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Positive and Negative Effects of Technology on Organization Culture

Abstract

Some consider organizational culture as a belief system that is common between employees of the organization; some consider it as a series of common and dominant values, which are represented by symbols such as stories, myths, in general the common aspect of these definitions is a series of common beliefs and values that exist in an organization and guide the behavior of that organization. In the theories of organizational behavior, much attention is paid to organizational culture as an influencing factor on the effectiveness and efficiency of organizations, directly and indirectly, on the indicators of creating an impact. It has been done, so in this article we will examine the effect of information technology on organizational culture or its leadership as an accelerator or an obstacle in providing appropriate solutions for the promotion and growth of the leader or organization.

Keywords: Organizational Culture, Information and Communication Technology, Information Society, Human Resources, Innovation

Teknolojinin Kurum Kültürü Üzerindeki Olumlu ve Olumsuz Etkileri

Öz

Bazıları örgüt kültürünü örgüt çalışanları arasında ortak olan bir inanç sistemi olarak görürken; bazıları hikayeler, mitler gibi sembollerle temsil edilen bir dizi ortak ve baskın değer olarak görmektedir; genel olarak bu tanımların ortak yönü bir örgütte var olan ve o örgütün davranışlarına rehberlik eden bir dizi ortak inanç ve değerdir. Örgütsel davranış teorilerinde, örgütlerin etkinliği ve verimliliği üzerinde, doğrudan ve dolaylı olarak, etki yaratma göstergeleri üzerinde etkili bir faktör olarak örgüt kültürüne çok dikkat edilmektedir. Bu nedenle, bu makalede bilgi teknolojisinin örgüt kültürü veya liderliği üzerindeki etkisini, liderin veya kuruluşun tanıtımı ve büyümesi için uygun çözümler sağlamada bir hızlandırıcı veya engel olarak inceleyeceğiz.

Anahtar kelimeler: Örgüt Kültürü, Bilgi ve İletişim Teknolojisi, Bilgi Toplumu, İnsan Kaynakları, İnovasyon.

Introduction

Organizational culture is a type of collective thought planning that has been presented as a dominant thought in the field of organizations in recent years. This collective thought distinguishes members from one species to another. Anyone who has worked with human groups is aware of the existence of this important organizational phenomenon.

The new era, which is known as the information age, is the era of information and communication technology, today's people are experiencing a community founded on the principles of information and communication technology., which has its own characteristics. Such a society is called an information society (Sarafizadeh, 2013, p. 2). The information society is characterized by its reliance on information and communication technology, shaping the economic, cultural, and social aspects of its people's lives. In this society, individuals actively engage with technology in their professional endeavors, at home and even at leisure. They use this technology as much as possible. Organizations or the leadership of organizations should have the necessary and desirable information updates to be able to take important and correct steps to make the best use of the information technology in the organization. The success or failure of this movement hinges significantly on factors such as "culture, leadership, or organization." Organizational culture affects all organizational aspects and based on common beliefs and values, it gives power to organizations and influences individual behavior, motivation, job satisfaction and commitment level of human resources. The structure of organizational and systems, goal setting and also, organizational culture is an effective factor in promoting creativity and innovation, which works by valuing hard, focused, and purposeful work, hard work, and commitment.

Manpower is the most important main resource of the organization by using information, technology, materials, equipment and budget to produce goods and services, and if it works properly, the organization will also enjoy good performance.

Therefore, by paying attention to the culture and recognizing the existing culture of the organization, analyzing it, and creating appropriate values in support of the desired culture, the organization can be in the direction of the effective use of the information and communication technology play an important role in the organization (Sarafizadeh, 2013).

1. A Review of the Literature

Studies related to culture that took place in the early 1980s showed that the culture in the leadership of an organization is like a human being personality. Without a doubt, it should be accepted that people create culture and culture also creates people. Culture teaches people to learn comprehensive and stable thoughts and to find material in the form of complex groups that have a separate and special task. Organizational culture has a close connection with the culture of the society in general, it encompasses a substantial portion of behavior and growth of the organization, and it takes effective help from them to bring about transformation and a kind of desired and measured behavior.

