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THE IMPORTANCE OF ERGONOMICS IN HUMAN RESOURCES MANAGEMENT

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The role of human resources management is to have competent and motivated staff for maximum results and this objective is supported by the application of management policies and strategies at the organizational level. The importance of ergonomics in human resource management has been specified in numerous presentations of researchers, especially in the military field. This article presents some aspects associated with human resource management and the positive effects that ergonomics has in optimizing working conditions. It also describes the correspondence between increasing the performance of the organization and ergonomic interventions in the interaction between technique/equipment and staff.

Keywords: ergonomics; human resources management.

The efficiency of human resources management is a determining factor in increasing the productivity of the organization, but this in turn is conditioned on the one hand by the skills and abilities of the staff and, on the other hand, by the ergonomic design of the equipment used by the human resource.

Employee competencies and skills are key elements used by organizations in implementing long-term human resource management strategies. In fact, all activities in the workplace are based on the skills of employees. Therefore, one of the most challenging tasks of human resource management is to develop the skills of employees so as to achieve maximum efficiency[1].

Ergonomics includes several areas, being oriented to the anthropometric and biomechanical characteristics of man, mental processes, perception, memory, optimization of socio-technical systems, policies and processes and organizational structures[2].

These aspects of ergonomics are oriented towards human resource management and have a special importance in decision-making at the organizational level, with considerable effects in stimulating employee morale and implicitly in increasing productivity at work.

A device that meets the ergonomic characteristics facilitates the interaction between man and machine, thus obtaining remarkable results. Improper use of equipment at work can lead in time not only to decreased individual productivity, but also to the occurrence of absenteeism or health problems of employees. Recently, attention has been focused on the relationship between the implementation of ergonomic principles in the workplace and the quality of the product or service.

Efficient human resource management is extremely important in the company's ability to maintain its competitive advantage at a high level as well as to adapt to the continuous evolution of technological requirements. Investing in people has proven to be the surest way to ensure the survival of an organization or to ensure its competitiveness and future, which has led Naisbitt and Aburdene[3] to say that: "In the new information society, human capital has replaced financial capital, as strategic resource".

When we refer to human resources management in the traditional vision, we think of recruitment, selection, staff motivation, but also staff retention. There is also the concept of human resource management based on skills that focuses especially on the individual and less on the workplace. Competence is the determining factor for human resources management in the recruitment, selection and performance processes of the organization. Human resources contribute to the achievement of the organization's objectives by qualifying staff, performing functions and performing tasks. Moreover, the notion of human capital refers to the knowledge and skills that a person has, being useful to solve problems that arise in the workplace, thus adding value to the organization[4].

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The goal of human resource management is to achieve maximum performance and maintain the competitive advantage in the market given the constant and rapid changes in all areas. As a result, in the contemporary vision, in addition to the traditional role, human resources management is also concerned with supporting staff in all activities, whether it refers to working conditions, security, comfort and even the general well-being of employees. Now all the activities related to the personnel and the performance of the organization fall within the attributions of the human resources management, and this is possible through the *ergonomic interventions*. Therefore, the importance of ergonomics in human resource management is observed in the way of organizing activities, the quality of equipment, security and working conditions that bring comfort and motivate staff.

Ergonomic interventions at the level of human resources can be considered primary measures to improve results and they can lead to:

- performance that represents the economic goal of ergonomics, constantly pursued, whose presence inevitably and non-stop stimulates the process and ensures the competitive and sustainable success of any modern organization;
- improving human well-being which can be considered the social goal of ergonomics because well-being is associated with safety, health and comfort, which are particularly important for employees.

Ergonomics is directly connected to human resource management. Even if at the beginning it referred more to production management, in recent decades the ergonomic principles refer to all working conditions that are provided to employees. The ergonomic aspects of human resource management are related to the adaptation of work to human body, namely to the physical and mental characteristics so as to obtain optimal working conditions not only for performance, but also for employee comfort.

Ergonomics has seen a continuous expansion in all areas, especially in recent decades, helping to develop the protection, safety and general well-being of employees, all resulting in the motivation and performance of employees and, consequently, the efficiency of company results.

In recent decades, it has been observed that not paying special attention to the working conditions of staff leads to poor management with repercussions on the final results of the organization.

Although it aims to avoid accidents and occupational diseases, ergonomics should not be confused with health and safety at work, the objectives of ergonomics being much more complex, for example[5]:

- improving working conditions so that they are a source of comfort and satisfaction which leads to increased staff motivation;
- technological development that leads to the efficiency of the activity carried out at the workplace;
- the main objective is to optimize the relationship between man - technique - work environment.

Achieving ergonomic goals at work has the following advantages[6]:

- staff motivation;
- development of socio-psychological relationships
- increase performance and productivity.

