

## B. WORK, WORKER AND WORKPLACE

### LEARNING OBJECTIVES

After completing this section the learner is able to—

- identify the components of work.
- define work, worker and workplace.
- describe the importance of workplace design for better work efficiency.
- explain the interdependence among work, worker and workplace.

### 10B.1 INTRODUCTION

All of us work for long hours daily - while children study and attend to other essential tasks, parents earn livelihood and manage the home. Although we perform a lot of activities everyday, have you ever thought of the number of ways in which you can perform one activity? Why is it that you perform well in certain activities and not so well in others?

Nisha, a skilled labourer, is unable to perform well because of her inconsistency in work. Her place of work has a very poor work environment. The place is uncomfortable and the work-stations are also poorly designed. As a result, she has lost interest in her work. She can deliver better results and optimally utilise her resources (skills and knowledge) if the work environment improves. There can also be factors other than work environment that may affect work performance. Let us try to understand these.

For optimal performance, it is important to understand **work** in relation to the environment in which it is performed — the **workplace** and those who perform it — **workers**. This understanding helps to reduce the energy used and time spent on the task, thereby increasing work efficiency. At the same time, it will also prevent fatigue and other health problems. It is

therefore necessary to create a healthy work environment for the worker instead of forcing the worker to perform the task in an uncomfortable workplace.

For example, your mother works in the kitchen and has to bend again and again to pick up utensils which may be kept at a distance from the kitchen counter. In this case, she would be using more energy and spending more time to take out the utensils and will also experience fatigue and backache. On the other hand, if the utensils are kept near the counter and at a suitable height she will be able to work more comfortably, thereby, increasing her work efficiency!

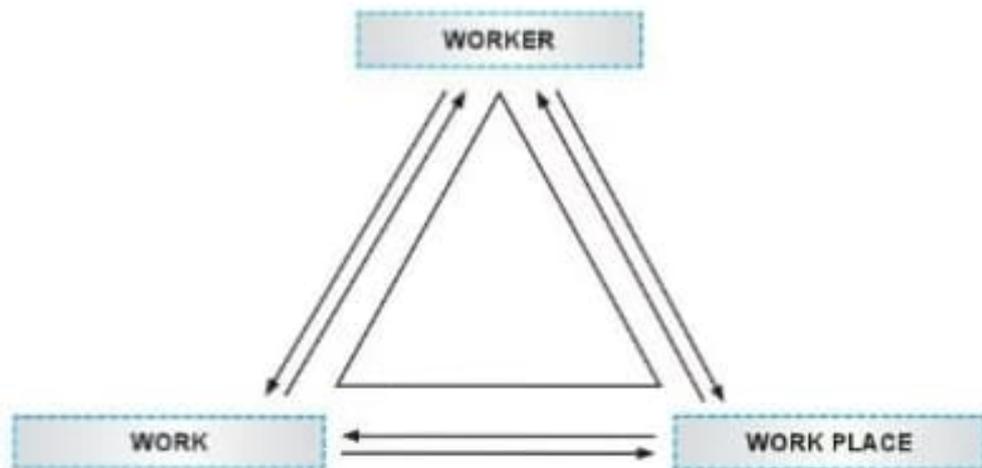


FIGURE 1. RELATIONSHIP BETWEEN WORK, WORKER AND WORKPLACE

The diagram above clearly shows the interdependence between work, worker and workplace. To understand this relationship well, the following three components should be studied in detail.

## 10B.2 WORK

To create a better match between worker, workplace and the equipments or tools used, understanding work is of prime importance. Work is defined as the activity directed towards making or doing something. Work is to exert oneself physically and/or mentally in order to do or complete a task. It forms the basis for accomplishing our goals. It is something that is done or performed, especially a duty, task or an activity. For a student, work primarily means studying to gain knowledge.

Work comprises many smaller jobs, tasks or sub-tasks. Such tasks become instrumental in achieving desired goals. But before deciding the tasks and sub-tasks one should be clear about goals or else work will suffer.

Work performed will be of good quality if the

- Worker understands the goal well.
- Worker sets certain standards for herself/himself for personal satisfaction.
- Work is organised as per the goal.

