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Work Safety – Concern of Human Resources Management?

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Abstract: Productivity, market position, profitability, return of investment, and so on, are terms which are presenting the success of an organisation, success that has as main element the human factor. Human resources are the engaged efforts, knowledge, skills and abilities, through which the people contribute to an organised work as a part of work exchange and which are used by management to fulfil the tasks and to help the organisation to continue its existence. In this respect, the organisation must provide the necessary environment, tools and instruments to the employees in order to assure their complete involvement into the organisation's activity. The present paper is proposing to analyse the implementation of ergonomic approach within the organisations from Romania, as an important part of the human resources management by satisfying the basic need of health and safety at work.

Key-Words: ergonomics, work safety, work security, employee, human resources management, training.

1 Introduction

In each person's life work is a way of asserting his intellectual achievement and physical qualities, knowledge, skills, experience, the conditions for self-realisation, self-education, self-assessment, means for creation of the material and spiritual world, personal well-being, knowledge of the surrounding world and professional communication, etc. Work is an active process in achieving the proposed goals through their implementation, making appropriate efforts to overcome physical and mental difficulties, personal mobilization of physical, psychological and professional resources but also functional resources of the body and psyche. The nature of the activity within the work, on the one hand, and individual capacities and possibilities of the worker on the wide side, results

in a wide range of normal characters that are in an interrelationship and determines the continuous development relating to changes and confirmation as a professional.

The particularities of any activity, the purpose, the content and work product, together with the work subject determines his professional features that reflects the activity specificity, in particular, characterizing them by merging the subject with occupation, his individuality within the activity, work individuality and safety, and other aspects.

The permanent complication of the professional activity causes new demands not only related to physical characteristics, but especially mental, which are needed because of:

- Potential reduction of physical labour and increased intellectual activity;

- Replacing unskilled labour with more skilled one and the growth of the profession of operator; mechanization or automation of the elements or even entire process, linked to need for control, management, servicing functions aimed at human interference with the technological process, the objectives and work of others;

- Increasing the role of intellectual activity linked to cognitive and psychomotor sphere charge, information processing in the condition of its deficit or surplus (surplus, outside influence, lack of time, uncertainty of work situations and their end, the determining role and responsibility for decisions taken and their outcome, etc.).

- Increasing positive motivation of harmful factors, of high capacity of activity and functionality in unforeseen circumstances;

- A huge variety of assignments not only nominated, but also unnominated, in extreme overdose of information and intense physical activity, the influence of daily stress;

- Increased demands on continuing professional development, periodic qualification and retraining of new techniques.

Thus, the contemporary professional work is characterized usually by work intensification, leading to increased pressure, the negative influence of informational factors, physical, chemical, resulting in lower effectiveness of social defence and compensation - adaptation of mechanisms regulating health and activity of the person, the development of unfavourable functional states, which in turn lead to decreased productivity, quality, reliability and safety, reducing professional activity.

2 Problem Formulation

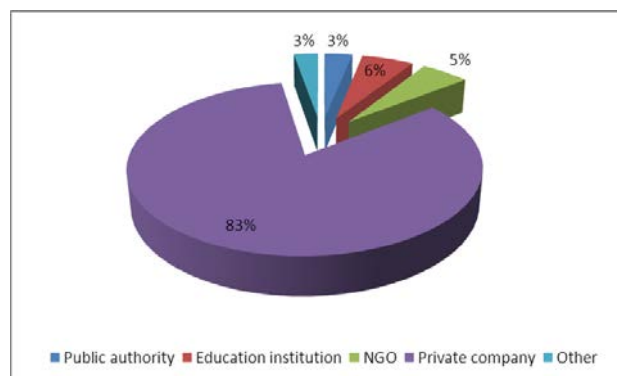
At the end of 2012 was conducted a research regarding the implementation of ergonomic aspects in Romania, applying a questionnaire on 444 organisations from the North-Eastern Region of the country. From the total number of 444 respondents, the majority of 83% were representatives of private companies (as presented in figure no.1). Most of the organisations are conducting their activity in the field of services – 33.33% (as presented in the figure no.2), followed by commerce – 19.82%.

Why we organised the research? The ergonomic concept is not well known and implemented by the organisations from Romania, and the main aspect in this respect is the work health and security.

