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E-TRAINING AND ITS ROLE IN HUMAN RESOURCES DEVELOPMENT

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ABSTRACT: *Nowadays, the rapid development of information and communication technologies in all areas as a key element in the success of any institution, and an important prerequisite for achieving competitive advantage and the ability to survive in an environment of rapid change. Hence, the need to invest the huge leap in communication and information technology and computer applications for use in e-training, as a program for achieving sustainable human development under the knowledge economy. This research paper aims to identify e-training as a new concept in human resources development from the logic of scientific progress, and the importance of information technology in the field of training, education and information awareness dissemination.*

KEYWORDS: E-training, Human Resources, Information and Communication Technology.

INTRODUCTION

Human resource is one of the most important resources for institutions of various types, and the main engine of all activities, and the basis of their effectiveness, especially if this resource is characterized by its skill, knowledge, ability and adaptability to the nature of the works carried out, in view of the huge technical developments known by the world in the field of information and communication technology leading to the Internet spread, which helped the world to enter the era of Informatics, and the increasing interest of organizations, in all forms, to human resources through electronic training and development.

Using information technology and the Internet in the education and training of human resources is one of the most important indicators of the society transformation to a digital one, because that will contribute to greater efficiency and effectiveness, disseminating information awareness, and thus obtaining informationally efficient human resources sought by communities in the current era.

Under the progress of knowledge, it is necessary for communities to develop their training systems; the concept of training is no longer a traditional concept limited to organizing training courses, but it has become a strategic choice in the system of investment and human resources development.

The study's problem:

The study's problem is centered in identifying the concept, the importance and the role of e-training in human resources development, in addition to the obstacles facing its development, particularly with the global trend towards employing information and communication technology in training as the most important indicators of the transformation of the society to a digital one. So, we try to answer the following major problem:

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What is the role of e-training in human resources development?

The following secondary questions are derived from the major problem:

- What are e-training programs, and what are their most important components?
- What are the main differences between e-training and traditional training?
- What are the contributions of information technologies to support and establish the bases and foundations of e-training?
- What are the main problems and obstacles facing e-training process?

The study's importance:

The importance of this study stems from talking about e-training, its properties, and rapid spread as a modern means to develop human resources in institutions, and to set up resources with innovative skills and capacities able to cope with the technological revolution.

Study's hypotheses:

To address this topic, we assume at the beginning:

- E-training contributes to the development of human resources.
- E-training differs from traditional training.
- The availability of information technology infrastructure in institutions affects the e-training process provided to their employees.

Study's objectives:

This study seeks to achieve the following objectives:

- Identifying the concept, characteristics and stages of e-training;
- Statement of the great importance lately gained by e-training;
- Identifying the major obstacles that limit the release of e-training programs and the work to reduce their impact;
- Highlighting the stages and steps of e-training processes implementation;
- Giving a picture about the fields use information technologies in training and their impact on human resources.
- Making recommendations that could contribute to the effective use of e-training in the development of the human element, and the enrichment of attention to these modern trends.

The study's method:

This study is based on the descriptive and analytical method used in almost all economic studies, through references and researches which have dealt with the topic of this study, whether direct or indirect, and the comparative method by addressing the most important differences between electronic and traditional methods used in human resources training.

The study's divisions:

Under the study's problem, objectives and importance, this study can be divided into the following axes:

Axis one: E-training conceptual framework;

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Axis two: Information and communication technology and its activation in training;

Axis three: Advantages and obstacles of human resources e-training.

E-TRAINING CONCEPTUAL FRAMEWORK

The concept of E-training

The concept of e-training is still evolving, unsettled and in constant modification as it is related to modern technologies which grow and develop day by day, adding that it is connected to a virtual changing world. Some argue that the origins of this term dating back to the 1980s, within the same time framework of the emergence of other types of online training. There are several terms used to indicate e-training including: distance training; virtual training; online collaborative training; web-based training; training by technological media[1].

E-training is defined as "a process of distance training through the use of the Internet or Intranet, providing the individual the necessary knowledge on various selected subjects or chosen specialty, in order to raise the scientific level or to achieve rehabilitation, using the computer, sound, video, multimedia, e-books, email, chat and discussion groups"[2]. Others believe that it is "the Internet-based training that facilitates cooperation among trainers and trainees to improve education"[3].

