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PRODUCTIVITY IN LIBRARY MANAGEMENT

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1 CONCEPTS OF PRODUCTIVITY

Productivity is a concept used to understand the magnitude of effectiveness of work output in a given situation.

Productivity is defined as the ratio of outputs of a system to the inputs into the system.

Expressed in simple terms,

$$\text{Productivity} = \frac{\text{OUTPUTS}}{\text{INPUTS}}$$

Clearly the outputs could be products, services, employment, turnover etc. In the particular context, in terms of the library, the outputs could be No. of books serviced, or number of users serviced.

Inputs could be labour effort, capital, power, machinery materials, etc. Inputs are usually recognised in terms of the 5 M's.

These are:

> ➢ Men (for manpower)
> ➢ Machines (for facilities)
> ➢ Money (for capital)
> ➢ Materials (for raw materials)
> ➢ Management (for operational features)

It is therefore obvious that Productivity in absolute terms is very difficult to calculate. Very rarely, attempts are made to calculate productivity in absolute terms. However, achievement of same outputs by reducing the inputs, could be imagined as improvement in productivity. This has been taken by unscrupulous management as a mechanism of removing existing labour. Very rightly therefore, the work force has the wrong feeling that productivity application implies removing labour. Hence work forces around the world have been averse to concepts of productivity.

1.1 Variants of Productivity

LABOUR PRODUCTIVITY: When productivity is imagined with respect to manpower inputs, it is called Labour Productivity.

CAPITAL PRODUCTIVITY: When productivity is imagined with respect to money inputs, it is called capital productivity.

MANAGERIAL PRODUCTIVITY: When productivity is imagined with respect to managerial intelligence, it is called Managerial Productivity.

Attempting to improve labour productivity is a skillful manouevre, which needs wisdom. It can very often lead to problems of human relations. Besides the benefits of

meddling with labour productivity is many circumstances are only marginal. Achieving higher Capital productivity could be done with change of technologies. It requires deeper concepts in finance and hence it is not possible to achieve this by all and sundry.

Achieving higher Managerial productivity is an issue of intelligent deployment of methods and machinery. The benefits of managerial productivity are significant.

It is important to note that since productivity is concerned with minimising effort it could lead to very useful simplifications on doing the work in the form of reducing the effort, time etc. WORK- STUDY is centred around this concept. This paper is meant to provide certain useful concepts of work-study in relation to library management.

2. CONCEPTS OF WORK STUDY

Work study is the technique of systematically studying the existing methods and facilities with which work is accomplished, undertaken with a view to minimising the effort associated time of accomplishing it while leading to more effective efficient methods and facilities.

Work study is accomplished by a standard sequence of steps. These steps are: SELECT, RECORD EXAMINE DEVELOP DEFINE INSTALL, and MAINTAIN.

2.1 Select

In this step the job on which work study is to applied is selected. Selection is to be made on the basis of the following:

➢ Jobs which are repetitive
➢ Jobs involving huge effort
➢ Complex jobs
➢ Monotonous jobs.

The objective of selection is to ensure achieving utility of the study.

2.2   Record

In this step the job or activity being studied is recorded using one of the standard tools. These recording tools are so designed that, if they are followed in recording, the identification of better methods is easier.

Some of these tools are:

- ➢ Outline Process chart
- ➢ Flow process chart
- ➢ Simo chart
- ➢ Flow diagram
- ➢ Two handed process chart
- ➢ String diagram etc.

With respect to office work, Procedures, etc these charts may be suitably modified. For example, instead of Flow Process Chart one could use Flow Procedure Chart.

2.3   Examine Critically

This is the step at which innovation is achieved by the systematic application of a questioning technique. With respect to each step of the activity questioning is applied. The items to be questioned are: PURPOSE, PLACE, SEQUENCE, PERSON, and MEANS.

The questioning sequence employs Primary and Secondary questions which are so designed that, on the basis of the answers obtained to these questions innovative Reformations can be done to minimise work and effort. This questioning sequence is

summarised in the following table.

THE QUESTIONING SEQUENCE

ITEM	PRIMARY		SECONDARY	CREATIVE
	EDUCATIVE	*EXPLORATORY*	*INNOVATIVE/ DEVELOPMENT*	*RESULT*
		WHY	**ELSE**	**DECISION**
PURPOSE	WHAT? What is being done?	Why is it being done?	What Else can be done?	What should be done?
PLACE	WHERE? Where is it being done?	Why only at that place?	Where else it can be done?	Where should it be done?
SEQUENCE	WHEN? When in sequence, is it being done?	Why only in that sequence?	When else it can be done?	When should it be done?
PERSON	WHO? Who is doing it?	Why only that a person of that skill/hierarchy?	Who else can do it?	Who should do it?
MEANS	HOW? How is it being done?	Why only with that means?	How else it can be done?	How should it be done?