The research in the organizational culture has sought to evaluate the employees' view of their organization, whether the organization is too structured? Does it reward innovation? Does it suppress conflicts? Organizational culture, although it has a long history, is a topic that has recently arrived in management knowledge, especially in the field of organizational growth and organizational behavior is the most significant. These factors are effective in the profitability of the organization (Shakari, 2002).

2. Definitions of Organization Culture

The significance of organizational culture and its role in fostering the growth of an organization is a crucial aspect within any organizational system. Scientists have given different definitions of organizational culture. Below are some of the definitions:

1. Organizational culture is the collective perception that individuals hold about the organization. Organizational culture is something that exists in the organization, not in individuals. It is the special qualities that are assigned to the organization and it expresses the common and enduring traits that set an organization apart from others (Guderzi, 2002).
2. Adgar Shain¹: Organizational culture of manners, customs and ethics (Mahmoudi, 2005).
3. Hough Astd ²: Collective planning of organizational culture (Guderzi, 2002).
4. William Ochi³: Organizational culture is characterized as a collection of symbols, rituals and myths that convey its basic beliefs to its employees (Aghajani and Kajouri, 2004).
5. French⁴: Defines organizational culture as the hidden aspects of the organization and some others showcase both the formal and informal organization as organizational culture (Mir Sepasi, 1998, <https://tinyurl.com/mr32ppej>).

3. The Importance of Culture

¹ Adgarshain

² Hough Astd

³ William ouchi

⁴ French

Organizational culture as a constituent of culture is a turning point where the philosophy of the organization affects the issues of the organization and becomes the meeting place of ethics and the organization because within the organizational culture, individuals hold certain beliefs.

Organizations are like individuals with personality, and therefore the personality of the organization is called the organization culture. To put it differently, the relation of culture to the organization is like personality to the individual; in general, the organizational culture is a perception that people have of the organization (Aghajani and Kajuri, 2004). A strong culture is an organizational culture characterized by a high level of commitment among its members to the prevailing values and their level of commitment is strong (Guderzi, 2002). Today, there is a belief that individuals represent the most crucial resource and wealth of a company, influencing the approach to their management directly is not through computer reports, but by following cultural threads, you can reach this goal. A strong culture is an empowering lever for guiding behavior and assists employees in enhancing their job performance across at least two dimensions:

- A. A strong culture is a set of informal guidelines that dictate the typical behavior of individuals most of the time.
- B. A robust culture fosters a sense of fulfillment and satisfaction among individuals regarding their actions, so they will have more desire to work.

Successful organizations have powerful cultures that attract, retain and reward individuals who play a role in achieving organizational goals. One of the crucial responsibilities of management is shaping cultural values. Effective managers use symbols, beliefs, manners, and cultural customs to achieve goals, motivate people, and ensure their long-term loyalty (Shakari, 2002).

4. Organizational Culture Framework

Organizational culture is a unique pattern of common assumptions, values and norms that forms social activities, language, symbols and operations of organizations. To get to know the organizational culture better, it is better to know its framework first:

1. Common assumptions: Common assumptions include the following
 - A. People's thoughts and beliefs about themselves and others (focusing on their own interests versus public interests).
 - B. Members' relations with each other (competition or cooperation).

- C. Organizational relations with the environment (overcoming the environment, participation and the like).
 - D. Time movement (future, present and past).
2. Common values: A value is a basic belief about issues that have significant and significant importance for individuals and is stable.
 3. Common socialization: a systematic process according to which the organization introduces new members into its organizational culture.
 4. Common symbols: anything observable that can serve as an indication of a shared, common value. or a special meaning.
 5. Common language: a common system of sounds, written signs or signs used to convey special meanings between members.
 6. Common stories: stories, heroes' stories and common legends in an organizational culture.
 7. Joint operations: ceremony and outward etiquette, special and formal activities designed to create strong feelings and do things as a special event (Shakari, 2002).

5. The Main Characteristics of the Culture

When we look at the characteristics of culture, it is useful to mention some points. According to this:

1. Acquired: The acquired nature of culture means that culture is not an inherited category, but acquired. Culture is acquired through learning and experience.
2. Sharing: Sharing refers to the social nature of culture because culture is completely collective and people have a share in it. Every individual, as a member of a group, organization, or society, actively engages in the cultural context.
3. Transferability: The transferability of culture refers to the fact that cultural elements are passed down from one generation to the next.
4. Adaptability: Adaptability means that human culture depends on change or adaptation. Just like the genetic adaptation of animals during forced adaptation to the environment. Morgan 2002 explains culture as a natural and living activity among all people and re-creating the world in their lives.

