Scientific management theory notes pdf

INTRODUCTION: Scientific management, also called Taylorism, is a management theory that analyzes and synthesizes workflows. Its main purpose is to increase economic efficiency, especially labor efficiency. It was one of the first initiatives to apply science to the engineering and management of processes. This administration referred to it as a classic school with a significant flow of thought from previous schools. Frederick Taylor (1856-1915) was developed by a leading advocate of scientific management. According to Taylor, scientific management means knowing exactly what you want men to do and seeing them do it in the best and cheapest way. DEVELOPMENT : In the early days of the Industrial Revolution, in the absence of a built-in theory on factory organization, factory owners or managers relyed on personal judgment to participate in the problems they faced in managing their businesses. This rule of thumb is referred to as the thumb rule that governs factories with enabled them to handle situations that arise but suffer from the limitation of the trial and error approach. It was important to know what worked and why it worked to imlite your experiences. For this, there was a need to follow an approach based on the science method - defining a problem, developing alternative solutions, predicting results, measuring progress and drawing results. In this scenario, Taylor proposed scientific management rather than the rule of thumb, and emerged as the father of scientific management. PRINCIPLES OF SCIENTIFIC MANAGEMENT : ACCORDING TO TAYLOR THERE ARE 4 PRINCIPLES : (1) NOT THE SCIENCE RULE: --This principle says that we should not get stuck in a series of routines with old doing techniques, we need to constantly experiment to develop new techniques that will make more work much simpler, easier and faster. -- Taylor believed it was the best way to maximize efficiency and that even a small production activity, such as installing pigs in box wagons, could be scientifically planned and managed. --This method included researching traditional methods through study, combining best practices and developing a standard method to follow throughout the organization. (2) HARMONY , NOT DISCORD: --According to this principle, such an atmosphere should be created in the organization where labor (the most important element of production) and management consider each other indispensable. --There must be complete harmony between managers and workers. --Taylor called such a situation a 'Mental Revolution' and believed that the realization of the mental revolution would end all conflicts between the two sides and be beneficial to both. -- Management should share the company's gains, and at the same time workers need to work hard to change the company in a good way. EXAMPLE : Fatherly style in Japanese companies management is in practice. There is complete clarity between management and workers. All workers go on strike as they wear a black badge but work more than normal working hours to gain sympathy from the administration. (3) NOT COOPERATION, NOT INDIVIDUALISM : -According to this principle, all activities carried out by different people must be carried out in the spirit of mutual cooperation. --Cooperation should replace competition. --Taylor suggested that managers and workers set standards jointly. This increases participation and thus increases liability. That way we can expect miraculous results. --This can be achieved : Rewarding employees for their recommendations. Workers don't go on unnecessary strikes and make irrational demands. Open communication between management and all personnel. Equal division of jobs and responsibility between workers and management. (4) THE GREATEST EFFICIENCY AND WELL-BEING OF EACH PERSON: --According to this principle, the efficiency of each person must be handled correctly from the moment of selection. --Everyone's education should be arranged appropriately. --It should also be noted that work is allocated according to the ability and interest of each individual. Such a caring attitude will also create a sense of euphoria and a sense of belonging among employees. SCIENTIFIC MANAGEMENT TECHNIQUES : SCIENTIFIC MANAGEMENT HAS 7 TECHNIQUES : 1. FUNCTIONAL FOREMAN- Foreman represents the executive figure that workers meet face-to-face every day. Functional Foremanism is an extension of the Business Department or the manager of specialization on the store floor. Taylor defended the separation of planning and execution functions. The following activities carried out by 4 personnel within the scope of planning - Staff will prepare a draft of instructions for workers - Instruction card officer Specify production route- Route clerk . Time and cost sheet prepare - Time and cost clerk . Providing discipline- Discipline. Production function will provide : On-time and accurate completion- Speed boss . Keeping machines and tools ready to work by the worker-gang boss. To ensure the proper operating conditions of the machine and tool- Repair boss . Check the quality of work - Inspectors . Foremen should be intelligence, education, delicacy, courage, judgment, special knowledge, dexterity and energy, honesty, good health. Taylor suggested eight experts because all these qualifications could not be found in a single person. 2. STANDARDIZATION AND SIMPLIFICATION OF WORK - Standardization means the process of setting standards for each business activity. This is a tool to achieve manufacturing economy. Implies that the physical attitude of the products must meet the needs and needs of customers. Taylor, in addition to tools and equipment, should be standardized to obtain standard output from workers. The goals of standarization are : 1 . Reduce the given line or product to a fixed and predetermined type, form, design, size, weight, quality, etc. 2. To ensure the manufacture of identical parts and components. 3. To ensure that quality and excellence standards are protected. 4. The performance standard is set for all employees and machines at each level. Simplification is a method of eliminating unnecessary product diversity. This results in labor cost savings, machines, tools etc. . Simplification is an example of eliminating extra varieties, sizes and sizes, dimensions, while standardization implies developing new differences instead of existing one. 3. METHOD STUDY - This technique determines the best way to do the job. There are several methods of doin work. To best determine the various parameters. From the supply of the product to the final delivery to the customer, every activity is part of the method work. The aim of the method study is to minimize the cost of production and to maximize customer satisfaction and quality. As an example of method study : Direction Research and Assembly lines : Process Schedules : 4. MOTION STUDY - In this study, the movement of the body and limbs necessary to perform a job has been closely examined. In other words, an operator transaction on a machine on a particular task means working. The purpose of the motion study is to eliminate useless movements and determine the betting path to do the job. By undertaking motion work, an attempt is made to know whether some elements of a job can be eliminated combined or the order in which it can be changed to achieve the required rhythm. Movement work improves the efficiency and efficiency of workers by reducing all wasteful movements. EXAMPLE : It is possible to find Efficient Transactions. Incidental movements (going to stores) . Inefficient movements. Taylor used stopwatches and various symbols and colors to describe different movements. A technique that allows the administrator to determine the standard time taken to perform a specific job. Each job or every part is examined in detail. This technique is based on the work of the average worker with reasonable skills and skills. The average worker is selected and assigned work, and then with the help of a stop time, time is determined to perform a specific job. Taylor argued that Fair day studies should be determined through observation, experimenting and analysis, taking into mind the average worker. Standard Working Hours × = Fair Day Work EXAMPLE : Based on various observations, the standard time taken by the worker to make a cardboard box was determined to be 20 minutes. So in 1 hour he/she will make 3 boxes. Assuming a worker has to work 8 hours a shift and be dropped for an hour for rest and lunch, Within 7 hours a worker is determined to make 3 @ @ 21 boxes per hour. This is the standard job a worker has to do. 6. FATIGUE STUDY- It depends on whether a person is physically and mentally tired if he/she is not fit to rest while working. Rest intervals will help you to gain an endurance and work again with the same capacity. This increases productivity. Fatigue study tries to determine the amount and frequency of rest intervals when completeing a task. EXAMPLE : A plant takes place 8 hours and 3 shifts each. Even on a single shift a worker should be given some rest interval for lunch and some other small pauses from work. 7. DIFFERENT PART WAGE SYSTEM - This wage payment technique is based on the efficiency of the worker. Efficient workers are paid more than inefficient workers. On the other hand, workers who produce less than the standard number of parts are paid a lower rate due to the inefficiency of the worker. This system is a source of incentives for workers who increase their productivity to get paid more. It also encourages inefficient workers to improve their performance and meet their standards. Leads to mass production that minimizes cost and maximizes profits. Snow.