



The impact of information technology on workforce management

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Article	Abstract
<p>Article history: Received: 7th July 2021 Received in revised form: 13th July 2021 Accepted: 15th July 2021</p> <p>Keywords: Labor Employment, Production of New Jobs and Labor Relocation, Labor Knowledge, Virtual Organizations, Information Technology</p>	<p>Technology is the application of science in the field of applied techniques and skills and converts natural resources, capital and manpower into goods and services. Technology can be considered a combination of hardware and software, the software itself has three components: human software, information software, and organization software. Information software or information technology is one of the important components that has attracted the attention of many countries in the last two decades. Because in the present age, information technology is considered a powerful platform and tool that can have tremendous economic, social, cultural, and political effects. The present article is a summary of a study that examines some of the above effects: "The impact of information technology on the structure of the workforce, the structure of jobs and organizational structure." The composition of the workforce producing new jobs in the organizational structure and entrepreneurship has been analyzed.</p>

1. Introduction

The purpose of this article is to provide some methods for companies that want to adapt to the changes ahead - having a dynamic insight into the environment and reacting quickly to existing and emerging challenges can help today's companies survive. The purpose of this article is to examine the positive and negative effects of the Internet and information technology in relation to human resource management, especially finding new employees, motivating and leading them. It also discusses the expected results from the use of the Internet and information technology in the future and what is likely to be achieved by managing and exploiting the changes that are taking place [1].

2. The effect of the Internet and information technology

The number of Internet users in 2000 was over 30 million (this number is projected to reach about four billion by 2020). One-third of the US economy grew between 1996 and 2012, directly to expansion. The Internet is relevant. There are currently more than 60 billion web pages and more than 85 million registered DAMAINS [2]. These facts show more than anything else that the Internet has had a significant impact on how, why, and when and where people work. The greatest impact of the Internet and information technology has been on the educated, skilled and interested in success, especially those from this group who deal with information and communication technology on a regular basis. Since educated, skilled, and successful people are working in important positions in the organizational hierarchy and therefore have a greater impact on the overall success of the organization, we should also focus our attention on this group of employees through the Internet [3]. Research in the United States (on 500 websites of international companies that were among the most profitable companies in 2000) shows that 99% of these companies use the Internet extensively to search for new employees. Also, a comparison of available statistical data for the years 1998 to 2000 shows that in 1998, 29% of these companies used the Internet to hire [4]. The main advantages of using the internet in hiring new employees are:

Spend less money on hiring new employees (in cases such as: saving applications, postage, data processing costs, etc.)

Develop a faster recruitment process: According to research, this period is reduced to less than 12 days from the time a new employee is needed to the time a new employee starts working in the organization.

Ability to attract more and more candidates: The initiative of publishing an application on the website, can attract even those who are not actively looking for a new job. In addition to the company website that is looking for a new employee, third party websites are also important. These websites and places serve as arrangements for related appointments, but also a "third place for labor exchange", not only as most of them publish news, job search conditions, personal information of job seekers, etc. It acts as a recruitment mechanism and reassures companies that their call for new workforce has been met [5].

3. Using the Internet in new ways of working

Through the development of the Internet and (more broadly) the development of information and communication technology (ICT) - with the complete fluctuations that have come with the last two decades - there are newer and different possibilities for doing the work and structuring of organizations. This term is synonymous with the various terms used for "virtual work". Virtual work: Many definitions of and ... Because "e-cottages" "Spatial flexibility" "Virtual communication", "Doing work remotely". For example, it is not alone, so it seems that providing a few brief definitions for that "virtual work" of the purpose of this article is sufficient [6].

As stated in the European Commission's 2000 Annual Report, virtual work has a broad meaning, with the common denominator of all its definitions being "the use of computers and virtual communications to bring about geographical change in what is accepted."

Virtual work means that with the help of information technology, we try to direct the work to the employees, instead of moving the employees to the work. Virtual work has many benefits that can be summarized and classified from three perspectives: individual, organizational, macro-social. From an organizational point of view, virtual communication has benefits such as high productivity, doing more work than before, and reducing absenteeism. Because employees are more satisfied and their work ethic is increased, they are less likely to be looking for another job and organizations are experiencing lower rates of return [7].

According to authors, virtual work can reduce employee fluctuations by up to 50 to 80 percent. The use of virtual work enables organizations to create an extensive network of communication between employees, even though the geographical constraints for the organization have been reduced. In addition, the costs of (real estate) assets such as real estate are reduced as the location needs for the organization are reduced. Customer service is also improved due to flexible working hours. According to a survey, 18% of Dutch employees, 12% of American employees and 5% of English and German employees regularly use virtual work [8].

In addition, the percentage of users of virtual workflows is increasing at a rate of 10 to 15 percent in all developed countries in terms of information and communication technology.

According to another report, out of 50% of companies that have the technical facilities and opportunities for virtual work, only 29% of them still use this method.

It is estimated that of the total workforce population calculated in these companies, only 0% of full-time employees can use virtual work correctly and appropriately, as their counterparts in the Netherlands and the United States do. Put.

4. Project work with partial contract (subcontract)

According to economic theories, there are two main reasons for investing in human resources in organizations

1. Cost reduction, which is achieved through the division of labor.
2. The need to manage the work that is divided among a large number of employees.

