

Return on Investment (ROI) in Organization; with Emphasis on Human Capital Development

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ABSTRACT

Training is one of the most complicated tasks in any organization and it is one of the most useful investments, which if planned and implemented properly, leads to current employees' empowerment and would have significant economic return. Human capital Development through training is an unavoidable requirement which organizations require it to survive and thrive in today's changing world. Therefore training is not an expense, and some consider it as investment. Of course these investments should lead to results and learning from this training should be evaluated. Since training is considered as an investment in organizations, so training policy makers should consider results of their effective and productive activities in education process, and try more in using methods, human and physical resources and efficient and proper equipment, and organize training process with a proper plan and use evaluations to adjust and improve quality of training courses to optimal execution of codified process. Calculating ROI and its results would help to training designers and developers to improve efficiency and effectiveness of training courses. In this article, we consider return on investment (ROI) with emphasis on human capital development.

KEY WORDS: Return on Investment, Human Development, Training, Investment

1. INTRODUCTION

According to fast phase shifts in human knowledge, everything is changing strongly. Organizations interact with their environment as open systems and to survive they require responding to environment changes. Since Human Resources is considered as organizations' operating base, so preparation of human resource to face with changes, has critical importance and every organization, with any mission, should spend the most capital, time and plan to foster humans in different aspects [1]. In other words, the rapid changes in science and technology is affected on all today's organizations and neglecting it, result to rapid fail of the Organization. Organizations are formed from important bases such as structure, human resource, technology and management, and according to experts, human resource is the most important element. Because efficiency is depends on doing tasks right by human resource in line and staff departments. Since human resource is constitute about 70 percent of organizational capital, so providing this human capital require Regular and continuous training activities at all organizational levels. Fostering elites and skilled humans, which is named human resource development, human resource and human capital is an unavoidable requirement which organizations require it to survive and thrive in today's changing world[2]. On the other hand, today's managers experience an era in which the real capital of the organization is intelligence. In our era, organizations never pride to their mass production, large financial reserves and manpower, but also their pride depends on their intelligent capital and knowledge. It is not possible to succeed, until consider a high value for organization's intelligent and knowledge capital and try to develop and strengthen it in organization. Human resource training and remediation is considers as a useful investment and critical element in development, which if planned and implemented properly, would have significant economic return[3].

Economists have argued that basically the largest investment is investments in human resources. Because investment in this context, create human skills and abilities and this type of investment has the most return and significant increase in production in developed countries is only due to the increase in production efficiency. This increase in the improved production methods is resulted from investment in manpower. It is obvious that manpower is the most important factor in economic growth. Additionally, more use of more human capital, leads to increase their skills and improve their quality of work[4]So training is a necessary job and doing and presenting it in a way that has beneficial results is a need rather than a choice [5].

Hence, training is one of the most complicated tasks in any organization and leads to manpower empowerment, and in addition to guaranty their success, results in achieving organizational goals with more effectiveness. So

manpower training is one of the factors that have a great impact on organizational effectiveness and could play an important role in improving it[6]. Training requires forecasted plans which enhance existing competencies in manpower and leads to acquiring new knowledge, skills and abilities. Hence training activities should be an integral part of any organizational plan to successful compliance with future changes. So since organizations make major investments in the field of training, they expect to gain tangible benefits and outcomes for organization. Therefore the main objective of this study is return on investment in organization with emphasis on human capital development. According to what was said, after a brief review of human capital development, we introduce some kind of training effectiveness evaluations. Hereafter, necessity of return on the investment calculation is addressed and return on investment model and its stages are described in detail and finally conclusions are presented.

2. Human capital development

Physical resource and capital is not enough to economic and social development and growth, but in addition it should also be trained human capital. Therefore human capital development is possible through training [7]. Human capital is knowledge, skills, experience, the abilities and capabilities, and ultimately the Discipline that is created by society workforce education and leads to increase in their job productivity [8]. Today organizational managers consider human resources training and development as critical tasks in improving way the organization and according to its important benefits make great investments in this field. There is no doubt that sound management of the organization is depends on performance of its manpower. Therefore organizations enhance and develop their employee by training professional knowledge and skills and align their performance with slightly objectives. In principle, Organizations are considered as operational development and growth units in societies and each have a share in development process [9]. Both theoretical models and empirical studies show that training is one of the Human Capital Development ways [10]. The role and position of training in providing efficient manpower and creating intellectual capital, which are considered as the main factor in organizational development and excellence, caused senior managers of organizations, have a special attention to it. So that every day the number of fans and supporters of training and human resource development in Large and small organizations is growing [11].

