks), significance (let employees understand the importance of their work), autonomy and feedback (employee should be given certain degree of liberty of operation and should also be inform of their performance). All these principles, however are subsumed in the four influence factors listed above.

## Conclusion

Coordinating the efforts of human resources for the purpose of achieving organizational goals is at the centre of human resource management. This entails getting the right people and placing them at the right jobs. In order for the right people to be attracted and placed on the right jobs, a thorough job analysis, which involves job description and job specification, must be carried out. This is what has been clearly and carefully explained in this chapter. A proper job analysis will inform the management on who the ideal people for the identified and described jobs are; however, for the employee to perform the job efficiently and finds satisfaction in it, then job design , which leans support on job analysis, must be done properly. It can be concluded that job analysis (description and specification), and job design are foundational to the success or growth of any organization.



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