In Romania, according to the Labour Code, all employers must ensure the health and security conditions of the personnel, so they can work in

proper conditions and at the maximum of their efficiency.

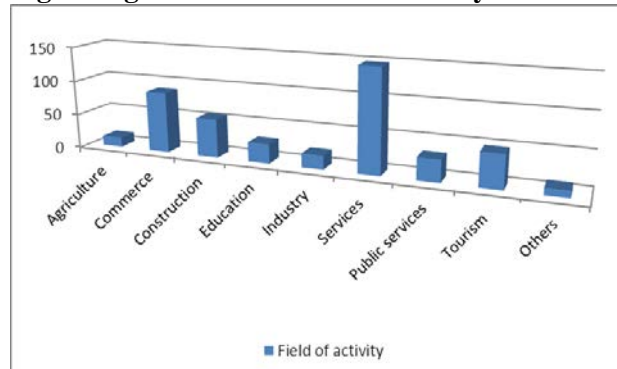
Fig.1. Types of organisations participating in the research



Source: Own projection of the authors

In the case of its responsibilities, the employer must take all the necessary measures to protect the health and security of the employees, inclusive for the prevention of professional risks, information and formation, also for the implementation of work protection and the necessary means. The general principles for prevention are regarding: avoiding risks, evaluation of risks which can be avoided, combating risks at the source, adopting the work to humans (especially protection of jobs and election of equipment and work and protection methods, in order to mitigate the monotone and repetitive work and to reduce its effects on the health), taking into consideration the evolution of technology, planning of prevention, adoption of collective protection measures priority to individual protection measures, instruction of the employees. The rules of work security and health must be stated within the internal regulation of the organisation.

Fig.2. Organisations' sector of activity



Source: Own projection of the authors

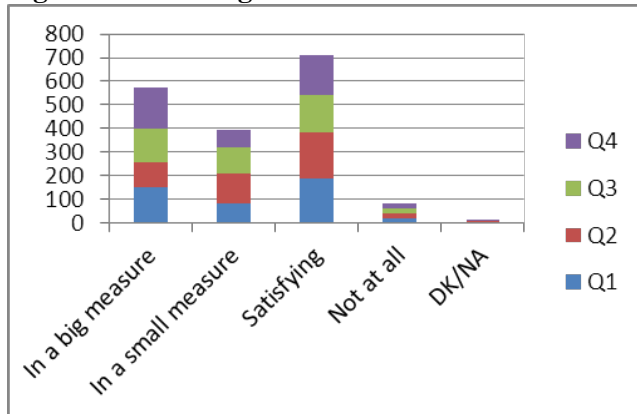
During the research, the organisations' representatives were asked to respond to some

questions concerning the ergonomic approach in their organisation, more exactly:

1) In what measure in your organisation's strategy are included concerns for ergonomics?

2) In elaboration, fundament and implementation of managerial decisions are taken into account the ergonomic aspects of work?

Fig.3. The main ergonomic concerns



Source: Own projection of the authors

3) Jobs design and organisation is performed according to their ergonomic aspects?

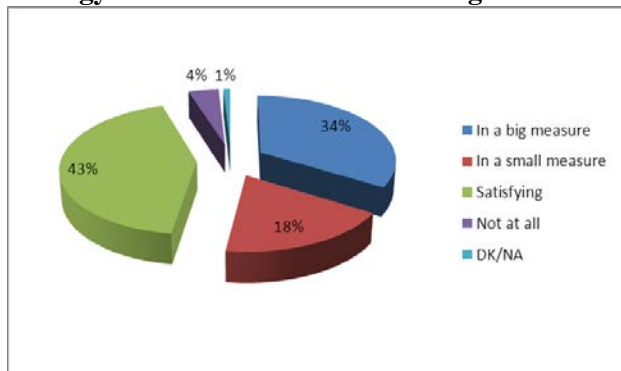
4) Training programs in the field of security (work safety) are appropriate (suitable)?

The responses were not satisfying, because the conclusion is that ergonomics is not an important issue for the organisations, as it should be comparing to the specialists (see figure no. 3).

2.1 Relation to the organisation's strategy

At the first question, we wanted to see if the companies understand the meaning and purposes of ergonomics, in defining and integrating the necessary aspects in the definition of the organisation's strategy (shown in figure no.4).

