



# Training programs and their role in achieving occupational safety

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## Abstract:

Increasing interest in the search for ways to provide a sound work environment, whether physically or psychologically, as it contributes to raising the performance of the human resource in his organization and the most important of these ways is to provide him with training programs that help him adapt to his work environment so the goal of our research to highlight the role of training programs in achieving occupational safety by introducing what each of the programs and training and occupational safety and highlight how these programs contribute to achieving and one of the most important proposals of our research is the intensification of Training programs aimed at the prevention of occupational risks.

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## introduction

The trained workforce is one of the most important pillars of production, but it is the backbone of the production process and its main engine, and therefore taking care of that human force, preserving it, and providing the necessary security for it during the performance of its work, whether against hazards, accidents at work resulting from the use of machines, machines or against diseases, and health damage resulting from the nature of work all mean in the end the preservation of the most important economic wealth. Although the method of designing and engineering machines has a role in contributing to achieving occupational safety, most studies conducted in the field of occupational safety have confirmed that human factors or the human element are the main cause of most accidents. (Al-Mashaan, 1994, p. 142) Therefore, it was necessary to take the human element into account because the worker is the one who manages and moves these machines, and mechanical prevention in many factories has reached a great extent of accuracy and workmanship, however, the neglect of workers for the means of prevention causes many accidents and industrial security scientists believe that the ineffectiveness of industrial security legislation is mostly due to the focus of those legislations on the worker's protection from the dangers of physical equipment, ignoring that the awareness or behavior of the worker himself is the factor with the greatest impact in most cases, because accidents occur or not, and through that, the role of psychology in training workers to respect the means of prevention and spread preventive awareness, and to clarify the risks of work and the importance of their implementation of regulations, and legislation on industrial safety. (Aridi, 2014, p. 4) Researchers in all disciplines in universities and scientific research centers in the

developed world began to subject the problem of accidents and work injuries to careful scientific study. These studies aimed to try to reach a set of variables, and considerations that can contribute to providing radical solutions to limit the negative effects of the problem, and reduce them to a minimum. It is noticeable in most developing countries that there is not enough attention by departments to implement training programs on occupational safety for workers, despite the awareness of all parties concerned about the importance of occupational safety, and despite the availability of legislation, and laws related to occupational security and safety, but to move away from the actual practice of the theoretical aspects that training programs suffer from in all magazines to find themselves away from the requirements of their environment and achieve their needs. As for the nature and characteristics of these programs, let us ask the following questions:

- What are the training programs?
- What is occupational safety?
- What is the role of training programs in achieving occupational safety?

#### **Research Objective:**

- Definition of what training programs are.
- Definition of what is meant by occupational safety.
- du demonstrates training programs in achieving occupational safety.

#### **Importance of Research:**

The research derives its importance from the importance of occupational safety in organizations, as its availability contributes to creating a safe environment that helps to raise the performance of workers and increase their psychological security, and this will only be possible by underlining effective training programs that contribute to meeting the training needs of workers to avoid the dangers resulting from the practice of work.

#### **2. Training Program:**

The training program is a statement that specifies the details of the work needed to meet a specific training need within a specific time frame and estimated cost. (**Ahmed Nasser**, 2002, p.62) The training program is defined as a dynamic process aimed at bringing about changes in the information, experiences, methods of performing the behavior and attitudes of trainees to enable them to exploit their latent functions in a way that helps raise their efficiency in practicing their work in a regular and highly productive manner. (**Ayman Suleiman**, 2010, p. 7), and the training program is defined as a statement that specifies the details of the work necessary to meet a specific training need within a specific time frame and estimated cost, the training program plans, and organizes courses Training in accordance with the objectives set, and the program limits the list of necessary means To achieve the objectives set, the objectives set for their achievement formative priorities, and the content of Pedagogical training courses, and the time required for training professional groups. (**Bouali Badia**, 2008, p. 101).

A training program is a set of interrelated processes for changing or modifying the trainee's behavior that targets cognitive, cognition, and attitudes. The training program consists of a set of coherent and interrelated **components, objectives, strategies, and evaluation** so that these components complement in terms of presence and representation and constitute interactive support in terms of functions.