However, there are certain forces like 'time' and 'attention requirement' which affect completion of certain tasks. To avoid this, **work simplification** is necessary. It is the management of both time and energy. Work simplification may be defined as accomplishing more work in the given amount of time and energy.

Therefore, it is essential to make the activity simple, perhaps, more interesting. If one likes the activity one gets involved in it and finishes it faster and more efficiently. (You will study about this in detail in the next chapter.)

### 10B.3 WORKER

A worker is a person who performs a particular task or activity to achieve productive outcomes. A student doing her/his school work, and a homemaker cleaning the house, are examples of a worker. The following aspects are involved in any work done by an individual.

#### Physical

It is related to the body of the worker. It includes human energy, physical activity, and growth.

- **Energy** : We all need energy to live and to work. Where does this energy come from? Energy is supplied by the food we eat. The dietary energy needs depend on the factors that include age, sex, body type, type of work and duration of work.
- **Physical activity** : The amount of energy needed by the individual to do any work depends on type of activity, intensity of work and duration of time, age and sex of the individual. The more the number of muscles used and the longer the duration of work, the greater is the energy demand or energy requirement.

The following table shows the energy required to perform different common activities that most of us perform on a daily basis.

**Table 1: Energy costs of some common activities**

S.No.	Activity	kcal per minute per kg body weight	
		Males	Females
<b>General Personal Activities</b>			
1	Sleeping	1	1
2	Lying	1.2	1.2
3	Sitting quietly	1.2	1.2
4	Standing	1.4	1.5
5	Dressing	2.4	1.6-3.3
6	Plating hair		1.8
7	Eating and drinking	1.4	1.6
8	Walking slowly	2.8	3
<b>Activities involving household tasks</b>			
1	Dusting		7.6
2	Mopping		12.2
3	Washing clothes		10.5
4	Ironing		7.9
5	Cooking		6.4
6	Storing water		13.9
7	Grinding masalas		9.7

Source: Varghese, M.A., Atraya, N., Bhatnagar, A., & Chatterjee, L. (1989) *Ergonomics in the home*, DRS Report, Mumbai, S.N.D.T Women's University.

- **Growth** : Energy is also required for growth. Hence when growth at a particular stage of life is faster, energy requirements are greater. For this reason infants, children and adolescents have higher energy needs.

### Cognitive

Cognitive or mental aspect includes the psychological features of the worker. These are attitudes, skills, knowledge, etc. To reach our goals we require **ability** and **aptitude**. Also we need to **gain knowledge** on the subject, develop **skills** by undergoing formal training and repeated practice, and have the willingness to improve performance — **attitude**. Significance of a positive mind-set can be seen in the following case.

Shobha, a young talented girl with a fertile imagination and drawing skills, aspired to be an artist. She had enrolled herself in a course where she improved her skills and acquired the knowledge she needed to achieve

her goal. With her efforts, hard work and available resources she achieved her goal to be a successful teacher of art.

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### Affective

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It includes likes, dislikes and preferences a worker has towards work. It concerns the worker's personal feelings about the activity and contributes towards achieving goals. Dissatisfaction leads to a feeling of fatigue, whereas satisfaction contributes to work efficiency.

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### Temporal

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This is concerned with time management. Sometimes the number of activities that one has to perform in a specified time period is large. This requires good management of time, which you will study in the next chapter.

Thus, an understanding of these components of the worker is an indicator that every worker is different and has different physical, cognitive, affective and temporal compositions. Perhaps tools, equipments and work spaces should be designed according to different body types. For example, tools such as scissors must be designed in order to suit both left-handed and right-handed workers. Equipments should also be designed such, that they fit the safety needs of all workers.

#### ACTIVITY 1

Make a list of activities under the following headings—

- Physical activities that require extra energy expenditure.
- Activities which require mental work and skills.
- Activities you like and dislike.
- Activities that require time management.

## 10B.4 WORKPLACE

This is the place where a worker performs a job. Some examples of workplace are school, office, study room, kitchen, etc. A well designed workplace is important to prevent health problems related to poor working conditions, as well as for ensuring work performance and productivity. Every work station should be designed with both the worker and the task in mind so that the work can be performed comfortably, smoothly and efficiently with minimum energy expenditure.