# MA II<sup>nd</sup> Year Lecture Notes Online Semester-IV<sup>th</sup>

**Paper-II Specific Resource Management** 

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**Unit-II- Time Management** 

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**Unit-III- Energy Management** 

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**Unit V- Work Simplifications** 

# TIME AND ENERGY MANAGEMENT

#### **Time Management**

We all have twenty four hours a day to use in some way. Time is one resource we all share. Locating ourselves in our environment with reference to time is an important part of time management. All our activities for example going to bed, getting up in the morning, having meals, playing, etc is based on the available time. Time and energy are closely related, the management and use of one affecting the other.

Time use is affected by the following factors.

#### 1. Stage of family life cycle

The beginning stage is the period of establishment which starts from the date of marriage till the first baby is born, a period of approximately 0 to 4 years. The time demand will differ based on whether the home maker is employed or not. The second stage is the expanding stage where the demand for time will be more for guiding and being with children. The third stage is the contracting stage when the children leave home because of marriage or employment. The time requirement at this stage will be much lighter and they will have more time for participation in community activities etc.

#### 2. Environment

The size and type of the house, the number of persons in the family, the age of the family members, work area, tools and equipment available affect the usage of time.

# 3. Who perform the household task

Whether the household tasks are performed individually or shared by the family members affect the use of time.

**4.** The attitude towards house work and whether the homemaker is gainfully employed also has a role in affecting time use.

#### **Energy Management**

Energy management is more difficult and complex as the energy that each person has to do various activities depend on physical and mental health. Like time the demand for energy will be less during beginning and contracting stage and more during the expanding stage.

The various efforts are needed to perform different household tasks. They are mental effort, visual effort, manual effort, torsal effort and pedal effort. Depending on the energy requirement tasks can be classified as below.

Light work - Eg. Sewing, Washing dishes, Dusting furniture, sweeping etc., Moderate work - Eg. Kneading dough, ironing, hanging clothes.

Heavy work - Eg. Bed making, mopping floor, laundry, carrying children etc.

Energy expenditure for doing various tasks depend on the mental approach, postural strain, muscle tension, concentration in work and the skill they acquire. Fatigue is a condition where the amount of work output would be reduced. This can be classified as physiological and psychological fatigue.

The reason for fatigue could be

- 1. The long period of mental or physical work
- 2. Heavy physical work
- 3. Working under pressure
- 4. Unfamiliar work
- 5. Non accomplishment of work
- 6. Monotonous work
- 7. Lack of motivation
- 8. Dislike for work
- 9. Desire to stop work
- 10. Failure of plans

#### Management of time and energy

#### **Planning**

The first stage of management is planning. The time and activity pattern of the family should be planned taking into consideration the daily, weekly, seasonal and special tasks, and the amount of time required for various activities. The steps is making the time plan are

- Step I This consists of listing the everyday, weekly, special and recreational activities of the family
- Step II Making a plan for routine tasks considering that work that must be done at a definite time of the day. By this one will know the block of free time available.
- Step III Fitting the special and seasonal jobs into the free time block.
- Step IV Deciding who will do the various tasks in the family. This can be decided through group discussion.

#### **Controlling**

Carrying out time and activity plan is the next step in managing time and energy. Change of plan may occur depending on the interruptions. Motivation plays an important role in carrying out the activity plans. Developing skill and use of work simplification techniques will reduce time and energy expenditure.

# **Evaluating**

Evaluation should be done while making and carrying out plans as well as reviewing the results. Constant evaluation of performance and checking of accomplishments should be done to make sure that things are going on as planned.

# **WORK SIMPLIFICATION**

Work simplification is making work easier. According to

Nickell and Dorsey, 'it is the conscious seeking of simplest, easiest and quickest method of doing work.' It aims at

accomplishing more work with limited amount of time and energy

### (Gross and Crandall).

Home making involves various types of activities which are most of the time tedious, monotonous, time consuming and involves various types of skill. Most of the work if done without much skill and under pressure would lead to unhappiness or frustration. To manage the house one should know the best way of doing each household activity. To do the work easily one should know why, how, when, who and where a work should be done.

**Dr. Marvin Mundel** has given five factors that influence the character of work. They are:

# 1. Change in hand and body motions

Work can be simplified by using each part of the body properly and economically.

This can be achieved by

- 1. Keeping body parts in alignment
- 2. using muscles effectively
- 3. Doing the work in rhythmic motion
- 4. Developing skill in work.