Fig.4. In what measure in your organisation's strategy are included concerns for ergonomics?



Source: Own projection of the authors

Strategy of the organisation consists of establishing on long term the purposes and objectives of the organisation, adoption of actions and allocation of resources. More exactly, the concept related to our paper is strategic management and the planning function.

As we know, strategic management is based on how the organization will produce and sell products and services. Strategic tactics guide the efforts to make things better than the competition. For example, a manufacturer of household may decide to open a new plant to produce at lower costs. A hotel can initiate a marketing campaign to attract customers who spend more on vacations. Rewards from different sources, including human resources specialists, guide these strategic plans. For the company that opens a new factory, human resource data can help determine whether employees have the skills needed to run the new manufacturing process. For the hotel, human resources data may identify training needs that may result from focusing on a different type of client.

Strategic management practices also require measures to ensure the value that human resources management is offering to the organization. Development and implementation of the strategy is thus an important function that the human resources department shares with other departments within the organization. Human resources management plays such an important role in achieving the global company's strategies. Expectations of the employee related to payment and benefits vary greatly from country to country. Human resources department provides important assistance that guides organizations through adaptation policies and practices to be compatible with the local culture and legislation.

The next important function is the planning and employment which includes the job design and placement of the staff. This function generates information about the tasks to be performed and the knowledge and skills that people must have to perform these tasks. People with special talent are recruited and hired from outside the organization, or promoted from within. Human resources department is responsible for all the planning and recruitment process or in some company acts as an advisory agency, line managers being the ones dealing with the actual hiring.

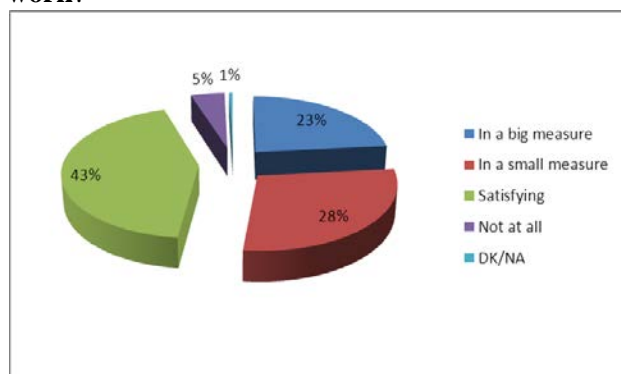
The conclusion is that would be more efficient and realistic for all organisations to take into consideration the human factors and functions, because they are the one supporting and fulfilling the purpose of the organisation. When employees have the proper environment, tools, skills and

motivation, they can help to achieve the goals – that is the mean given by ergonomics to organisation.

2.2 Relation to decision making

Organizing involves making decisions to efficient achievement of plans, allocating the necessary resources. Specifically, the organization is directly related to the labour structure and division of tasks, establishment of hierarchy and subordination relationships. This includes the activity of ensuring the human resources necessary for the goals achievement of the organization.

Fig.5. In elaboration, fundament and implementation of managerial decisions are taken into account the ergonomic aspects of work?



Source: Own projection of the authors

In our research the results are not in the favour of the employees, more exactly, 43.24% of the organisations are very few considering the ergonomic aspects of work in elaboration, fundament and implementation of managerial decisions. The rest of the representatives of the organisations responded *In a big measure* - 23.46% (meaning 150 persons), *In a small measure* – 28.37% (meaning 82 persons) and *Not at all* - 4.50% (meaning 18 persons) (you can observe in figure no. 5).

Management decisions in the field of human resources management are involving organization's actions participating to the knowledge enrichment, know-how, material comfort and social recognition of the work of employees. It is based on improving working conditions and training and assessment personnel policy.

Improving working conditions relates to working times which is a key feature of human resources management: can be seen in a year framework or weekly one. It is equally a feature of ergonomics aimed at ensuring physical and mental health of employees, reducing work fatigue and the problems

based on industrial maladjustment. Development actions should aim at improving employee safety (reduction of accidents). These actions improving the working conditions are part of a human, economic and legal risk management perspective; they enable organizations to reduce any hidden costs.