A good application of ergonomics increases not only the quality of work performed at work, but also the comfort of staff which leads to motivation and increased efficiency.

Productivity increases with the use of ergonomic principles and the adaptation of working conditions to the human body, so that physical wear and tear is reduced and staff efficiency is increased. And, last but not least, an ergonomic culture of the organization is developing, ensuring employees' safety and trust.

The military environment has always been a technological one. For this reason, the relationship between the military and combat technique is of special importance for military performance.

This approach fully justifies the need to pay special attention to ergonomics, especially when the issue of the purchase of military equipment and apparatus is raised, in order to ensure maximum efficiency in their use.

A concrete case in this regard was reported in the Australian military when the company producing military equipment did not consider the application of ergonomic principles to the needs of the military. Although the equipment met the security requirements, it was too heavy and bulky, considerably reducing the military's performance[7].

Another example[8] refers to the design of the ground control station interface of unmanned aircraft. The interface has a multitude of aspects to consider such as: shape, color, modes of operation. Although all these details are well established and

the operators are trained to a high level, there were still problems of an ergonomic nature, which were identified, namely:

- the existence of red graphics on a blue background;
- control lever that was not adapted to the shape of the hand;
- extremely close placement of two switches, one for the light and the other for the energy source.

In order to obtain maximum results after the implementation of the ergonomic principles, it is essential to involve the staff that benefits from the new working conditions; through the acquired feedback, working conditions or equipment with significant benefits at organizational level can be developed.

The performance of socio-technical systems depends decisively on the interactions of the components (military, combat technique) with social system components (working conditions, safety and protection factors, activity planning, performance monitoring, training and evaluation of military personnel).

The ergonomic realization of the combat technique involves the approach of the entire military system – combat technique – environment of action, because only the knowledge of the characteristics of the combat technique in close correlation with the other two components of the system can lead to performance. If this necessity is disregarded, the combat technique will produce disturbances, frequent disturbances within the system, which will negatively influence the execution of missions by the military.

Based on these considerations, the ergonomic study of the combat technique considers all three components of the system in their interaction. Through this interaction, the components of the military system – combat technique – environment of action, a common goal is achieved, which is the very raison d'être of the system. The effectiveness of the whole system depends on the quality of the information received by the military and the combat technique, on the way the system acts as a result of the information received and on the speed with which the main functions of the military system-combat technique-action environment are realized.

Although ergonomics aims to study the interaction between man and the work environment, its role is much broader within the organization. Ergonomics is not limited to improving the working conditions of staff, but also takes into account the general well-being of employees so that they are motivated and work to their full potential to achieve optimal results[9].

The purpose of ergonomics is to increase productivity, but also to maintain the well-being of employees at work.

The implementation of ergonomic aspects at the level of human resources management has led to the improvement of working conditions having a positive impact on employees and their performance.

Conclusions

Improper use of means of work leads not only to decreased employee productivity, but it can also take other forms, such as frequent absenteeism, health problems, etc. Only in recent years has the focus been on examining the relationship between the implementation of ergonomics in the workplace and the quality of the product/service provided by the organization.

In conclusion, ergonomics is essential when it comes to employee comfort and efficiency. The implementation of ergonomic principles leads to ease of use of equipment and contributes to the safety and comfort of staff.

Therefore, the importance of ergonomics in human resource management can be seen by achieving concordance between man and his work environment, so results can be achieved such as performance, quality, reliability, on the one hand, and well-being, safety and health, staff trust on the other hand.

NOTES:

1 Łukasz Sienkiewicz, Anna Jawor-Joniewicz, Barbara Sajkiewicz, Katarzyna Trawińska-Konador, Krzysztof Podwójcic, *Competency-based human resources management. The lifelong learning perspective*, Educational Research Institute Warszawa, 2014, p. 5, http://researchgate.net/publication/313791834_competency_based_human_resources_management_The_lifelong_learning_perspective, accessed on 15.05.2020.

2 https://iea.cc/what-is-ergonomics/ accessed on 15.05.2020.

3 J. Naisbitt, P. Aburdene, *Re-Inventing the Corporation: Transforming Your Job and Your Company for the New Information Society*, Little Brown & Co,1985, p. 36.

4 B. Binczycki, "Ergonomics in Human Resources Management", *7th International Quality Conference*, University of Kragujevac, Kragujevac, 2013, pp. 263-266.

5 *Ibidem.*

6 C. Vijayakumar, T. Vignesha, A. Murugesan, N. Bavana, "Effect of Erroneous In Ergonomics and Its Remedies to Workers in Industries – A Literature Survey", *International Journal on Recent and Innovation Trends in Computing and Communication*, vol. 3, no. 1, January 2015, pp. 368-377.

7 *** *Proceedings of the AHFE 2020 Virtual Conference on Ergonomics in Design*, USA, July 16-20, 2020, pp. 17-23.

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