Others consider the term e-training refers to "the use of multimedia technologies and the Internet to improve the quality of education by facilitating media and services access as well as distance exchanges and cooperation"[4]. It is also defined as "a trend in the cluster network; that network which has changed individuals' lives in all fields; education was based on power technology which can be divided into time scales and spatial scales, education happens all the time, and the learner can store and reference to it at any time"5. It is "a training process aims to provide training contents through any medium of modern communication mechanisms as computers and the Internet to overcome geographical distances between the trainer and trainee; it is a training system between distant trainees and trainers in space and time to enable individuals to train and overcome time and space conditions"[6].

It is clear from the foregoing that e-training is a process of acquiring a set of knowledge, skills and attitudes by an individual or a group of individuals using electronic media in communicating and receiving information, acquiring skills and interacting between the trainee and the trainer. This type of training does not require spatial and temporal meeting, and it can be summed up in the following figure:

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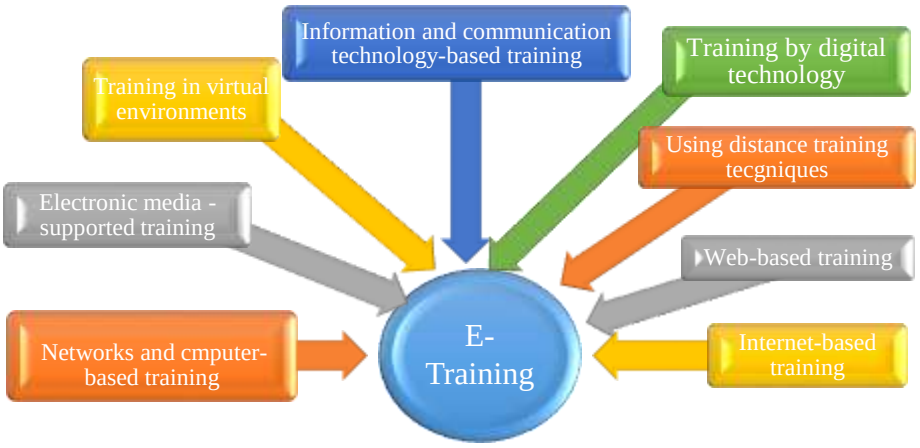

Figure 1: E-training styles

The difference between traditional training and e-training:

The difference between traditional training and e-training can be summed up in the following table:

Table (1): Differences between traditional training and e-training

Traditional training	E-training
-The trainer is the primary source of training - One-way information flow - Individual training -The trainee receives or takes knowledge from the trainer -Rigid and routine trainings -Information-recall – Training without taking individual differences into account -Static content -Interesting to quantity -High cost -Training process according to a specific plan without taking individual differences among trainees into account	-The trainer is a guide and facilitator of training resources -Interactive two-ways information flow -Collaborative training -The trainee learns through practice and self search -Search and investigation through the Internet -Problem solving – Analysis evaluation – Creativity – Taking - individual differences into account -Changing content -Interest to quality -Relative cost -Interest to trainees' conditions and observation of their individual capacities

Source: Omar Ahmad El-Kabir**,** Distance training in the context of evolving techniques of training, National symposium on: **education and vocational e-training**, General People's Committee for Workforces, Training and Employment, Tripoli, 2006, P. 7.

1- **The importance of e-training:** The importance of e-training is highlighted as follows:

- Rapid development in innovations, their applications and integration with education, learning, information and communication, technologies as well as the digital technology;
- Allowing for the greatest amount of trainees to attend different levels of training in accordance with the principle of equal opportunities and training for all[7];

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- Reducing material cost and saving time and effort for obtaining specific training;
- E-training creates interactive relationship between trainees and trainers;
- E-training develops the trainee's ability to use computer and take advantage of the Internet, which assists him in his career[8];
- The necessity to accompany knowledge explosion and prepare an individual able to deal with globalization through lifelong learning.