The intelligent application of the above questioning sequence could lead to simplification / minimisation / reduction in effort, cost or time of the activity. Consider for example the questioning of the PERSON. Let us classify persons on the basis of their Qualification / competence. Let A, B, C, D represent 4 different persons in descending order of competence. Obviously, A's time is more precious and costly. While A can do B's job, B cannot usually do A's. Hence if B could be substituted to do A's job, it leads to an improved productivity. Also, remember that A doing a job with B's level of skill will be less effort some for A. This is illustrated separately in the seminar. Such ramifications are what are expected of work study.

As a general rule, the Primary questions achieve the task of educating and exploring the objective. The Secondary Questions will achieve brain storming and innovation and hence contribute to Development of a new method of doing the job.

2.4 Develop

In this step the ideas generated during the critical examination phase are subjected to operational screening and after making marginal amendments, these ideas are crystallised into a workable solution.

2.5 Define

The new method of performing the activity is now documented in order to clarify it to all concerned personnel. The documentation is necessary to proof it against possible errors in implementation.

2.6 Install

The documented method is now installed as the new practice with the concurrence of all concerned persons. It is necessary to gain the acceptance of people before installation. This will again require a sound human relations approach.

2.7 Maintain

The installation of a new method of carrying on an activity would always involve a tendency on the part of the connected people that the old method was better. It is therefore necessary to constantly monitor the new method, find inadequacies and operational difficulties in the new method and overcome it to prevent a slip back

The above are the general steps in any WORK-STUDY approach which is very fundamental to the field of Industrial Engineering. These steps are to applied meticulously to achieve results of improved productivity. However, in work study these steps are implemented with respect to separate aspects known as METHOD STUDY and WORK MEASUREMENT. Method study is aimed at improving managerial productivity, whereas, Work measurement is aimed to providing for planning execution.

Work measurement also provides for control of labour productivity.

These principles can be applied to library operations.

3 LIBRARY OPERATIONS & WORK STUDY

Library operations can be broadly classified into two; they are:

- ➢ Routine Day to Day Operations and
- ➢ Periodic operations

3.1 Routine Day To Day Operations

These are operations such as:

- ➢ STACK SETTING (Regular)
- ➢ STACK SETTING (Reference)
- ➢ ISSUES
- ➢ RECEIPT & REMOUNTING
- ➢ MAGAZINES & BACK VOLUMES
- ➢ QUERY
- ➢ FINE COLLECTION
- ➢ MISC. TASKS
- ➢ REPROGRAPHY
- ➢ DOCUMENTATION & PUBLISHING
- ➢ FAX & E-MAIL

Work study principles can be Profitably exploited for Routine operations. Its potential is immense for activities such as Stack Setting, Remounting, Reprography, etc.

3.1.1 Stack Setting: It is the task of setting stacks with right books in the right order. It

is the biggest bother in any library.

3.1.2   Reprography, query and Documentation are areas in which work study can be usefully applied.

Reprography procedures are relatively new to many libraries. The existing procedures do not account for effective use of computers. The degree of their mechanisation is unsatisfactory.

3.1.3 Fax & e-mail Routines

Fax & e-mail routines are not yet well defined in libraries and hence can be largely subjected to Work-study to minimise difficulties.

3.2   Periodic Operations

These are operations such as:

- ➢   STOCK TAKING
- ➢   RE-BINDING
- ➢   PROCUREMENT & STOCK UPDATE
- ➢   INDEX UPDATE
- ➢   STACK RECLASSIFICATION
- ➢   ACCOUNTING
- ➢   COSTING
- ➢   TECHNOLOGY & SYSTEMS UPDATING

3.2.1 Stock Taking

Stock Taking in libraries and the corresponding reconciliation effort is very huge. Most of this effort is due to the fact that stock numbers need to be tallied in the verification effort.

3.2.2 Updating

Index update, Stock updates etc are not mechanised in many libraries. Accounting for library operational costs is an area in which much work can be done.

3.2.3 Classification

Classification and exploitation of ISBN systems need a close look.

3.2.4 Accounting & Costing

The accounting and costing of library operations are not very well developed.

4. ILLUSTRATIVE EXAMPLE

An attempt is made to illustrate with examples how work-study can be usefully applied for library operations.