In 2012, the Ministry of Labour, Family, Social Protection and Elderly from Romania registered 3,686 accidents at the working place, from which 215 persons died. By economic sectors, the situation is presented as follows:

- Building construction – 241 accidents, meaning 6.5% from the total of the accidents from Romania;
- En detail commerce, exception of automobiles and motorbikes – 229 accidents, meaning 6.2% from total;
- Land transport and transport via pipelines - 196 accidents, meaning 5.3% of the total;
- Extraction of upper / lower coal - 163 injured, representing 4.4% of the total;
- En gross commerce, exception of automobiles and motorbikes – 155 accidents, meaning 4.2% from total;
- Industry of metallic construction and metal products, except machinery and equipment - 138 accidents (3.7% of total);
- Manufacture of motor vehicles, trailers and semi-trailers - 133 accidents (3.6% of total).

The frequency index of accidents (number of injuries per 1000 workers) was 0.79‰ for all persons injured, down 8.1% from 2011, when it was 0.86‰.

In 2012 it was recorded a number of 215 fatal accidents, with 35.6% less than in 2011, when 334 people were fatally injured. Frequency index (number of deaths per 1000 workers) was 0.05 ‰ for all people fatalities, down with 28.5% compared to 2011 when it was 0.07 ‰.

The workplaces must be organized to ensure employees safety and health. The employer must conduct continuous monitoring of the condition of materials, equipment and materials used in the work process in order to ensure the health and safety of employees.

The employer is responsible for ensuring the first aid in case of accidents, to create the conditions for fire prevention and evacuation for employees in special situations and in case of imminent danger.

The control organism related to health and safety of workers in Romania is Labour Inspectorate, which is a specialized body of the central public administration, subordinated to the Ministry of Labour, Family, Social Protection and Elderly,

which exercises the authority of the state in labour relations and occupational health and safety.

In accordance with the Convention no. 81 and 129 of the International Labour Organisation was founded and organized Labour Inspectorate under Law no. 108/1999 and the functioning of this institution is governed by the rules of organization and operation approved by Government Decision no. 1377/2009.

Similar labour inspection bodies in the Member States of the European Union Labour Inspection aims to fulfil the legal obligations of employers in labour relations, safety and health, as well as those relating to working conditions, protection of life, limb and health workers and other participants in the work, during work.

The main objectives of the Labour Inspection activities are:

- Enforcement of legal provisions relating to labour relations, occupational health and safety, the protection of employees working in special conditions and legal provisions on social security;
- Informs the competent authorities about the weaknesses in the correct application of the legal provisions in force;
- Provision of information about the most effective means of compliance with labour legislation;
- Technical assistance to employers and employees to prevent occupational risks and social conflicts;
- Initiates proposals to the Ministry to improve existing legislation and developing new legislation in the field.

In its current activities Labour Inspectorate organizes control and awareness campaigns on topics of interest identified at Community level, using for this purpose the inspection methods and tools for training of labour inspectors, similar to those used by labour inspection bodies in the Member States of the European Union.

In the field of health and safety at work, the Labour Inspectorate controls the following aspects:

- Compliance with the requirements of the job, the use of work equipment and personal protective equipment, as well as the provision of safety and / or health at work;
- Workers exposed to specific risks: vibration, noise, electromagnetic fields, chemical agents, carcinogens, artificial optical radiation, etc.;
- Compliance with minimum requirements for temporary or mobile sites for medical treatment on board vessels, surface mining or underground mining drilling for explosive atmospheres and fishing vessels;

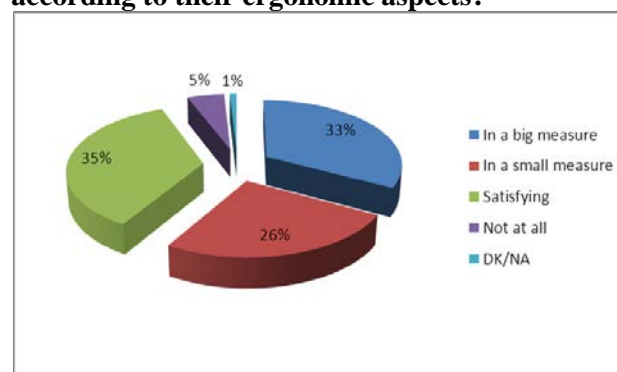
- Protection of young people at work;
- Compliance regime of explosives;
- Compliance regime for plant protection products to control diseases, pests and weeds in agriculture and forestry;
- Compliance with essential health and safety requirements necessary for the marketing and commissioning of electrical equipment for use in low voltage, personal protective equipment, industrial machinery, equipment and protective systems intended for use in potentially explosive atmospheres, the explosives for civil uses and limitation of noise emissions from equipment used outdoors;
- Organization and functioning of the committee of safety and health at work;
- Compliance with legislation on workers' health surveillance, medical examination for employment, adaptability and occupational health inspections;
- How employers have organized activities for first aid in case of injury, and organizing rescue teams and equipment to the extent required in the specific activity or required by law.