Stout (1993) and Bambrough (1996) [12,13] state the main stages of the human capital learning in a simple model of Figure 1:

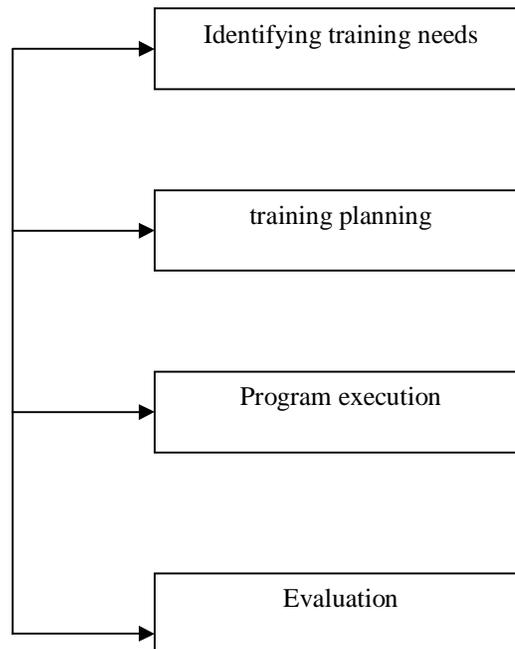


Fig 1: Human capital training process

3. Development of human capital through training

3.1. Identifying training needs: training needs are needs which could resolve through training. These requirements are not only discussed in Knowledge, skills and attitudes fields, but also it is the key to ensuring effectiveness of

training and development functions and if properly done, would become more objective basis for planning as effectiveness map, and more likely to compliance with organizational needs and workforce job field and finally leads to effectiveness[14]. Training needs are of primary inputs to training system and is the main basis for system activities planning, implementation and evaluation. Many times trainers are forced to learn about something which didn't practically use in their job success. Apart from Consequences of this problem, it is caused by two reasons: failure in needs evaluations, or lack of self need assessment in training process. So the first obstacle for training effectiveness is their mismatch with the needs of the audience and participants [15]. Identifying training needs would be effective in identifying many of organizational problems. Therefore training needs for individual employee should identify for more training effectiveness[16]. McClelland (1993) [17] believes that training needs evaluation is a known tool for human resource development and used to identify training needs of organizations and employees. And if designed, implemented and analyzed properly, give a detailed picture of the organizational knowledge, skills and capabilities. Training needs evaluation, determine the nature and scope of the training programs and provide the context for designing training programs and ensure that expected results of design and implementation of the program would accomplished[18]. According to Gent & Dellomo (1989), needs evaluation is a dynamic process that initiate training programs and with a focus on major human factor in productivity, ie, job performance, is an opportunity for considering training at the heart of strategic management[19].

3.2. Training Planning

Training planning is the application of analytical tools about each components of training system and aimed at establishing an efficient training system [20]. Noe (2002) [21] consider Essential elements of training design as: explain why practitioners should be trained, provide appropriate and targeted training content, making required opportunities and fields to practice and apply learned material and providing appropriate learning environment. Training planning has a great importance as a basis for scientific and technological developments [16]. Designing training programs which equipped employee with knowledge, skills and capabilities to perform their duties, would results in organizational effectiveness increase [22].

3.3. Program Execution

After needs evaluation and planning training programs, next step is executing training programs [23]. Implementation of training program is the most important stage in training; because a program hasn't external exist until its execution. Also deficiencies of the program specified during its implementation. It is possible that some programs not executed due to impracticality. In fact, all factors affecting on training planning, would affect on its implementation [24]. Executive management includes all related activities to training programs execution, providing facilities and suitable operating conditions, division of functions for effective implementation of the trainings, providing a favorable organizational climate for transfer the learning, making motivation and opportunity to use learning results[25].