Effective training programs bring the following benefits to the organization:

- ✓ Increasing productivity and organizational performance, by providing workers with the skills and knowledge necessary to perform their jobs help them to carry out the tasks assigned to them efficiently, and reduce wasted time and material resources used in production.
- ✓ Training contributes to creating positive attitudes among employees towards work and the organization.
- ✓ It leads to clarifying the general policies of the organization and thus raises what the organization wants about the performance of employees through their knowledge of goals.
- ✓ It leads to the rationalization of administrative decisions, and the development of methods, foundations, and skills of administrative leadership.
- ✓ Helps in the renewal of information and updated it following the different variables in the environment.
- ✓ Contributes to building an effective base for internal communication and consulting, thus leading to the development of methods of interaction between working individuals, and between them and management. (**Suhaila Mohammed Abbas**, 2006, p. 188)

Among the basic principles that must be included in any training program to be effective are the following:

- **Participation:** Reflects the interaction and sharing of ideas between the trainer and the trainee and not focusing on the role of the trainer only in indoctrination and the role of the trainee in receiving.
- **Transfer:** Any application and transfer of what the worker or trainee learns to the actual reality, as practical application leads to reducing errors.
- **Reinforcement:** This is done by creating positive and negative incentives for trainees in the training program
- **Feedback:** Feedback or information about the performance of trainee workers is of great importance at every stage of learning, as it helps workers correct their mistakes (**Suhaila Mohammed Abbas**, 2006, p. 89).

(**Ahmed Ismail**, 2009, p. 134) states that among the principles that should be available in effective training programs are the following:

- **Adopting a theoretical framework or model for training:** The most effective training program is one that is based on a theoretical framework or a theoretical model of training that has roots. It is an empirical fact to adopt it as a frame of reference to guide the activities and training practices in the program. There is empirical and empirical evidence that a training program adopts a theoretical framework or model. A training program is more efficient and effective than a program that lacks such a theoretical framework for training.
- **Meeting the professional needs of trainees:** The training program is based on meeting the professional needs of trainees and makes them feel the importance of this program in their working life of trainees, and enables them to carry out their future professional roles efficiently and competently.
- **Flexibility and multiplicity of choices in the training program:** The most effective training program is one that is flexible In terms of admission requirements, study requirements, and

graduation requirements; it is also characterized by the diversity of options available to trainees about choosing courses and various training activities.

- **The training program should achieve conformity and compatibility between theoretical ideas and practical practices:** for Training programs to achieve their objectives effectively, and success must be in its implementation, the principle of congruence and compatibility between ideas and theories shall be taken into account. related, between practices, and practical applications. The criterion of effectiveness and success of training programs is determined by The extent to which the program can translate theoretical ideas into Performative or procedural practices that can be observed in the behavior of trainees.
- **Continuity of the training process:** Modern training programs look at the training process on the basis that it is an ongoing process that begins with preparation before service and continues throughout the career, this principle came in line with social and scientific developments.
- **The program enables trainees to achieve their self-realization:** One of the characteristics of the new training programs is that they provide the opportunity for trainees to participate and interact with the teaching and learning situation, and the training program helps to achieve trainees' selves which have the greatest impact on their sense of self-satisfaction and results in providing them with the necessary skills that help them perform their new roles.
- **Investing in the teacher training program for the results of research and scientific studies:** Modern training programs work to encourage studies and scientific research and work to employ the results of these studies and research to make developments and improvements to these programs.
- **Individualization of education:** Training programs should provide full opportunities for each trainee. To learn according to his abilities and distinct needs. And to progress in the training program, according to his own pace in proportion to his special circumstances.

The concept of training is based on the idea of the system, and according to the following basic dimensions in training systems:

- ✓ Integration and internal interdependence between the elements and components of the training system.
- ✓ Openness to the environment, interaction, and adaptation to suit changes by affecting its components on the other hand.
- ✓ Sense of proportionality with the requirements of the environment. and their needs and thus the ability to modify the training activities carried out, and correct their course to comply with the requirements of the changing environment.

We address the program's goal of changing or developing the specialized or general skills in the product or service performance of workers or what it requires to add new knowledge and skills required by development and improvement in the technical or administrative performance of workers. Therefore, the content of the training program is an effective outcome in enabling the trainees to acquire specialized skills at times or general skills at other times (**Khudair Kazem Hammoud, Yassin Kaseb Al-Kharsa, 2007, p. 131**).

Therefore, the content of the training program should include a combination of theory and practice.

- The material should be derived from the reality of the participants and meaningful to them.
- Be worded in sound and clear language.
- To take into account accuracy, objectivity, and modernity.
- Ideas and concepts should be coherent and clear and stay away from tedious repetition.
- To be commensurate with the time scheduled for the training program.
- To suit the level of trainees who will participate in the program
- Determine the vocabulary of the training program For the identification process to be the right way, the designer must be aware of the training needs, and that the topics of the program are directly related to the nature of the work that will be done by the target group for his training, then he links the topics to each other and determines the depth and elaboration in dealing with each topic. **(Khudair Kazim, Al-Kharsa, 2007, p. 133)** include:

## **2- Occupational Safety:**

Occupational safety is the department that has the responsibilities and duties of management, guidance, planning, implementation, and follow-up of everything related to occupational security and safety in the institution or establishments, setting technical rules and instructions to ensure the safety of workers, property and the environment, and developing a strategy, whether in training or education and awareness programs through which the level of performance of employees can be improved. **Ashraf, 2001, p. 60**