# 2. Change in equipment and work arrangement

Using labor saving devices, planning work surfaces at proper height, depth and width with proper tools and adequate storage space and lighting will improve the efficiency of work.

#### 3. Change in production sequence

When there are a lot of household activities to be accomplished time and energy can be saved by simplifying the work through combining the tasks and eliminating unnecessary steps.

#### 4. Change in finished product.

Simplification of work could be achieved by changing the standards or expectations of the finished product.

#### 5. Change in material

This refers to the change in the raw ingredient to get the same final products.

#### Fatigue: Types, Causes and Methods to Reduce Fatigue!

Human capacity to work is limited. Every work requires care, attention and concentration. A person cannot work continuously for longer periods. The work output will be more in the morning and it goes on decreasing with passage of time as a worker will feel tried, mentally and physically, in the evening. The decrease in efficiency of working due to longer working periods is known as fatigue.

It is one of the most significant problems before industrial engineers. Fatigue has been defined as a negative appetite for work activity. According to vitals, "The tension, the subjection to specialization of work and a rhythm uncontrolled by the individual, promote fatigue characterized by decrease in the power to work, a decrease in pressure taken in work, and a increase in the enjoyment of the hours spent away from work"

# Family Life Cycle: 3 Main Stages

Each family passes through a cycle that begins with the marriage of two young person grows with the coming of children and then again becomes a home of two persons. A view of the family's life cycle, from its beginning to its end, assuming

there are no breaks, reveals definite and discernible stages. Each stage has its own clearly defined situations and problems.

If the adults will develop knowledge on time, energy and money adjustment then problems of each stage can be easily resolved. The family life cycle may be divided into three major stages, the beginning family, the expanding family and the contracting family. The eminent scholar of home science. Bigelow adds eight sub stages to these three major stages.

Three Major Stages	Sub-stage
1) Beginning	1. Period of Establishing
2) Expanding	2. Child Bearing and pre-school
	3. Elementary School
	4. High-school
	5. College
	6. Vocational Adjustment of children
3) Contracting	7. Financial Recovery
	8. Retirement

Most families with children go through all these sub stages. If college sub stage is omitted, a family goes directly from the high school sub stage to the period of vocational adjustment.

# Three Major Stages of the Life Cycle:

# Stage I: The beginning family:

The first sub stage of the family life cycle is the period of establishment. It begins with marriage and continues until the first child is born. It is also called "getting

acquainted" stage, when two partners try to know each other's psychology and behavioral prospects. Both the partners should learn to manage the resources of time, energy and income properly to achieve their long term goal in their married life.

#### Stage II: The expanding family:

The expanding family stage covers a longer period than the beginning family stage and includes a number of sub stages. It begins with the birth of the first child and ends when the last child leaves home. The first sub stage is known as child bearing and per school and is also marked by the accumulation of goods.

This in turn brings about the development of attitudes that influence future family living. During this period parents take necessary steps to make adjustments with their relations and new child as well. The parents have to shoulder different responsibilities to keep pace with rapid change of the situation.

The elementary school period begins a series of overlapping experiences that cover the time when the children are about 6 to 12 years of age. During this sub stage the children begin their formal education and make their first independent contacts with the outside world.

In this sub stage parents are primarily concerned with the educational and health needs of the children, creating an environment in which the children will have a feeling of belongingness. Parents will provide nutritious food, suitable clothing and adequate housing to children for physical development as well as provides opportunity to them for social contacts outside the home for social and emotional development.

#### The High School Period:

It includes the teen age period of children i.e., within 12 to 18 years of age. Parents will assist to their children whole heartedly in their high school or vocational education to solve their educational, social, recreational and vocational problems by which the children become independent and self-reliant individual.

#### The College Phase:

It covers the college period of children. The chief parental duties now-are helping them in choosing a suitable college and financing their education. So during this period a lot of financial adjustment is needed by parents. They have to spend more from their savings for college expenses. The parents have to carry out all activity with planned budget during their period.

#### Their planning should involve three steps:

- (a) Planning
- (b) Controlling the plan in action
- (c) Evaluation.

They should give more emphasis on surplus budget during expanding family stage.

# **Stage III. The contracting family Stage:**

This stage begins when the first child leaves home as a young adult and ends when the last child leaves home for a life of his or her own. It is marked by the departure of young adult for service or marriage. It is a period of adjustment for parents and children. The parent's financial assistance may be needed for the establishment of children.