2.3 Work performance

The third question is derived from the necessity to understand that each employee has the necessary abilities, skills and knowledge to do a certain job. Depending on design and projection of the working place and work conditions is assured the productivity and efficiency of the workers and the profitability of the organisation.

Achieving a string work operations requires workers to keep working position for several hours. This is related to the sharp increase of importance of static muscle tension load, which does not mean a relief of work activity. Keeping long the work position - work is rarely less tiring, as work accompanying motor activity.

Fig.6. Jobs design and organisation is performed according to their ergonomic aspects?



Source: Own projection of the authors

Static strain, subject to the need to respect work postures, reaches different muscle groups depending on the work structure/type, whether it requires standing or sitting position. Electrophysiological investigations of different muscle groups tonus found that in the standing position, a higher tonic tension is characteristic of spinal muscles and knees and in case of the seating position is observed increasing the biological activity of the chest muscles and waist hip muscles, in case of leg muscles inactivity.

Regarding the higher functional load of the analyser, the motric element in supporting the required position, it is discussed the sharp contraction/reduction of human resistance for static loads. After the static tension, the human capacity in muscle weakness worsens, indicating increased electrical activity of the muscle groups that are resting.

Automating production has significantly decreased the volume of motric activity, but enhancing the volume of muscular tension which consumes not only to support postures, but also to provide levers in supporting and conducting processed details. This is reflected in the working muscles. When working in vertical position, the blood is accumulating in the blood vessels of the legs. The total final of heavy blood muscle circulation is rapid fatigue. Thus, for a tinsmith the decrease in muscle strength of the hand gets at the end of the working day 22%, and for a machinist of a crane - 41.8%.

An important feature of many contemporary professions, is limiting the volume of sudden dynamic tasks related to the move. There is no greater expenditure of energy, not increase pulse, not breathing deepens, physiological costs are not too high, but also economy is a huge cost for the body.

Automation saves the man from the feeling of "muscular joy," as I.P. Pavlov expressed, from the satisfaction of freshness that people physically well trained have.

The division of labour processes primarily physical or intellectual work, recognized in current work physiology, carries a relatively character. First, in performing a physical thing, man in some degree is permanently loaded with intellectual activity. Moreover, in today's professional work processes it decreases the share of physical labour and increases the intellectual work. Secondly, both physical and intellectual man's activity comes along with a determined level of psycho-nervous, emotional tension.

In our daily work, professional work, permanent muscle or physical work were always arranged in dynamic and static work.

The static work, being a main component in supporting position for the man, takes place on account of major and tonic reductions of determined group muscles. Biochemical conditions under "vertical" and "sit" positions are not identical, and neither those physiological changes that are related to static work of man who is standing or sitting (supporting surface, hydro-static tension for the level of blood pressure, blood flow conditions to level of energy losses), so they are not the same. In case of static muscle effort (isometric decrease of muscle) external mechanical work in full physical sense is missing, but in the relationship of the physiological processes that occur, nervo-muscular apparatus, the central nervous system providing support for the state of tension, static work is assessed taking into account the time, during which it develops power reduction.

In the case of static work it increases the change of substances / the metabolism, increases the energy consumption but to a lesser extent than in the case of dynamic work. Energy consumption is not converted into mechanical power, but it loses all in the form of heat.

During dynamic muscle work, unlike static work, the body consumes energy both in support of defined strains of muscles and the mechanical effect of the work. This is why in some cases the dynamic work can be measured in units of mechanical work.

The intellectual work should be reported work-related receipt and processing of information that requires priority straining sensory apparatus, attention, memory, thought processes activation, emotional sphere.

A key symptom of intellectual work can be considered the feature that has as purpose and results of this activity not only material resources but also new knowledge, projects, prototypes of the surrounding world, dispositions, information.

