

- **Techniques of productivity improvement:**

Total time of operation

= Total work content + Ineffective time

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- Method Study:

It is systematic recording and critical examination of existing and proposed ways of doing work.

- Scope of method study:

- Basic procedure of method study:
There are eight steps in performing work study.

Selection of work job: Economic, technical and human considerations.

Record, examine and develop: Techniques and tools have been developed. Standard forms, charts and diagrams are used.

Measure, define, install and maintain.

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- Two categories of charts:
 - 1) Record process sequence.
 - 2) Record events in sequence on a time scale.
- Most commonly used charts and diagrams:
 - a) Charts indicating process sequence:
 - . Flow process chart.
(man type, material type, equipment type and two handed process chart)

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- b) Multiple activity chart and simo chart
- c) Flow diagram, string diagram, travel chart

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- Process chart symbols:
 - The symbols have been provided for operation
 - Inspection
 - Transport
 - Temporary storage or delay
 - Permanent storage
 - Combined activity

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- Outline process chart or operation process chart
- Flow process chart
- Benefits of flow process chart

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- Examine critically:

Purpose

Place

Sequence

Person

Means

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- Develop new improved method: Steps involved are
 - i) Eliminating unnecessary activities
 - ii) Simplify activities
- Record proposed method

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- Flow of materials:
 - Flow diagram can be used for this like:
 - String diagram:
 - Process for construction
 - Benefits
 - Flow process chart
 - Multiple activity chart(man-machine,
man-man
simo chart)

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- Principles of motion economy:

There are no of principles concerning the economy

of motion to improve methods grouped as:

Use of human body

Arrangement of work place

Design of tools etc.

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- Classification of movements
- Two handed process chart
- Micromotion study:
 - Therblings
- Define and install improved method

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