

Workstudy and Method Engineering IE223

Assignment 01

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Table of Contents

[Brief history of workstudy and methods engineering, and its tools and techniques discovered. 3](#_Toc168523418)

[Introduction 3](#_Toc168523419)

[Brief overview of work study and methods engineering 3](#_Toc168523420)

[Importance in industrial efficiency and productivity 3](#_Toc168523421)

[Historical development 3](#_Toc168523422)

[Tools and techniques 4](#_Toc168523423)

[Time study 5](#_Toc168523424)

[Motion study 5](#_Toc168523425)

[Work sampling 5](#_Toc168523426)

# Brief history of workstudy and methods engineering, and its tools and techniques discovered.

# Introduction

The field of methods, engineering and time study includes planning, developing, and choosing the optimal production procedures, machinery, tools, and manpower to produce a product after the product engineering department has released the working drawings.

# Brief overview of work study and methods engineering

A Methods engineering implies the utilization of technological capability mostly as a result of productivity gains and method engineering.

# Importance in industrial efficiency and productivity

Productivity growth is the only way for a corporation or enterprise to expand and become more profitable. The improvement in production per work-hour or time expended is known as a rise in productivity. The three main tools that are used to boost productivity are salary payment, time study, and approaches.

# Historical development

1. The work of Taylor
2. The Gilbreths' work and the motion research

# Tools and techniques

Methods engineers usually use eight different process charts, each of which has specific applications.

1. Operation process chart.
2. Flow process chart
3. Flow diagram
4. Worker and machine process chart
5. Gang process chart
6. Operator process chart
7. Travel chart
8. PERT chart

# Time study

The actual taking of time study is both an art and science. To find specific time required to do a task by labor, time study is taking place. There are certain elements of time study such as choosing the operator, dissecting the task and determining its components, performance rating, the operator, assigning allowance (personal, relaxation, etc.).

# Motion study

The meticulous examination of many bodily motions used to perform a task is known as motion studies. Its purpose is to eliminate or reduce ineffective movements, and to facilitate and speed effective movements. In broad sense, motion study is covered by two degrees of refinement that have wide industrial application. This includes work system, analysis and design for increased productivity and efficiency. Motion study examines the tasks to find the best configuration of tools, machinery, and motions to increase output. By illuminating workplace safety and human-machine interaction, this field of study has significantly advanced ergonomics and industrial engineering. In keeping with the objective character of motion studies itself, the passive language highlights the action and its impact rather than the person.

The laws of motion economy

1. The use of the human body
2. The arrangement and conditions of the workplace, etc.

# Work sampling

Work sampling is a technique used to examine the percentages of total time spent on the many tasks that make up a job or work environment. Work sample data are useful in defining production standards, figuring out machine and personnel utilization, and figuring out allowances that apply to the project.