3.4. Training Evaluation

The process of measuring training outcomes through pre-determined criteria and standards, which determine whether investment in training would result in employees' performance improvement and increase organizational efficiency, is called training evaluation[25]. Noe (2002) believes training evaluation is the process of gathering required results in order to determine the effect of training. According to him, evaluation will gather required information to determine the effectiveness level of training program in dimensions such as: from whom, about what, when and how will collect[21].

Evaluations not only should include training proves but also it should have a feedback for participants about the content and applications of the programs [26]. Training evaluation is a part of employees training cycle and by providing feedback on the effectiveness of training methods, degree of achievement to objectives and whether identified organizational and individual level needs are realized has a key role in quality control of training cycle [27]. Training assessment is refers to evaluation of the value of the overall training program, this overall value is effective in terms of costs and outcomes for organizations and individuals who receive these trainings. Training evaluation is not a self oriented activity; identified training needs in the first step of the training process leads to training objectives. Objectives will serve as a foundation for program design and implementation. In addition, training needs and objectives provide criteria for evaluations. Evaluation is the most important method to evaluate the effectiveness of training program [28]. Assessing managers' training programs helps training managers to sustain programs, adjust current or future programs, and validating the value and role of training in organization [29]. The purpose of a complete and accurate evaluation is that evaluation is done completely from different aspects and its results are used to remove defects and deficiencies in training programs and to modify, improve, and enhance

designed programs. In fact, the importance of evaluation is that its results will be fed back to Training programs and essential changes in program content are applied [16]. Evaluation would use to justify training costs and demonstrating the value of training in organization to top-level executives, and results to improve training design and its benefits for the organization [27]. (Hanson, 2003). The purpose of evaluation is that which training programs fulfilled its mission and which didn't. Programs which failed to achieve their goals put aside, and which are successful, retained [30]. Desimone & Harris (1998) [31] argue that the purpose of evaluation is defending from training process in organization. Patrick & Patrick (2006) [32] defines training objectives in three fields:

- 1- Justification of training department in the organization and its role in organizational goals and mission achievement.
- 2- Determine whether the training programs should be continued or stopped.
- 3- To obtain information on how to improve future training programs.

4.Evaluation models

There are different models provided for training evaluation. Methods and valuation models help to human resource professionals and employee training departments to achieve training objectives [33].

4.1.Patrick's four-level model: This highly popular model was presented by Donald Kirkpatrick in 1959, and has been widely used to evaluate training performance and has 4 levels [34].

Four-levels of Patrick model are: 1- reaction level, 2- learning level, 3 -behavior level and 4- results level. Levels 1 and 2 are evaluated before trainee backs to his job and 3 and 4 levels, are used to determine level of using leanings in job activities and impact of training on organizational performance.

Reaction evaluation is relatively easy, and this is one of the reasons of its usage and fame near human resource management professionals. Even if organization's human resources experts conclude that students are satisfied with the curriculum, there is no assurance that the learning, actually happened [33].

4.2.Bell system model: this evaluation model is based on Patrick's four -level model [35].

- 1- The reaction results: Evaluation of the participants' understanding of the training curriculum.
- 2- Ability results: assessing what has been learned from the training program.
- 3- Results Application: assess whether what they learned on the job training is used.
- 4- Results Value: This level of evaluation is to find a balance between costs and benefits of the program.

The first two levels are demonstrating training short term objectives and other levels introducing long-term training program and organization objectives.

4.3.CIPP model: this model was presented by Stapel Bim in 1969, and recognized as a management oriented approach [36].Four levels of the model are including:

- Evaluation of the context
- Evaluation of the input
- Evaluation of the process
- Evaluation of the product

Context evaluation helps to decisions about planning. This kind of evaluation helps to identifying different problems and defining training needs. Evaluation of the input helps to decisions relating to the allocation of resources such as time, capital and employee and achievement to defined objectives [35].

Process evaluation is related to the training program implementation. This kind of evaluation helps to reduce barriers to the success of the program and make necessary revisions in the program [36].Product evaluation could lead to decisions about continuing or stopping the program.