For most professions with intellectual profile activity the fast rhythms, abrupt increase in the volume and diversity of information, shortage of time for taking decisions and personal responsibility are characteristic. All of these are often leading to over- emotional tension and functional disorders. Some characteristics of an intellectual hard work, along with other causes, are leading to illness of cardiovascular system and nervous system and to premature aging.

Intellectual work is accompanied by functional changes in the nervous system, endocrine, cardiovascular and other systems. But unlike

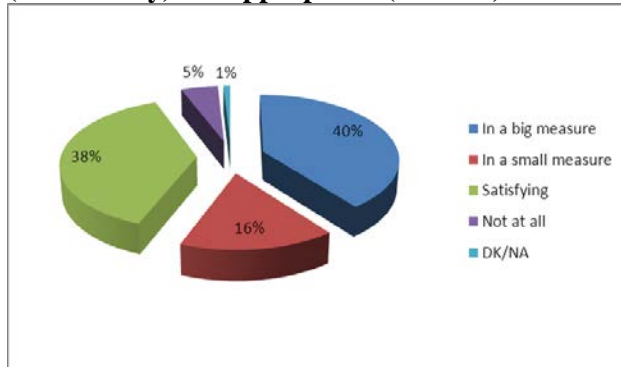
physical work, in the intellectual work these changes are poorly manifested and occur during emotional tension. A key influence on the dynamics of physiological and psychological functions during work is age, which largely determines the ability of workers. Intellectual work increases sharply the amount of information received by heads of institutions and enterprises, collectives, guards, dispatchers and other specialists for processing.

2.4 Training program

Is there training and instruction in the field of health and work safety different than other programs? Besides the productivity and satisfaction of employees and welfare of the organisations, here is included the life of the workers.

A successful training program in the field of ergonomics should be included in the organization’s overall strategic plan for health and stress reduction programs.

Fig.7. Training programs in the field of security (work safety) are appropriate (suitable)?



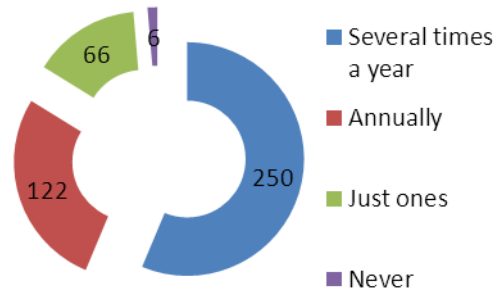
Source: Own projection of the authors

The employer must periodically organise the instruction of its employees in the field of work security and health. As we can see in the following figure, the situation is not according to the Romanian legislation, so that only half of the respondents (56%) are organising training programs in work security and safety few times a year. The number of organisations which never organised such training is very small – only 1%, 15% are organising the training only with the employment and integration of the employee within the organisation. The rest of the respondents, of 28% are assuring this service annually.

The instruction of the employees is not required only in the first day of work, but periodically, depending on the field of the activity, and also to the employees which are changing their job or the place of work, and also after a period of work

interruption, for example bigger than 6 months. Is obvious the fact that we must update the knowledge of the employees regarding the safety and health instruction when the regulation is changed.

Fig.8. How often you train the employees regarding the security and safety standards at work?



Source: Own projection of the authors

This instruction must be made by a representative of the organisation, which has training in the field of work security and health.

Table 1. Specialised personnel

Is there in the organization a person trained to regularly train employees about safety rules and safety at work?	No of responds
Yes	226
No	218

Source: Own projection of the authors

If the employer cannot ensure the security and health of the employees, in all its aspect, he can appeal to other specialised persons/organisations, but is not exempt its responsibility.

The specialists in work safety are recognised by specialists as ergonomists. The job of an ergonomist goes beyond the instruction and supervision of employees regarding the work safety and work conditions. In general, the ergonomist is the person who must project, design and implement the human-engineering systems in regard to improve the human performances, performances which include the health, safety and productivity. Ergonomists apply their skills in business, industry, government and academic fields in order to:

- Increase human productivity, comfort, health and safety, and
- Reduce injuries, illnesses and the likelihood of errors.