Today, information and communication technology has led to the formation of an efficient community of people with similar attachments and complementary skills and their collaboration in short or long-term projects, without the need for a formal department in general, the use of advanced information technology To make the company's restrictions ambiguous, so that ". Be a company to the extent that it can be imagined that there are no boundaries for the company (virtual organizations). At the same time, the functions of the company are increasingly transformed into complex profit centers, profit centers, small companies with small contracts. As this transformation takes place, the integration of the organization's downsizing and leveling activities, according to Charles Hindi, leads us to a community of twenty to eighty employees, a small number of whom are employed by the organization [9].

5. The effect of information and communication technology on the organization

Information and communication technology and the Internet have affected not only IT professionals and employees who use information technology in their work environment on a regular basis, but also the organization environment, self-organization and the social world in general. . Managers need to be aware of these changes and work to understand and adapt appropriately to them. One can expect more individualism to emerge in the future. This means that there are special needs for each employee and these needs are different for other

employees. The same things that motivate smart employees, also motivate volunteers to work. We know that start-up volunteers are more satisfied with their work than employees who have been paid for some time. Most of all, they need to throw themselves into the fire and water in order to understand and believe in the mission of the organization and to receive continuous training to see the results [10].

In this regard, the point is that different groups in the working population should be managed differently and the same groups should be managed differently at different times. It is obvious that the rewarded behavior of individuals is not equally responsive to money, position or other tangible benefits [11]. Moreover, the authoritarian leadership style is inappropriate due to the fact that the employees, who are gaining more and more knowledge every day, do not want to be ruled by a dictator. Especially if such employees can easily change jobs. According to the results of a research, dissatisfaction with the manager is the main reason for changing jobs. Using any leadership style other than authoritarian style can be a big challenge for all managers. Because the manager has to rely on leadership based on the skills and personality traits of the people (and this is difficult). On the one hand, the contradiction between the fact that a manager's work and the results increasingly depend on his subordinates, and on the other hand, the enormous amount of internal work interaction (project management with a team of different and skilled professionals) and power Less commanding and influencing subordinates, along with the power that arises from the situation, can be discouraging [12]. Thus, the manager's personality will become a lever to motivate employees to achieve common organizational goals. At first, the manager has to motivate the employees properly, so that they can do their job without the need for supervision. Second, he must provide good working conditions and support professionals in each field, as they have not yet acquired the necessary competencies (for example: management skills such as planning and organizing). That group of employees is critical to the success of the company with sufficient knowledge. Even if we consider that the decisions assigned to employees are not sustainable enough to have certain results, or that the decisions made by them are so difficult that they give up, (however) in more than a third of such decisions some results are obtained [13].

6. Change the way employee's control

Nowadays, control is less important by constantly observing how employees work. Constant control will reduce employee motivation because:

1- Due to the fact that control in the traditional way is impossible or at least very difficult, how can there be direct control over virtual work?

2- Because of the employees who have a high demand for self-management of their duties.

Therefore, the proposed method for controlling employees is to match the final results of each plan and determine the extent to which the goals have been achieved in accordance with the results of the plan. It is especially important that these goals are set objectively. Therefore, it can be said that it is undeniable that employees have enough motivation to accomplish exhausting goals [14].

7. Changing employee motivation

Differences between employees and their different needs are likely to increase in the future. If the company wants to meet these needs with an integrated incentive plan, the plan must be very broad. Providing such a plan would be very expensive and ineffective, so the company offers a variety of benefits for each person, some of whom will find some of these benefits less important and some more important. The main purpose of this type of incentive system is for each employee to set his own personal goal that he wants enough (insists on). The employee must be highly motivated to meet this (specific) goal, not because of the company's goals or supervisors' oversight, but because of his or her self-interest. Ensure compliance with company goals [15].

8. Changes in information management and knowledge utilization

More effective management of organizational knowledge and its application in the labor market is the ultimate goal of those who are looking for competitive advantages in the market. Using the personal knowledge of employees is much easier than exploiting all the knowledge that is in the minds of all employees of the organization [16]. According to a study conducted in the United States, companies use only 20% of the knowledge in their employees. The hardware and software solutions of the current situation are the use of knowledge. The main obstacles in this direction, one related to the concept of knowledge and the other related to individuals in how to access inventory knowledge, which is done with the help of information technology and in the best way to share, store and transfer knowledge throughout the organization. According to a 28-month study of more than 1,000 senior executives from international companies, better

business performance results not only from information technology, but also from the proper management of information and the management of people in the organization [17].

9. Conclusion

The main purpose of this article is to introduce some changes that are caused by information and communication technology and the Internet in the development of employees and make possible new ways of working, such as project work with contractors and virtual employees. Although the scope of this article is very wide and the importance of the topic is very high, but the Internet and information and communication technology are not the only factors affecting the labor market and employee management that are discussed here.

However, some of the most important innovations in this field and possible ways of adapting (synchronizing) these changes with organizational structure, leadership style and employee motivation style, and advanced information management and knowledge utilization, have been discussed.

These adaptations are not the only possible cases. The truth is that the most important of these adaptations are those that are used to find and take advantage of new business opportunities in an environment that is rapidly and increasingly changing, and this is the most important principle that every senior manager should seek it.

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