2- **E-training objectives**: E-training aims to achieve many objectives summed up below:

- Providing multiple and disparate sources of information allowing opportunities of comparison, discussion, analysis and evaluation;
- Updating information and skills of learners according to new data on human knowledge[9];
- Sharing experiences through e-training medias;
- Finding interactive training environment through new electronic techniques and different information sources and experience;
- Meeting market needs on personnel and qualified staff, particularly meeting market needs on knowledge-based jobs[10];
- Filling the gaps of society structures as a result of successive developments in information technology;
- Providing education and training opportunities for staff and jobs managers;
- Spreading technical culture in order to create an electronic community able to keep up with the developments of our time.

3- **E-training characteristics**: E-training has many characteristics vary according to each technological means used in it. It is characterized by :

- The possibility of dialogue, discussion and groups in various places and times [11];
- Considering individual differences of each trainee as a result of realizing subjectivity in the use of one machine per trainee;
- Multiple sources of knowledge as a result of contact with different sites on the Internet;
- Dissemination of compatibility between trainees achieving compatibility between different environments with equal and compatible standards [12];
- Seeking to achieve interaction both between the trainee and the trainer or the trainee and other trainees. This interaction, or at least something of it, has become possible by technological advances in the areas of computer and communication;
- Training a large number of trainees in a short time without obstacles of time and place;

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- Feeling the principle of equality and the treating some psychological phenomena such as fear and shame felt by trainees in discussion under traditional methods; it makes them feeling more daring and free to express their ideas.

E-TRAINING DESIGN AND IMPLEMENTATION PHASES

E-Training Design

This phase is characterized by estimating future needs for trainees to work on meeting them, defining general and special training objectives and clarities, and putting appropriate measures for improving the performance of trainees; the first responsible of this phase is the beneficiary from training with the help of university professors and specialist experts of training.

Preparation of e-training content

Preparation of e-training courses content: Under the analysis of real training needs of trainees using methodological approaches and systems analysis, as well as it must be taken into account the link of content with the objectives to be achieved. It must be scientifically valid, applicable and sufficient to give a clear idea about the subject.

Design of training courses activities: Through designing training activities of the content according to technical requirements and standards of e-training content design to achieve interactive self-training.

Site design and training environment fitting up:

A site of e-training containing training content is designed as lessons supported by multimedia.

E-training organization: E-training organization steps are as follows:

- Selecting the time duration of training;
- Holding the test of the training course end;
- Training supervision;

E-Training Implementation

During this phase, we access to the e-training system to run Internet Explorer software and write the URL; the following pages will appear [13]:

Login page: The trainee enters the user name and password given to him by the trainer, then he presses the button “enter”.

Home: It includes training content, chat, evaluation and research.

Training content: It includes the table of contents and shows the trainee how to review content and navigate through the pages.

Trainer page: It includes information about the trainer (name – email and dates of his presence on the site).

Self-evaluation page: It describes the strategy through which the trainee’s performance is evaluated.

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Trainees page: It contains a list of trainees' names and emails enrolled to study the training content so that these trainees correspondence with each other.

E-training evaluation

Training evaluation process is based on a number of principles and criteria through which modifications can be made to develop the training system and draw the future strategy. Among these principles and standards: identification and clarity of training objectives, comprehensiveness and continuity of evaluation, coherence and consistency of training systems, integration and quality of the previous and subsequent training efforts.

INFORMATION AND COMMUNICATION TECHNOLOGY AND ITS ACTIVATION IN TRAINING AREA

The concept of information and communication technology

It is defined as "the use of modern technology to do the capturing, processing, storage, retrieval and delivery of information, whether in the form of digital data, text, sound or picture"[14].

It is also defined as "all types of technology used in the operation, transmission and storage of information in electronic form, including computers technology, communication media, connection networks and other equipments heavily used in communications"[15].

It is clear from the foregoing that information technology outputs have led to the emergence of many areas of development, such as the emergence of advanced software, which includes expert systems, artificial intelligence, databases, Internet, intranet, extranet, email and remote communications technology.