The period of financial recovery begins after the children leave home and become self-supporting. Current expenses drop rapidly' Debts that have accumulated over the previous stages are paid off and saving for the future takes a large share of the income. Some persons develop their former professional interests like writing, painting, music, teaching etc.; some persons develop their creative interest to get financial benefit.

Some may spend money for travel. So the period of financial recovery calls for social and vocational adjustments that look toward retirement. People must plan regarding their time, money and energy to feel independence in their later life. They must make time plan to spend their leisure time for watching the television, reading the spiritual and story books, so that they can develop feeling of fulfillment and adequacy despite their age.

The last sub stage is the time of retirement. The wants of individuals during this stage usually grow less intense and the need for care and protection increases. It is the period of adjustment to physical changes, to changes in environmental conditions, to changes in human relations, and often to changes in income.

For those who can make the necessary adjustments and who have health and strength, human relations will continue to be satisfying even though the physical setting of the home may change. This is the period not only a vocational arts but also management of time energy and money are important both to the family and to the aging person.

# Fatigue can precisely be explained as follows:

- 1. It leads to loss of efficiency.
- 2. It results in more or less complete loss of responsiveness of tissue.

- 3. It may be termed as the reduced capacity of work resulting from work itself.
- 4. It is considered as state of 'lack or interest' in not only work but in other activities too.

Fatigue is related to the mental status of person. One person may not be tired even after long hours of work whereas the other person may feel fatigued or tired even after few hours of work. Some persons may feel fresh after a Shorty relaxation during working periods while others may not regain energy "even after longer rests." A number of factors such as aptitude, interest, nature of job, work environment or working conditions etc., influence the mind of persons on jobs.

#### **Types of Fatigue:**

# Fatigue may be of the following types:

# 1. Physical fatigue:

Physical fatigue is caused either by continuous work for long periods or the nature of work like the work may be heavy and requiring lot of physical excursion. The physical capacities of workers are limited and they may feel tired after a continuous work for longer periods.

# 2. Mental fatigue:

A worker utilizes has brain for doing a job for a longer period. The doing of same work again and again will result in mental fatigue of the worker.

# 3. Nervous fatigue:

When work needs the use of mental and physical capabilities for a continuous period, it will result in nervous fatigue.

#### 4. Industrial fatigue:

When a worker continues to work the job for longer periods, his efficiency and productivity will result in nervous fatigue.

#### **Causes of Fatigue:**

# Fatigue may be caused due to the following reasons:

- 1. Longer hours of continuous work without rest pauses may cause fatigue because muscles will be tired after long work.
- 2. Unsatisfactory working environment like insufficient light insanitation, congestion, noise elevated temperatures etc.
- 3. Fatigue may also be caused by personal reasons such as family tension, bad health etc.
- 4. There may be faulty design of machines and equipment which leads to wastage of energy of workers on them.
- 5. The complexity or production process may also put more load on workers resulting into fatigue.
- 6. The workers may not be properly placed on jobs as per their skill levels.
- 7. The harsh attitude of supervisor may also result in fatigue of workers.
- 8. Inconvenient and awkward posture of worker (required for some particular jobs) i.e., standing or bending for longer periods may also be the cause of fatigue.

#### **Methods of Reducing Fatigue:**

A fatigued worker will not be able to work with his original rhythm. Every industrial enterprise is expected to devise ways and means of reducing fatigue so that production does not suffer for longer periods.

# Following methods may help in reducing fatigue and providing freshness to workers:

#### 1. Rest pauses:

When workers continue to work for longer periods then they; feel tired and need some rest. Rest pauses are of great importance in reducing fatigue as well as monotony. Rest pauses should be provided in such a way that workers feel relieved after working for some hours. A well planned rest pauses schedule will be of .great help in reducing fatigue.

#### 2. Less hours of work:

Longer hours of work are the main cause of fatigue. The hours of work should be reduced to that optimum level where workers are able to keep up their working speed. The factories act in India allows only 48 hours a week for adult workers and it should be followed strictly.

# 3. Proper lighting:

Poor illumination is an important cause of disturbance and fatigue. The work place should be properly lighted so that workers are able to work without burdening their eye sight and brain.

# 4. Improving environmental conditions:

The humidity, temperature and ventilation influence workers at work. A proper balance of temperature, humidity should be maintained to make the work place comfortable and worth working so that fatigue is reduced.

# **5. Reduction of noise:**

Undesirable noise will cause fatigue. It may also cause muscular tension. Unnecessary noise should be curbed to its, minimum level. Lower noise levels increase productivity of workers by reducing fatigue, removing cause of irritation.