4.4.University of California, Los Angeles (UCLA) Model: UCLA model is composed of the following five types of evaluation:

- 1- System Assessment: this step of evaluation, collect necessary information about the condition or state of the training system (Like context evaluation step in CIPP model).
- 2- Program Planning: At this stage of the evaluation, special programs are selected which are believed to be helpful in fulfillment of training needs.
- 3- Program Implementation: At this stage essential information gathered about whether selected program is introduced as considered before or presented to target group or not.

- 4- Program Improvement: the purpose of this stage of evaluation is to gather information about how the program works, how to achieve to mediate or temporary objectives, and whether there is unexpected outcomes or not. (This is like the process evaluation stage in CIPP model).
- 5- Program Certification: in this stage, required information to judge about the value of the program and possibility of using it in other situations is provided. [37].

4.5.Parker's Model: This model is focused on four types of evaluation:

- 1- Evaluation of job performance (evaluation of improvement in job performance results from training).
- 2- Group evaluation (examining the effect of training on the organization and group).
- 3- Evaluation of participant satisfaction with the training program.
- 4- Determining participants learned techniques and skills as a result of the training program [38].

4.6.Holton's Model: this model is includes three result categories:

- 1- urgent or immediate learning as learning outcomes
- 2- individual performance
- 3- organizational results

These results are influenced by three categories of motivational, environmental factors and indicative factors of ability or disability are [39].

4.7.Context-Input-Reaction-Output model (CIRO): this model is based on Kirkpatrick model and has four levels:

- 1- Context evaluation: acquisition and use of information about the status of organizational current operations, to determine training needs and objectives.
- 2- Input evaluation: analyzing organization's inputs and resources to determine how to use these resources and inputs in training process effectiveness.
- 3- Reaction evaluation: acquisition and use of information about participants' reactions to the training program.
- 4- Output evaluation: obtain information on the effectiveness of training and learning outcomes and using this information to improve future training programs by substituting other training programs [31].

4.8.Return on investment (ROI) Model: The first four levels of this model are like Kirkpatrick model, but Phillips defines return on investment evaluation as the fifth level. Return on investment evaluation; compares benefits and costs of the training to measure the effectiveness of training. In this model, Philips show that how should incorporate financial or monetary terms in training value and how to calculate return on investment in a training activity [35,40].

5. Necessity of calculating the return on investment in the organization

Economic and social development and achieving to objectives, requires appropriate allocation of limited resources such as labor, management, capital, and natural resources and therefore limited resources should allocated according to reach to economic and social objectives of each country. With these interpretations, organizations should inform from their investments returns adequately to invest according their limited resources in plans with more return.

Today's leading organizations; with an understanding of organization's mutual interactions, quality, qualitative and effective human resource management, consider their success in using modern and qualifying management methods using wise humans, and believe qualitative employees are valuable assets crating competitive advantage for them, and only these employees keep organization ahead of competition and is considered as golden keys [41].Moreover, since the most valuable element of any organization is its human and in a more accurate term, is its human resource, so there is no doubt that HRM department has a most serious position, and would provide, improve and maintain human element to keep pace with all current and future needs and challenges of the organization. currently, management field researchers by using available knowledge and experience found that much of the organizational and its managers 'difficulties are related to human resource issues directly or indirectly. It is noteworthy that low quality of products and services, and customer dissatisfaction, lack of full achievement to the organization's goals, absence in Global competition, low per capita income and GDP, and the like, are not always due to lack of funds, facilities and material resources, but also it could conclude that improper use of human resources as determinant of organization's mission and fundamental pillar of the economy (especially in developing

countries) is the main cause. In fact, developing and undeveloped countries, although benefits from more physical and natural capitals, but faced with uncounted problems due to little attention to human capital and undeveloped human resource [42].

employee training is one of logical methods to conduct their efforts in organization and leads to abilities and activation of hidden talents and creating a sense of flexibility in employees. Training and educating human resource could increase the effectiveness and efficiency of the organization [43]. But because training is relatively expensive in organizations, so to determine the outcome of a training program implementation, evaluation of its performance is not enough, but also in economic view point, it is required to formulate training programs to avoid unnecessary costs. Little amount of effectiveness in managers training programs are evaluated practically. And countable organizations evaluate training at this level and use information of objectives to evaluate programs [44].

