

## Frederick Taylor's other Principles

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### Abstract

*More than 100 years ago Frederick Taylor (1911) introduced the world to Scientific Management. These theories have changed how management would interact with employees. At the time he introduced these ideas, they were revolutionary and divided the experts. Everyone is familiar with the principles of Scientific Management, this paper will review other important principles that are lesser known; quality, flexible work schedule and motivation. We will examine these lesser known parts of Taylor's work and review how they have impacted the way management operates.*

**Keywords:** Frederick Taylor, quality, flexible hours, motivation.

### *History of Frederick Taylor*

Frederick Taylor was born in Philadelphia, Pennsylvania, on March 20, 1856 into a Quaker family (Zuffo, 2011). His father was a Princeton-educated lawyer, making his money on mortgages (Blake & Moseley, 1999). His family lived in luxury. The family traveled around the world spending several years in Europe. The Taylor household was raised to work hard and have a "definite instruction." The family money allowed Frederick Taylor as a youth to attend the prestigious Phillips Academy in Exeter (A private school), New Hampshire (Blake & Moseley, 1999). After graduating, he was accepted at Harvard (Myers, 2011, Blake & Moseley, 2011). However, he was unable to attend due to poor eyesight. Instead of attending college, he started working as an apprentice at Enterprise Hydraulic Works. He attended Stevens Institute of Technology via correspondence earning his degree in mechanical engineering; at the time this was quite unique.

### *Scientific Management*

Taylor's work has divided experts since publication, many saying he was an entrepreneur and wanted both employer and employee to benefit (Giannantonio & Hurley-Hanson). Many felt he dehumanized his workers and made them into robots (Bell & Martin, 2012). As stated by Bell & Martin, 2012; many of Taylor's principles are being used today in the work place.

Throughout *The Principles of Scientific Management*, Taylor discussed several essential principles that pertain to Scientific Management; Science, not rule of thumb; Harmony, not discord; Cooperation, not individualism; maximum output, in place of restricted output; development of each man to his efficiency and prosperity (Taylor, Shop Management, 1911). Taylor warned throughout his writings that the failure to introduce all aspects of the Scientific Management would result in a failure of the system. The publication of *The Principles of Scientific Management* in 1911, divided experts across the management spectrum. Many believed he was ahead of his time while others believed he dehumanized the worker. Peter Drucker credited Taylor as being the first person to study work seriously. After reading and studying Taylor's work, he believed Taylor was making a better world for everyone; he tried to create a utopia between management and the workers.

Reviewing the methods of Scientific Management, task oriented, incentive pay and training, companies are still working towards these attributes today. Taylor's idea of making every job as simple as possible was not to dehumanize the workers, but ensure the workers would produce the highest quantity and quality work possible.

By having a specific direction to follow, allowed the employees to know exactly what needed to be done in order to complete their job. If the workers completed their job on time, they would receive more money, making it worth working harder. (Taneja, Golden, & Toombs, 2011). Taylor was proud of his work and boasted that he never had a strike at a plant in which Scientific Management was implemented (Locke, 1982).

### ***Additional Principles***

The majority of research on Taylor had been on the Core Scientific Management Principles. Besides the major aspects of Scientific Management discussed, Taylor wrote about other management theories that have transformed management; quality, flexible hours, and motivation. These three additional principles Taylor discussed are vital in today's organizations.

### ***Quality***

#### **Taylor's theories**

Throughout Taylor's writing, he implied the importance of quality. When piece rate is introduced, the output must contain only quality parts, not just the number of the day. Taylor's attention to quality is seen in the ball bearing room, when an "over inspection" is introduced to ensure nothing slipped by the inspection process. This was done by having a dual re-inspection process. The following day, four of the trustworthy girls would inspect the ball-bearings from the day before, and the foreman would also do an inspection. This method ensured the girls, performing the inspections, would do their best knowing their work could be randomly inspected again. (Zuffo, 2011)

The inspector is part of the system to ensure quality and not a person at the end of the assembly line. Quality must be on everyone's mind. Quality was a high priority for Taylor, he understood that if a product did not meet the standards, it would not be sold and it was a loss of money for the company and a loss of time for the worker. Creating quality parts is vital to the success of every company.

#### **Today's Manager**

As discussed by Taylor, it was not enough to just make parts, they had to be correct. Quality is everyone's responsibility. Everyone has the ability to speak up and change the process in order to make it better. Employees are trained to do it right the first time and every time. When a quality product is produced there is less chance the customer will be unhappy, leading to more profits. Taylor's work was performed in manufacturing plants but this does not mean his theories do not apply to the office. Waste in the office setting costs the company money. If paper work is filled out incorrectly and entered in wrong this creates waste. Management and employees should understand the cost associated with not doing the job correct the first time. Management must discuss and encourage employees to spend the time to do what is right the first time and increase quality. Employees need to understand the importance of quality and how it affects the bottom line.

Since Taylor, other notable names have discussed quality. Dr. Edward Deming discussed Total Quality Management and the Seven Deadly Diseases. Dr. Joseph Juran incorporated many of Taylor ideas into his work of Quality Management. The use of Quality Management in the work place keeps employees on track and enables companies to reduce waste.