The importance of information and communication technology

The importance of information technology is as follows:

- It is considered as a basis for the administrative institutions to build their competitive advantage due to the active and principle role of this technology in the success of these institutions[16].
- It assists institutions in obtaining information required to properly and distinctively perform their works;
- It assists institutions in creating new opportunities of work;
- It works on restructuring institutions' products and services.

Information technology uses in training

Information technology will play a major role in changing the known education and training ways in the present time; the trainer will not need, in the future, to stand before individuals to deliver his lecture, but this process will be done by an e-trainer, so the individual will not be obliged to come to training headquarters.

Information technology has effectively contributed in the implementation of training programs, produced ways quite different from traditional methods, and created new and easy patterns, including:

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Distance Training: It refers to "the method of gaining knowledge through others; distance training has no limits or one means; any television broadcast, video or any information program may be considered as distance training"[17].

The important role of distance training is to facilitate and simplify the training process; today, through the network, anyone can develop his competencies of different types without the need for spatial presence. The network contains virtual organizations work to supply participants with lectures and valuable lessons about the wanted domain, and these training programs can also be generalized within the organization through the intranet so that a large number of workers benefit from them. Distance training does not care about the number of trainees because the halls here are virtual and based on the network.

Continuous Training: Information technology has made the training process continuously practicable, particularly in the present time characterized by rapid transformations and changes. In the network, there are many programs and training classes open 24/24 hours during the week without vacations; the training process does not recognize temporal and spatial boundaries.

At work Training: Information technology offers the possibility of implementing the training program in parallel with real work without feeling the difference between what individuals actually implement for the job and what they implement for training where interaction between the user and the database in case of work, and between the user and structural database in training, leading to benefit from worker productivity even during the training phase, thus to reduce the costs as a result of the exploitation of training process outputs while doing it.

Level-based training: Information technology provides the possibility of giving training programs to more than one level, depending on the trainee's nature and capabilities; the program, using a set of tests and artificial intelligence applications, determines the trainee's level, strengths and weaknesses, and provides training subjects in a manner appropriate to this level.

The use of information technology as an essential tool of training has achieved many advantages, including:

- **Reducing time and place**: Information technology makes all spaces electronically passed, offering storage facilities that accommodate a tremendous volume of stored information the trainee can easily access;
- **Communication networks training**: Information technology-based kit unites in order to form communication networks, allowing the exchange of information with other activities;
- **Connectivity**: It means the connectivity of different communication devices between the trainer and trainees;
- **Interactivity**: The user of this technology can be receiver and transmitter at the same time;
- **Globalization**: It is the environment in which these technologies are active where information take different and complex paths disseminated through various regions of the world[18];

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- **Spreading and deployment**: I.e. extendibility to include more and more unlimited areas in the world.

Advantages and obstacles of human resources e-training

E-training advantages: E-training is characterized by a number of advantages for the trainer and the trainee; they can be summarized as follows:

- **Reducing trainees moving**: Desktop training leads to reduce trainees travel times, because programs are available in time for trainees;
- **Easy access to the network**: Through modern tools, the trainee can easily access to computer and Internet networks with little skills and experience;
- **Use of personal computers** : Training using network does not require the trainee to install special software or develop multiple versions of computer applications;
- **Quick access to up-to-date information**: The responsibility of the development team is to quickly move to introduce any new changes in programs;
- **Flexible time**: It provides the opportunity to choose the time in which he completes his study of the topic rather than to be obliged - as in the usual methods of training and teaching- to assist at all training and mentorship courses;
- **Strengthening education with available media and materials**: E-training allows the trainer the possibility of consolidating information and skills provided through the site with images, static and animated graphics and video clips, to strengthen the training objectives and reinforce the provided message, which facilitates its submission to trainees online;
- **Creating interactive atmosphere between the trainer and trainee**: The nature of virtual study that primarily relies on discussion and dialogue makes the trainee a key participant in the training process making; it is a method of great benefit, breaking the traditional method of training which relies on the fact that the trainee is just a receiver and the trainer is just a lecturer;
- **Encouraging cooperation and communication between trainees**: E-training allows rapid exchange of more information and content between the trainees[19];
- **Easy access to trainers**: E-training provides easy and rapid access to the trainer outside official working hours; the trainee became able to send his questions to the trainer by email. This advantage is more useful and appropriate for the trainer than to remain restricted to his desktop[20];
- **Multiple evaluation methods of the trainee**: Immediate evaluation tools provide the trainer a variety of ways to easily and rapidly build, distribute, classify and evaluate information;
- **Providing virtual reality**: E-training programs can provide virtual simulation programs through which the trainee lives the reality without being affected by its conditions or serious and difficult positions.