It is the practice of several activities aimed at protecting the elements of production, foremost of which is the human element in the organization from exposure to accidents during work, by creating appropriate material and psychological conditions for workers to perform their work with high openness. Or are those activities and administrative procedures for the protection of workers from the risks resulting from the work they practice and from the workplace that may lead to occupational diseases and accidents that mean safe performance in the environment and the workplace, which ensures that accidents do not occur or minimize them as much as possible during Handle various machines. **(Zakaria Tahoun, 2006, p. 18)**

It is defined as the field that aims to protect the various categories of workers from serious influences by addressing the personal technical and environmental resources leading to these risks in a way that allows workers to enjoy adequate physical and social health. **(Al-Aqayla, 2002, p. 14)** It has been defined as those activities and administrative procedures for the protection of workers from the risks resulting from the work they practice and from the workplaces that may lead to diseases and accidents, which is to provide a safe and healthy work environment, to maintain three of the basic components of the elements of production: man, machine, and material within the creation of an atmosphere of safety and tranquility, to protect the human element from occupational accidents and diseases. **(Balul, Saghir, 2020, p. 25)**

### **2.1. Occupational safety objectives:**

Occupational safety aims to reduce the dangers faced by the worker due to the use of many machines and equipment, as well as health from occupational diseases resulting from the practice of professional work, as well as safety in the work environment itself and the accompanying dangers of all these factors are the main objectives of the concept of occupational safety and

health, i.e. it must achieve the following:

- Protection of the human element.
- Protect and develop skills, expertise, and disciplines.
- Raising the technical level of workers with continuous training and training.
- Identify performance methods and manage them with the least effort and the least risks.
- Giving confidence to enterprises and encouraging them continuously.
- Participation in the development of the economy. (Zakaria Tahoun, 2006, p. 20)
- Educating employees and educating them to adhere to occupational health and safety instructions and guidelines.
- Providing a safe work environment that achieves risk prevention by taking the necessary precautions and measures.
- Reducing the cost of production by saving money paid as a result of work accidents.
- Reducing the cost of expenses related to lost working time as a result of work injuries and occupational diseases, the costs of replacing the worker and training his replacement, and the expenses resulting from delays in work and delivery dates (Aqili, 1998, p. 495)

He adds (Youssef Al-Tayeb, 2009, p. 6) of its objectives:

- ✓ Identify the risks to which the individual can be exposed at work and outside it.
- ✓ How to perform the work or work safely and securely.
- ✓ Clarify the impact of accidents and injuries.
- ✓ Taking into account not neglecting the performance of work.
- ✓ Identify and work to solve personal and social problems of individuals at work.
- ✓ Adequate training in performing hazardous work skillfully and easily.
- ✓ Full clarity when performing business.

**Among the means of achieving the objectives of occupational safety and health are:**

- ❖ **Improving the physical working environment:** includes building systems, lighting, sound, ventilation, and appropriate temperature.
- ❖ **Securing and establishing technical security and safety systems,** including technical alarm and extinguishing systems, as well as personal protection systems, means, and tools.
- ❖ **Monitoring and inspection:** It is related to the discovery of professional errors, trying to control them, and taking the necessary procedures and systems to address these errors.
- ❖ **Studies and research:** Studies and research must be available on an ongoing basis to find out the causes of accidents and the effectiveness of safety systems and means, whether it is technical research, psychology, or statistical studies.

**A- Technical research:** studying the ways leading to carrying out the work in an optimal manner to avoid making mistakes, as well as studying the risks of equipment and finding preventive means for it.

**B- Psychological research:** the study of the use of the worker's willingness to do his

work and its relationship to accidents.

**C- Statistical studies:** studying accidents and injuries and preparing statistics on them to know the rate of injuries and propose the best ways to avoid them in the future

❖ **Training:** It includes organizing training programs for all levels, as it focuses on new workers, to strengthen their knowledge of performing work in safe ways, in addition to their knowledge of the importance of applying safety means to protect them from dangers.

### **3. The role of training programs in providing occupational safety:**

According to (Al-Mashaan, 1994, p. 282), it is believed that the training of workers is precise professional training, and teaching them many of the habits necessary to carry out the work accurately and skillfully. Prosser mentions some of the habits that he believes are necessary for workers to acquire, and he has broken down these habits into six main groups:

Arranging tools, machines, and materials and taking care of them: The worker must learn what to do with tools, machines, and materials during non-working hours and at work times, arranging tools in their correct positions in non-working times helps to easily address them during work, which leads to saving time and it has been shown from many studies that workers can increase their production to double if they arrange tools, machines, and materials.