The production of organizational culture is a framework for the use of work understanding and creates research for the advancement of an effective organization. Establishing its culture is a problem, but organizational culture is easily identifiable because it has a decisive effect on performance and also has a long-term effect (Mohanty & Rath, 2012). Factors and components of organizational culture Organizational culture consist of two main layers. The first layer

(values and beliefs) is a layer that shows tangible symbols such as clothing, behavior, ceremonies, rituals, myths and legends. Another layer of the organizational culture is the basic layer or the basic background of the organizational culture, which refers to the infrastructure values, assumptions, beliefs and thought processes of individuals and organizational groups. This layer actually constitutes the true culture of the organization. The forming factors of the organization's culture are: norms, traditions, rituals and assumptions. Edgar Schein⁵ also mentions three levels for organizational culture:

1. Products and innovations: this level includes all the phenomena that a person can see, hear and feel. Like language, technology, ceremony, stories, celebrations, this level is observable.
2. Supporting values: It includes values about how things should be done or what reaction a person should show and behave in a new situation, this level is less visible.
3. Basic assumptions: Which includes beliefs about how an organization should work, for example, decision-making in an organization is done by people who have great ideas or by people who are in a high rank, this level is not visible (Mohanty & Rath, 2012).

6. Information technology

Information technology is much broader and more ambiguous than computer science and refers to the production, storage and distribution of information in large organizations. Information technology consists of two words: "information" and "technology." Technology means systematic application of scientific information and other systematic knowledge to perform scientific tasks. Technology can be defined as all the knowledge and systems used in making products and providing services (Fathiyan and Mahdavi, 2016). According to the definition of the American Institute of Information⁶ Technology, specifically information technology encompasses the examination, design, development, implementation, support, or management of computer-based information systems, with a particular focus on application software and computer hardware.

In summary, information technology involves the utilization of electronic computers and computer software for the conversion, storage, protection, and processing of data, send and receive information safely. Recently, it has become common to use a term that includes electronic communication, and for this reason, people tend to use the term ICT (Information and Communication Technology).

⁵ Edgar Schein (Mohanty & Rath, 2012).

⁶ ITAA

7. The Value of Information and Communication Technology

Its information, communications and technologies have two important tasks: creation, preparation, distribution and example of presentation and delivery of information within the organization, as well as gathering and transferring information between and outside the organization of the activity other side organizations or intermediaries and even competitors in different dimensions and in international and global activities in such a way that the information and communication technology is designed in an accurate and appropriate way and is compatible with the goals and missions of the organization's programs; It is used as a very powerful lever for the growth and promotion of the organization's employees. But whenever this planning is not done correctly, without a doubt, it will involve a heavy and pointless cost that has no economic justification. Correct planning of information and communication technology has the following advantages for strategic management decision-making:

1. It provides necessary information about production activities and services at the discretion of users, applicants, managers and customers.
2. It improves the quality and producing a quantity of products and services based on the demands and needs of applicants and customers.
3. Increase the productivity of employees and users in the organization.
4. Implementation strategies facilitate and optimize the management of assets and the control of existing information and assets of the organization.
5. Provides them with the necessary information for performing management duties, including decision-making, planning, and supervision (Momeni, 2002).
6. Identifies and determines the relative advantage of providing services and producing goods for management.
7. It clarifies the reasonable distribution methods of services and goods in complicated domestic and international routes.
8. Determines the reasons for the increase in production and service costs and unreasonable costs.
9. Financial policies and optimal use of liquidity and other resources of the organization help in strategic management (Momeni, 2002).