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E-training obstacles: E-training faces many difficulties; including:

Technical Obstacles

- **Network outages during the research**: Network outage is one of the problems facing users while searching and browsing within the Internet due to a technical reason or other, compelling the trainee to refer again to the network but it is difficult to return to the same search sites;
- **Digital filtering**: It is the ability of people or institutions to determine the contact and time perimeter for people, and the necessity to receive their contacts, then do these contacts restricted or not, can they cause harm and damage; filters are placed to block or close unwanted contacts.
- **Privacy and confidentiality**: Attacks on major websites affected trainers and trainees and put in their minds many questions about the impact on e-training in the future.

Physical Obstacles

E-training high costs often tops the list of obstacles of its application in many institutions; the issue of e-training projects implementation costs is relative and influenced by several factors whose the most important[21]:

- **Lack of appreciation of institution needs by technical institutions:** Technical institutions have very small experience in business; they cannot assess the needs of the Organization, and the Organization does not have sufficient technical experience to identify its needs. Thus, institutions resort to handle with them when implementing projects – particularly infrastructure projects – as they deal with factories, banks and ministries, which burdens them with heavy costs for unnecessary equipments;
- **Lack of necessary experience in the technical field:** Institutions cannot find alternatives or determine what is the most appropriate; they often depend on the theory "the most expensive is the best and finest" without study and analysis of the amount of such preference and quality. They also depend on domestic prices only when comparing products without considering the value in the world market. For example: when buying computers from a company, the institution has to compare their prices with local ones as well as with international prices of commodities.
- **Self-reliance in systems building by institutions**: it is intended that institution resort to agree with a technical company to design a software or an application, which means assuming the full cost, while buying ready-made software is often less expensive. In this context, some institutions hire technical staff to produce these software, but with a simple accounting auditing they will find themselves spending doubles of what they could spend on the purchase of ready-made software, not to mention other administrative consequences that follow the appointment of any employee in the institution.
- **Lack of material support by software companies**: While we find in some foreign States unlimited support to institutions, consists in granting discounts, up to 90 per cent of the product's value – as the case of Microsoft- we find Arab companies do not provide any support as they are completely absent to perform their role;

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- **Desire to leadership and coping or competing with major institutions**: If this thing is good, but it is not a condition to deprive the institution of its share of e-training, unless it provides the full potential offered by the major organizations that have physical potential to expand in this area. If we go back to the definition of e-training, we find that each institution takes it to the extent of its budget.

CONCLUSION

E-training is one of the important issues in the rehabilitation and training of human resources; it is a way to develop the knowledge and skills of individuals in a flexible and appropriate way to their circumstances without the need for extra burdens. Training through the Internet and modern communication devices provides an excellent opportunity for institutions to use this type of training at less cost and more appropriate path to achieve the institution's objectives by coping with technological developments, and raising the efficiency of its staff. At the end of this study, we must emphasize the following points:

- Establishment of information technology departments in institutions to flexibly deal, provide necessary support to training programs through electronic networks and to respond to increasing requirements on this type of training;
- The necessity of preparing e-training programs according to the phases that are commensurate with the regulatory and technical environment of institutions, and taking advantage of all the experiences and practices of others;
- The necessity of constant updating of e-training materials according to the professional development and advances in technology and information, and providing training contents according to global standards in the training industry;
- The necessity of launching such programs by training institutions however the size, so the technique can be optimally used and invested, as well as creating opportunities for training employees, resolving some of the obstacles they face, and accessing to a greater number of beneficiaries and applicants of their services;
- Planning and developing existing training systems and introduction the total quality management approach;
- The necessity of activating and expanding the use of information and communication technology in human resources development;
- The necessity of coping with the technological development of networks and training by workers.

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