**Safety precautions:** The worker must learn the topics of danger in his work, how accidents occur, what precautions he must follow, what safety signs he must observe what method to follow in the event of accidents, and where to place first aid.

**Use of power machines:** Workers must learn that power machines work as they wish; they must learn how to check them before work, take care of them, control them, and avoid accidents when they manage them.

**Maintenance of tools and machines:** In many cases, there are no specialized persons for maintenance, so the worker must learn how to prepare the machine for work, how to maintain them, change the parts that need to be changed, and how to lubricate and adjust them.

Learning skills to perform work: The worker must learn the skills necessary to perform the work and to achieve this, training programs must be organized on correct rules and the psychological principles of learning must be taken into account in training.

**Examination of work and its accuracy:** The worker must learn how to examine the work and how to determine its accuracy or lack thereof, and he must learn how to know his mistakes and how to correct them and avoid their causes until he reaches the required level of skill and efficiency. (Al-Mashaan, 1994, p. 283).

Training remains one of the most important pillars, as it often aims to correct some circumstances and errors in a particular department or reduce the period required to complete the work and help workers learn a correct way of work that enables them to achieve the required achievement standards determined by the organization and the goal may be to reduce injuries and work accidents by teaching working individuals to follow the methods and rules of safety that avoid them and the imposition of industrial developments to face risks.

Some also point out that training on professional safety means teaching the worker the general principles of the causes of accidents, while teaching in particular the means to be followed for the machine that he manages and the process he undertakes, through which the behavior that results in risks is directed, reducing behaviors that hinder the individual, limiting the success of the

industrial security program and preventive methods, raising the level of performance of individuals and the growth of awareness they have with the acquisition of new information that ensures the individual's reluctance to some negative behaviors. (Bakraoui, Bouhafs Mbarki, 2018, p. 269)

Through previous studies, including a study (Bala Nihad, Bouali Nouredine, 2018, p. 61), it appeared that most of the injuries were of the type of wounds and burns in the hands and fingers, and this is a result of exposure to electric shocks, as for bruises and fractures in the column and head as a result of falling from electric poles or not using the crane to carry equipment, and this is caused by the failure of workers to wear personal protective equipment (helmet, gloves....) This is the result of the lack of training and qualification in the field of occupational safety on the one hand and the failure of the administration to apply strict penalties to those who do not wear safety equipment, according to (MADS) we find that the number of workers at great risk their level of training is weak and has seen the need to prepare training courses based on the identification of the real needs of training, especially in the field of occupational safety and health by providing lectures and explanations with their application in reality by safety specialists or firefighters to train workers on healthy and proper ways to work And how to do first aid to the injured in the event of an accident.

#### **4. Conclusion:**

Today, organizations are more interested in the human element than ever before, because the latter is the basis of excellence and excellence that any facility can achieve in its services and production compared to its competitor. With the technological and cognitive progress and the tremendous changes that the world is witnessing in all aspects of life, it has become necessary for organizations to keep pace with this progress through training, which aims to develop the capabilities of the individual and develop his skills, knowledge, and experiences and make changes in their behavior and attitudes to perform their work. Therefore, modern organizations are keen to develop integrated training programs in which time, effort and money spend a lot to obtain a positive return for both of them and individuals, as these programs contribute to enabling the human resource to make optimal use of machines and equipment in their work environment without damaging them or harming his health. Means and gear .This will only be possible by subjecting these training programs to the scientific steps of planning, implementation, and evaluation, and it is not possible to imagine the separation of these steps from each other, as it is not possible to know the endpoint of the stage and the beginning of the other, but rather they are overlapping and intertwined to make that interaction between these subsystems, each of which is based on inputs, processes, and outputs, these sequential stages form a circular loop, if the needs analysis, for example, constitutes the starting point in the engineering of the training program, its evaluation is in turn inputs The engineering of the training program also focuses on the requirements of the environment to work to meet them because the success of the training program, but the credibility of the training, derives from its ability to do so.

#### **It proposes the following:**

- ✓ Paying attention to the training and knowledge of employees, ensuring the necessary protection from work risks, and developing and implementing continuous training programs to develop their technical expertise and skills and develop their health awareness.
- ✓ Intensify training programs that target workers from occupational hazards and improve their

level of reaction to dangerous conditions, enabling them to avoid accidents.

- ✓ Harnessing specialists in the psychological and social field in organizations in the framework of the prevention of psychological and social risks after accidents.
- ✓ Define configuration requirements by specificity of the organization and region.
- ✓ Adopting the principle of compensation and insurance for workers, this leads to increasing the degree of job security and psychological stability for them.
- ✓ Conducting more studies and research on the subject of occupational safety to reach more in-depth results that contribute to the development of organizations better.

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