In Romania, in order to assure to the personnel the safety rules and safety at work, you need a qualification in the field, and the most recommended are the trainings given by specialised organisation. The legal frame for authorisation of professional formation programs in Romania is regulated by the Government Decision no. 129/2000 regarding the professional formation of adults, with subsequent changes. The methodology is implemented by the National Authority for Qualifications under the coordination of Ministry of Labour, Family, Social Protection and Elderly and Ministry of National Education. The authorisation must be requested by training organisations (private companies, non-governmental organisations, universities, etc. – any organisation legally constituted in Romania) which wish to organise formation programs finalised with qualification or graduation certificates with national and European recognition.

From January 2004, according to the information published by National Authority for Qualifications, in Romania are authorised too types of possible occupations related to work safety: 1) Work Safety Inspector, for which are authorised 25 training programs, and 2) Inspector in health and safety at work, for which are authorised 80 training programs. Most of these programs are for specialisation, and less for initialisation or perfecting. It is considered to be a very small number, comparing to the number of occupied persons from Romania (more than 11 billion persons) and the number of companies which need a specialised employee in this field (more than 420 thousands private companies).

Training programs can change the way people work together, solve problems and work actively to fulfil their role in implementing ergonomics. When is successfully implemented a training program in an office in the field of ergonomics, the result is increased capacity of the worker to change the work environment, to reduce exposure to risk factors at work and promoting healthy employment practices. High quality training in ergonomics incorporates a “participatory” approach in which users, managers, engineers, designers, health professionals, and others are involved. A participatory approach ensures that every employee learns and develops knowledge, skills and motivation in order to provide suggestions for improvement and change within the organization. It is this participatory aspect with training in ergonomics and work design system that forms the basis for creating an improved work environment and continuous change in the company.

An example for best practices in ergonomics, at European level, may be considered Great Britain. In Great Britain ergonomics is studied in universities at different levels: bachelor degree, post graduate courses or as part of another comprehensive course. The courses are different, highlighting specific domains, such as design and health. For example, a course may be suitable for those wishing to work in an industrial environment, other is concentrating on problems which may occur in health systems, such as accidents, work satisfaction, and the third is concentrated on applications of ergonomics, for example, in production, health system and IT industry.

There are two fields which had difficulties, more exactly: 1) it has been a barrier between ergonomics and engineering because of the limited common language and limited perspectives of the disciplines; 2) ergonomic specialisations tend to recruit students with background in science and design. This implies that the formation program is addressing to students with different specialisations as background.

In the past times, the situation was different, because the knowledge gained were narrower. For example, students in science did not have much knowledge in development of products and had difficulties in understanding the integrated nature of production process, while the students from design do not know to manage an experiment. Recommendations include:

- Spread the purpose of education in engineering by including ergonomic modules, in order to underline the relevance of ergonomics for engineers.
- The possibility to choose ergonomics course for students from economics and technology, with accent on their research regarding human factors.
- Post graduate courses in ergonomics (or specialisation trainings) designated to top management.
- Common courses. Besides acting like a scientist, the ergonomist must have the role of a specialised designer and to understand the entire process they support. This involves having not only knowledge in ergonomics, but especially knowledge in applied ergonomics in a certain industry, for example, in products design and automobile design. It can be done through common modules and course. This system brings benefits to punctual problems of a sector at the working place, and also it reduces the interdisciplinary communication problems, which decreases frequently the work collaboration and helps fixation of some common objectives.

- Researchers in training and future teachers must guarantee the status of ergonomics among other sciences and the way of application by other professional.

3 Problem Solution

Ergonomic interventions consist of studies and applicable solutions to problems in the field of working system, including the human factor, studies that must be periodically repeated, intensified and the results must be promoted widely.

Holistic ergonomic concept can lead to innovative solutions (technical and / or organizational) related to work, solutions which are more than suitable for global organisations:

- Worker fatigue and dissatisfaction at work;
- Evaluating work spaces, work methods, organization and equipment;
- Developing productive specifications;
- Productivity problems;
- Design or improve it in their jobs or production equipment;
- Implementation of new technologies, forecasting and organizations addressing potential adverse effects;
- Improve safety;
- Participatory work organization;
- The improvement of training and efficiency.

The ergonomic design of work systems increases the potential of the human factor and allows them flexibility in improving business productivity.

Engineering of human factors continues to be successfully applied in aerospace, healthcare, IT, product design, transportation, training, nuclear and virtual environment, among many others.