8. Limitation of Information and Communication Activities

With precision in the scope of information and communication activities in organizations, this result is obtained that information technology has played a crucial and impactful role in all of the following cases:

1. Providing information on a broad level.
2. Transferring information and establishing communication to encourage more people to engage in the activities and increase their awareness.
3. Providing necessary information to solve daily issues and work problems and providing information for strategic management and decision-making.
4. Transferring information in extensive discussions and conversations with the cooperation of specialists and experts.
5. Delegation of discretion along with control and creation of executive responsibilities.
6. Carrying out remote negotiations with specialists, users and experts.
7. Shaping the intellectual dimensions of others by providing wide and universal databases.
8. Making decisions and determining macro policies to achieve goals.
9. Providing reports with technical and financial content, as well as critical events and factors for managers' success;
10. Control and inspection of all executive activities of the organization.
11. Solving internal and external problems.
12. Establishing discipline in work and activities and coordination between tasks and executive plans;
13. Establishing a relationship with the functional world of management at all high, middle, operational levels (same level).

9. How Information Technology Affects the Structure of Leadership or Organization

A consequence of information technology is the establishment of a novel organizational structure, which is known as "T-shaped" organization. Coordination between employees is done through electronic communication, and group software is used for coordination. The employees' supervision is based on trust and the managers try to delegate more authority. As a result, decision making is done at a low level. The information system provides information at a level of the organization where decision making is done. This causes the organization to respond faster to its environment, competitors and customers. Also, information technology enables employees to execute their work responsibilities outside the physical confines of the organization.

The technological infrastructure of the organization includes networks and computers, a communication network that connects the employees of the organization to each other in the form of an internal network (Sarafizadeh, 2004).

10. The Relationship between Technology and Innovation

Often, before an innovation in technology is done, new organizational patterns must be created or come out of the hearts of previous organizations. Of course, every innovation is the result of interaction with other factors.

11. The Relationship between Technology and Culture

The function of technology concerning culture is to blame in several cases:

1. Lack of planning for the use of technology: In this scenario, technology comes in and confronts the organizational culture and leaves its effects without being controlled. For example, you can learn from the change of shopping culture in the American society after the invention of the car starter and the acceptance of more women from driving. Technology remains like a Trojan horse that enters a city and the soldiers of the hidden culture take over the city and shape the culture out of control.
2. Planning to change or create a culture to use technology: In this case, the Trojan horse does not enter by itself, but the managers make it, hide suitable soldiers in it and enter the city. In this case, changes will be made under control and according to the plan, although it is possible that changes outside of control will also occur. The soldiers that the administrators hide in this Trojan horse are:
 - Vision and strategy.
 - Gaining the trust of the employees and implementing the vision and strategy in the organization's tripod.
 - Use of technological tools to harmonize employees.
 - Aligning the values of individuals with the values of the organization.
 - Change and optimization of business processes.
 - Using other methods such as TQM etc.
3. Using technology to create the desired cultural changes: Over a period of time, it is essential to take actions beyond a single comprehensive program to create or change a special culture. Technology and its tools can help effectively at this time. By using a special technology and putting effort into it, cultural change is achieved. For example, you can use office automation to create a culture of order and speed in office relations and bring the organization out of stagnation (Manian, Khani and Prazmi, 2013).

Conclusion

Now you have to see how information and communication technologies guide social life and in which direction. It is certain that technologies save human beings from tiring physical

work and physical exhaustion. But computers also have other benefits, the first is that the information and an effective communication structure enables us to carry out tasks more efficiently and with a better foundation, and the second is that computers and information networks lead to liberation and liberating information from the clutches of clauses and limitations It becomes personal and specialized. Considering that the organizational culture encompasses the system of values and beliefs within an entity, manners and customs common among the organization employees and it regulates the interactions of different parts, therefore it is an effective tool in the use of information technology. In organizations lacking a culture of utilizing information and communication technology, repercussions may arise, such as supervisor dissatisfaction, high costs, long work flow, etc. Research indicates that a significant portion of inefficiencies in an organization stem from the underutilization of information and communication technology, because the daily growth of information helps organizations to work successfully in the field of competition. The absence of an organizational culture that embraces the use of information and communication technology stands out as a primary obstacle to its adoption. Organizational leadership culture plays an important role in the use of information and communication technology due to its strong influence on the behavior and performance of organizational members. Therefore, information and communication technology represent one of the most crucial issues of the current era in all societies, so its use in organizations to coordinate with the international community is considered necessary.

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