### ***Flexible Hours***

#### **Taylor's theories**

Taylor discussed the importance of controlling the number of hours worked each day. During his research, the average day was over ten hours long with few breaks provided. Taylor documented two instances in which reducing the work day would increase the employee's outcome. Pig-iron workers and the bicycle ball inspection showed that Taylor understood the importance of fatigue and the long hours being worked without any breaks which had an adverse effect on the employee. As seen in the pig-iron experiment, he had the employees take breaks and rest at certain intervals, allowing them to recharge their bodies. In the bicycle room, he reduced their hours and the output went up and the pay stayed the same. (Zuffo, 2011). The hours worked should be kept to eight hours with breaks. The eight and half hour workday was scientifically proven to provide the best work. (Zuffo, 2002) At the time of Taylor's studies, it was common for workers to work 10 -12 hour days. Taylor understood that workers needed to leave their stations to take breaks during work and implemented it (Locke, 1982).

Management believed they were getting the most of their employees when working 10 – 12 hour days. When Taylor did the study he proved that when employees worked 8 ½ hours they would get more done and have a higher quality product. Taylor pointed out that a job or task is given a certain amount of time to complete. If the workers completed it in a given time they could leave. Otherwise, they stayed until the task was finished.

### **Today's Manager's**

The standard eight hour work day has been proven to be more efficient for employees and companies. As discussed by Taylor, employees need to take breaks and work at a pace they are comfortable with. By allowing employees to have flex time, employees can juggle family and work more efficiently. This translates into more work being completed for the company and a happier employee.

As technology changes the world, the more companies need to change. Technology now allows employees to work from anywhere in the world. Companies are no longer locked into looking for the best local talent; they can search the world to find the best employees. Working remotely has benefits for both employee and employer. The employee will be able to balance family obligations while still working. The employer will reduce costs in overhead.

### **Employee / Motivation**

#### **Taylor's theories**

Taylor's research polarized management, many saying his work de-humanized the work force. However, he believed in motivating employees. Taylor's principles; hire the right person, compensations, focus on one job and have fun. Hiring the right person for the job ensures the job will be performed accurately. Employees want to receive fair compensation for the work performed (Locke, 1982). Do not multi-task and focus on one job at a time. Taylor knew the importance of activities, outside of work and that employees should have fun.

Throughout his writing, Taylor examined the importance of hiring the correct person to do the job. Not every person could do every job. One of the theories companies believed was workers wanted more money (Locke, 1982), which is not necessarily the case. Taylor understood each person had different motivational needs. Taylor stated he would rather hire a family man over a single man. The family man had different motivation for coming to work than a single man (Taylor, the Principles of Scientific Management, 1911). Taylor believed each person had a specialty; he would discover that specialty and put it to the best use. The selection process for his high-priced man had to meet certain criteria in order to receive extra pay for completing a full day's work (Zuffo, 2011). 3) As seen in the inspection room, just because a person had years of experience doing a job, if they did not meet the requirement to do the job quickly and accurately, they were removed from the inspection. (Zuffo, 2011) Each worker is a complete individual and has different motivations. As Taylor pointed out, every worker should be motivated to work as individuals and not lumped together.

Pay incentive was another important part of Scientific Management. Taylor felt if the company made more money so should the employees. He also believed that the employees that worked the hardest should be paid the best (Bell &Matin, 2012). Every employee should perform one job at a time, multi-tasking creates an environment where a clear focus is not available, and employees cannot have more than one person telling them what to do on a daily basis.

Taylor understood the importance of activities outside of the workplace, as long as it did not interfere with work. "Viewed from the managers' standpoint they're valuable aids in making more intelligent and better workers". This also is seen in Taylor's personal life: played tennis, played in tennis tournaments, and had patents to make the tennis industry better.

### **Today's Managers**

Taylor principals focused on for motivation; hire the right person, compensation, focus on one task and have fun. Hire the right person to do the job, not every person can do any job, each job requires a certain skill set. The employee selection is key to the success of the employee and companies. Care needs to be taken when hiring employees to ensure they are capable of performing the job. Many jobs require a unique skill set and the employer must ensure the employee has this skill. Employees want to be compensated for a day's work and the compensation should be fair and allow the employee to make a decent living. If the company makes a profit, that profit should be shared with the employees.

When employees are forced to multi-task, they cannot not be efficient. Employees need to focus on one task at a time. This will ensure full attention is given to it, which will produce a higher quality product. Encourage employees to have outside activities. This allows them to focus on activities, providing a distraction from work. When returning to work this enables them to focus better on the job at hand.

### **Conclusion**

Taylor's concept of management was developed over 100 years ago, however they are still relevant today. Taylor's principles are simple, employees and management should work together to maximize production and profit. His methods were ground breaking when developed 100 years ago and can still help management and employees be successful today. These additional principles will allow employees and management to work together. Hiring the right employee and motivating them will enable the company to produce quality work, increasing the bottom line for both company and employee. By management providing an atmosphere that encourages Quality and motivation employees both management and employee will succeed.

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