Physical ergonomics is important in medicine, particularly in those diagnostics of physiological diseases or conditions such as arthritis. Many ergonomic products are also used or recommended to treat or prevent disorders, and to treat chronic pain related pressure.

In most of the organisations, physical and mental wellbeing of people at work is promoted by the risk management function. As important laws govern workplace health and safety, by far this function requires specialized knowledge on legislation. Human resources department often takes the initiative to develop plans to reduce accidents at work; develops policies to ensure the privacy rights of the employee, and elaborates procedures to ensure that employees wear the suitable protective equipment.

Improvement of work conditions regards the working times, which must be a key feature of

human resources management: can be seen in a year, weekly. It is equally a feature of ergonomics, aimed at ensuring physical and mental health of employees, reducing work fatigue and the problems based on industrial maladjustment. Development actions should aim at improving employees' safety (reduction of accidents). These actions of improving the working conditions should be a part of a human management, economic and legal risk perspectives; they enable organizations to reduce certain hidden costs.

Demographic, technological, and economic changes and political pressures at work have combined to force modern organizations to examine more closely their human capital investments. Substantial investment and costs for training of human resources must be justified in terms of individual improvement, behaviour transfer in the workplace and increase of organizational performance. The evaluation of the training, at a basic level, is met to determine: (a) if there have been some real changes, (b) if the change is attributable to the training program, and (c) if the change is likely to occur again with an another group of individuals.

Why is it necessary to evaluate training activity? In the last year in Romania have been recorded 4,000 work accidents and other cases involving the health and safety of employees. If training should be done properly and at the right time, many negative aspects could be avoided.

In essence, the usefulness of a training program is the validity of information represented indirectly in cost figures, in order to allow comparisons between different types of programs. These utility analyses helps organizations to demonstrate that training expenses are a wise business investment and are well spent. Finally, practitioners working in organizations are particularly concerned about the need to link training activities with return on investment (ROI) for training costs. Thus, if the cost of formal education is very high, the expected production yield is low, and is registered a large movement of employees, so a formal training program may not be the best investment. As organizations continue to determine the value added by human resources activities such as training, it is important that training professionals rely on science training and related principles, guidelines and lessons learned in order to determine if the training was effective in achieving the organizational goals.

Besides training courses in health and security of work, the registered lack of expertise must be covered by post university courses in field of ergonomics, which can be a component of some

larger professional qualifications, such as master studies.

4 Conclusion

Ergonomic Science Foundation seems to be drawn in the context of Greek culture. Many elements show that Greek civilization in the fifth century BC used ergonomic principles in the design of tools, labour and workspace. An important example can be found in the description that Hippocrates gave surgeons work on the design. For the first time the term was introduced into modern language by a Polish biologist Wojciech Jastrzębowski in 1857.

Today, internationally, ergonomics and human factors study was aligned with the major technology and globalization, as a discipline implemented by individual study in engineering, medicine, and other fields involving human factor. The fundamental law of ergonomics is its interdisciplinarity as a condition of existence.

In Romania, the ergonomic concept was first presented by the professor Petre Burloiu, at a symposium from April 1974, expressing the idea of the energetic balance of the human body. This field of study is being studied by the human resources management specialists and students from the economics and engineering, but unfortunately not being applied by the organisations.

Well projected products must be safe, efficient, comfortable and easy to use, sustainable, with a fair and realistic price, with a nice aspect and used with pleasure. All these aspects are related to human factor.

The human factor is being seen as a cost, an expensive one, which needs only the basic tools to do his job. Its health and security is not a priority. Its social, cultural needs are far away from the organisation's strategy and vision. Here must intervene the new generation of specialists in order to propel globally the Romanian economy by improving the practice and recognition of human contribution. Due to the available workforce in the labour market in Romania, and in general in the world, organizations struggling to survive the economic crisis do not take into account employee satisfaction.

Many organisations, especially those activating in field of engineering, are investing in professional formation of their employees, for development of knowledge and relevance of their skills.

Which is the role of human resources management? Human resources department must be the one not only recruiting, integrating and managing the employees of an organisation, but also need to motivate them, to meet their needs for the good and success of the organization they represent.

Indirectly, human resources management, through its studies, papers, conferences and other means, must promote other projects and practices from different countries, such as United States of America or Russian Federation. The ergonomic practice must be implemented in a professional way in order to gain credibility from top and middle management.

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