

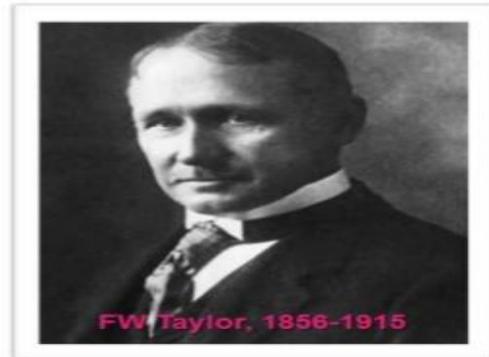
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Contribution by F.W. Taylor – Scientific Management

Frederic Winslow Taylor started his career as a mechanist in 1875. He studied engineering in an evening college and rose to the position of chief engineer in his organization. He invented high-speed steel cutting tools and spent most of his life as a consulting engineer.

F . W . Taylor

- He is Known as Father of Scientific Management
- Born into a wealthy family in the US in 1856.
- Graduated from Stevens Institute Technology as a mechanical engineer in 1883.



Frederick Winslow Taylor (1856-1915) is called the father of Scientific Management. His experience from the bottom-most level in the organization gave him an opportunity to know at first the problems of the workers. Taylor's principal concern was that of increasing efficiency in production, not only to lower costs and raise profits but also to make possible increased pay for workers through their higher productivity.

Taylor saw productivity as the answer to both higher wages and higher profits. He believed that the application of the scientific method, instead of customs and rule of thumb could yield this productivity without the expenditure of more human energy or effort. Taylor published a book entitled, *The Principles of Scientific Management*, in 1911. But his ideas about scientific management are best expressed in his testimony that was placed before a committee of the House of Representatives in 1912. Industrial problems increased due to the advent of large scale factory systems, mass production, and mechanization. People needed some specific principles and methods for solving the problems they faced. The initial impetus in the scientific management movement was Taylor. He was more concerned with the engineering aspect and the problems of workers and productivity-oriented wages.

He Said: *‘Scientific management is not any efficiency device, not a device of any kind for securing efficiency; nor is it a bunch or group of efficiency devices. It is not a new system of figuring costs; it is not a new scheme of paying men; it is not a piece work system; it is not a bonus system; it is not a premium system; it is no scheme for paying men; it is not holding a stopwatch on a man and writing things down about him; it is not time study; it is not motion study, not an analysis of the movements of men; it is not the printing and loading and unloading of a ton or two of blanks on a set of men and saying ‘Here’s your system; go and use it’. It is not divided foremanship or functional foremanship; it is not any of the devices which the average man calls to mind when scientific management is spoken of ...’*

“Scientific Management consists in knowing what you (i.e. management) want men to do exactly; and seeing to it that they do it in the best and the cheapest manner.”

Now, in its essence, scientific management involves a complete mental revolution of the part of the working man engaged in any particular establishment or industry. This complete mental revolution focuses on the duties of the organization toward its work, toward its fellowmen and towards its employees, and it involves an equally complete mental revolution on the part of those on the management's side, which involve the foreman, superintendent, owner of the business, board of directors, and so on.

The great mental revolution that takes place in the mental attitude of the two parties under scientific management is that both sides take their eyes off the division of the surplus as an important matter and together turn their attention toward increasing the size of the surplus, which becomes so large that it is unnecessary to quarrel over how it should be divided.

They come to see that when they stop pulling against one another and instead both turn and push shoulder to shoulder in the same direction, the size of the surplus created by their joint efforts is truly appreciable.

When friendly co-operation and mutual helpfulness replace antagonism and strife, it becomes possible for both parties to make the surplus so enormous that there is ample room for a large increase in wages for the workmen and an equally great increase in profits for the manufacturer.

In short , “Scientific management involves the application of a scientific approach to managerial decision making (consisting of-collection of data, an analysis of data and basing decisions on the outcome of such analyses); and discarding at the same time, all unscientific approaches, like – rule of the thumb, a hit or miss approach and a trial and error approach.”

F. W. Taylor’s 4 Principles of Scientific Management

The fundamental principles that Taylor saw underlying the scientific approach to management may be summarized as follows:

1. Replace rule-of-thumb work methods with methods based on a scientific study of the tasks.
2. Scientifically select, train, and develop each worker rather than passively leaving them to train themselves.
3. Cooperate with the workers to ensure that the scientifically developed methods are being followed.
4. Divide work nearly equally between managers and workers, so that the managers apply scientific management principles to planning the work and the workers actually perform the tasks.

Taylor concentrated more on productivity and productivity based wages. He stressed on time and motion study and other techniques for measuring work. Apart from this, in Taylor's work, there also runs a strongly humanistic theme. He had an idealist's notion that the interests of workers, managers, and owners should be harmonized.

Conclusion:

