History of Management

Introduction

Throughout modern and ancient history, leaders have frequently encountered obstacles to effective management which have required a great deal of flexibility and persistence in order to overcome. For example, during the construction of the Great Pyramid in Giza, Egyptian leaders were confronted with difficult logistical and managerial problems that required innovative answers. It took the Egyptians well over 20,000 workers and approximately 23 years in order to complete this endeavor. Planning, organizing, scheduling, and controlling the project all had to be done without the use of modern communications devices such as computers, cell phones, and fax machines. In the 1940's during the Second World War, problems arose from a severe shortage of workers that were needed to produce high volumes of war-time materials and supplies. Improved management practices were necessary in order to fill the gaps left by the reduction in the labor force; businesses quickly adopted policies which allowed expanded roles for women and further implementation of new technological developments in order to streamline production. These practical management problems marked the beginning of the modern management principles that are still in use to this day.

The environment in which people work is very different today than in the past. In the past, people did not always commute to work. Mostly, they labored at home or close to home, working as farmers, tradesmen, and ranchers. In 1790, two thirds of the United States' population worked in agriculture, harvesting fruit and vegetables from their own land. This work environment provided people with more task identification and control over their output. People were expected to participate directly in both the planning and labor which was necessary to complete these tasks. In our modern understanding of the business environment, there are individuals who plan and manage assignments, and there are those who complete the work.

Division of Labor

Labor changed dramatically as a result of the Industrial Revolution. The invention of the coal-powered steam engine and the widespread availability of low-wage workers led to the rapid spread of factories throughout the newly industrialized world. Tradesman who had previously worked on products from start to finish were soon outpaced by factories, which tended to employ teams of highly specialized workers who focused on individual

aspects of product manufacturing (think Henry Ford's assembly line), this process is commonly known as division of labor. Division of labor sparked an increased need for managers to help coordinate the large quantities of employees working on individual tasks in support of multifaceted projects. Because of specializing work efforts, productivity increased significantly. For example, the Ford Motor Company typically took 12.5 hours to produce a car prior to the implementation of the assembly line in 1913. After employing the division of labor theory, Ford reduced the total time to produce a car down to only 93 minutes. Each assembly line task was broken down into smaller, more specialized tasks. If possible, each task was automated to ensure maximum productivity. However, if the task was unable to be automated, employees would focus on that one task and repeat it over and over to improve efficiency. Productivity improvements, such as the ones incorporated at Ford, fueled the formation of large, formal organizations utilizing divided labor strategies.

Economist Adam Smith supported the division of labor theory and claimed growth was rooted in the increased use of the division of labor principles. Smith argued that as workers became experts in specialized tasks, efficiency would continue to improve. Overall time and expenditures were saved by not allowing workers to switch tasks during the day. Smith conducted a pin production study to emphasize the positive impact on production when tasks were specialized. When division of labor was implemented with 10 workers, 48,000 pins could be produced per day. This was a vast improvement of the 200 pins which had previously been produced per-worker on a daily basis.

Classical Approach

During the early 20th century, the first organized studies of management were formalized. These studies became known as the classical approach to management. Two major theories encompass the classical approach: scientific management and general administrative.

Scientific Management Theory

In 1911, Frederick Winslow Taylor published the book *Principles of Scientific Management*, which outlined the scientific management theory. This theory describes the use of scientific methods to identify the optimal strategy for project completion. Taylor's theory sparked a manufacturing revolution by defining guidelines for improving

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production efficiency. Taylor defined four principles of scientific management:

1. Develop a science for every job component to replace the old rule-of-thumb method.
2. Scientifically select, hire, and train workers.
3. Cooperate with workers to ensure work is completed in accordance with the scientific principle developed for the job.
4. Divide work equally between management and workers.

Taylor's ideas rapidly spread across the United States and other countries, inspiring others to study his theory. He became known as the "father" of scientific management. Frank and Lillian Gilbreth followed Taylor's scientific management studies. The Gilbreths focused on using tools and equipment to optimize worker efficiency. They studied hand-and-body movements to reduce the amount of time it took for workers to complete each motion needed to complete a given task.
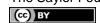
Guidelines and techniques developed by Taylor and the Gilbreths are still used in organizations today. As managers select the best qualified employee for the job, eliminate wasted time and body motions, and incentivize employees based on performance, they are following the basic principles of scientific management.

General Administrative Theory

The general administrative theory focuses on the functions of managers and the principles of good management practice. Two primary individuals who contributed to the general administrative theory were Henri Fayol and Max Weber.

Henri Fayol studied the functions that all managers perform. This effort led Fayol to develop the 14 principles of management outlined below. Fayol's management principles were designed to be applied to all organizational situations.

1. Division of work – divide work efforts amongst employees, fostering work specialization.
2. Authority – authority figures should be responsible.
3. Discipline – encourage common work effort among employees.
4. Unity of command – only one manager should direct employees.
5. Unity of direction – embrace common organizational objectives.
6. Subordination of individual interests to the general interests

7. Remuneration – establish employee's rate of pay based on variables such as cost of living, abilities, and supply of skilled workers.
8. Centralization – adopt centralization or decentralization practices defined by the organization.
9. Scalar chain – adhere to authority command chain.
10. Order – to maximize efficiency and coordination, use all materials and employees equally.
11. Equity – treat employees equally.
12. Stability of tenure of personnel – retain productive workers.
13. Initiative – foster worker initiative.
14. Esprit de corps – encourage harmony and good will among employees.

In contrast, Max Weber studied formalized organizations. Based on these studies, Weber developed a theory of authority called ideal bureaucracy. Ideal bureaucracy is an organization defined by division of labor, formal hierarchy, impersonal relationships, and distinct rules. The division of labor principle was defined by Weber as the act of dividing work efforts among employees to ensure focused attention on specialized portions of the tasks. Through his research, he discovered the importance of organizations using a formal hierarchy to establish authority. In addition, he described the importance of impersonal relationships in a business environment to ensure decisions were made without the influence of biased opinions. Weber thought that distinct rules were necessary in organizations to foster a controlled environment and establish acceptable behaviors. While Weber recognized that ideal bureaucracy can never fully exist in reality, his findings have frequently been used as the basis for organizational structural design in many of today's large corporations.

Quantitative Approach

The quantitative approach was derived from mathematical and statistical models used during World War II to solve military problems. This approach applies statistics, computer simulation, and analytical optimization techniques to management. For instance, critical-path scheduling analysis can improve work scheduling efficiency. In addition, the economic order quantity model allows managers to identify optimum inventory levels.

Total Quality Management (TQM) is a philosophy built on the premise of continuous improvement. Quality experts William Edwards Deming and Joseph M. Juran inspired TQM. Deming and Juran's findings demonstrated the need to use statistical techniques

to measure critical variables in an organization's work processes. They posited that benchmarking against industry standards should be used to identify and correct problem areas. TQM still plays a major role in implementing best management practices in today's modern world. For example, the Walt Disney Company incorporates quality into every detail of their theme parks, paying particular attention to employee hiring and training, to ensure high customer satisfaction.

Organizational Behavioral Approach

The organizational behavioral approach studies management by focusing on the people in the organization. Organizational behavior research has helped to identify many of the tasks performed by managers when coordinating the work of subordinates. These activities include motivating, leading, working in a team, and managing conflict.

In the early 1900's, Mary Parker Follett contributed to the organizational behavior approach by recognizing the importance of group and individual behaviors in organizations. Parker thought organizations should be communities. Based on this premise, each employee is an owner and collectively accepts responsibility for the organization.

Around 1930, Chester Barnard advocated for the organizational behavior approach by claiming that organizations were social systems. These social systems require work groups to be cooperative. Barnard strongly believed that happy workers are productive workers.

The most significant breakthroughs for the organizational behavioral approach came not from one or two individuals, but from a series of research studies that focused on the outcomes of various theoretical assumptions. The Hawthorne Studies of 1924 consisted of several studies conducted at the Western Electric Company Works in Illinois. They examined the effect of different lighting levels on worker productivity. The results indicated a strong correlation between attention given to employees – including the increased use of workspace lighting – and improvements in productivity. The Hawthorne researchers concluded that social factors often influence worker performance. In addition, these findings indicated that the workplace is far more complex than originally thought.

Summary

- Throughout history, managers have encountered difficulties solving practical management problems such as scheduling, organizing, planning, and controlling.

- As a result of specializing tasks, known as division of labor, productivity increased significantly.

- Two major theories cover the classical approach: scientific management and general administrative.

- Taylor developed the scientific management theory to describe the use of scientific methods in order to determine the optimal approach for project completion.

- Fayol and Weber contributed to the general administrative theory, focusing on the functions of managers and the principles of good management practices.

- Quantitative approach applies statistics, computer simulation, and analytical optimization techniques to management.

- TQM, a type of quantitative approach, focuses on continuous improvement for work processes.

- The organizational behavioral approach studies management by focusing on the people in the organization.

- The Hawthorne Studies, a major contributor to the organizational behavioral approach, identified the significance of social factors influencing worker productivity.