According to American Association for training and development, in 1996, only two percent of training developmental programs were evaluated by financial effects [45].

Rate of return on investment is become a basic topic for managers in recent years. Some specialists believe that calculating it in training would not be possible and others present some criteria and methods for it. But the problem is that return on investment in training programs is always unknown. So a model is required to present qualitative data as quantities, in other words it could calculate return on investment in comparison with allocated resource to training base on monetary terms.

6. Evaluation stages base on return on investment model

First stage: Planning evaluation

The first stage of return on investment model is evaluation of planning. This stage has several steps. The first step includes determining program objectives, evaluation objectives, defining some kind of benefits to evaluate, determining information gathering methods, and determining the time to evaluation. Program evaluation is initial step and aligns with program planning and in the first step, use program objectives which are defined or should be defined, through program designing. If program objectives were not defined clearly, they should be defined before proceeding to next step.

The next step after planning evaluation is determining benefits of training program. Benefits are evaluated by a composite approach. But elements of each program would be different. Organizations could measure their results. This measurement could complete with following performance observations or information gathering methods:

- 1- Which kind of information should gather?
- 2- What is the easiest method to gather this information?
- 3- Who should gather this information?
- 4- Which method is the best?

Second stage: Data gathering

Second stage of return on investment model is data gathering. This step includes determining costs of programs and physical benefits data gathering. This stage includes several steps: the first step of gathering data is determining training programs' costs. There are three kinds of costs for each program: List of known costs, other known costs, estimated surplus costs, and real costs resulted from training program development and implementation. Other known costs are costs which are not in listed costs or mentioned costs in program. The third kind of costs is surplus costs. This is a wide content and it could include internal and external costs. The second step is data gathering. This step is exerted by a special method, in special time and based on defined elements in first stage.

Third stage: Data analysis

The third stage includes data evaluation, conclusion and report the results. And determine information, costs and benefits evaluation. Costs are understandable. They are essential to determine benefits. Quantify information are converted to monetary values. In each question with special application, respondent requested to show financial situation. Also they require showing their assurance about financial efficiency. This assurance factor is to provide a baseline for multistage of benefits evaluation by assurance percent of each question. Benefits are gathered finally in all resources. Then using simple financial rate calculated from 100. The aim of conclusion and ROI process reporting is program improvement and presenting and accountability for program. By reporting results these questions are answered:

- Whether training program reaches to learning objectives?
- Whether training program make any changes in organization?
- Whether value of used money is acquired by program?

If the answer of these questions be positive, the program would be successful [38,46].

7. Data gathering and analysis steps to calculate return on investment

This stage includes four steps.

1- Distinguishing training effects

To determine return on investment in training you might measure changes from training results. So you might know performance and knowledge level, before any training. Measuring data before training would include repeated mistakes, ratio of work time to production or service departments, monetary cost of wastes, number of defective or returned products, volume of lost sales, absence, turnover rate or difficulties (Conflict, Contention because of customer dissatisfaction. Distinguishing training effects includes identification of all key factors influencing on employees' performance and business results. Focused groups, questionnaire, observations and reviews, facilitate gathering information, and this is facilitate by cooperation of employees, senior managers, supervisors, sellers, and human resource training and development managers.

2- Conversion of Effects of training to benefits.

Effects or benefits of a training program always may be appropriate and specified and return consumed monetary cost of management. Supervisors, heads of offices or divisions, senior executive managers, or Board of Directors in top position of the organization, observe changes in performance or effects in lower layers of the organization. Effects of training could be tangible or intangible which so-called hard and soft data. Hard data are Statistical- quantify and numerical data and it could interpret as material benefits easily. Such as productivity, quality, work time of each production unit, production cut off hours because of equipment failure, absenteeism and delay times, workers reward debts, sale or price of sale to each customer, market share percentage, customer satisfaction index, and number of customers with renewed purchase.

Soft data is qualitative and relate to intangible benefits which are abstract and based on individual verdict. So measuring it as material benefits is rather problematic. Such as job satisfaction improvement, team work improvement, organizational commitment improvement, improvement in sequence planning, increase communication within different job levels, more transparency to enhance chances.

3- Calculation of training cost

Human Resources managers could register the cost of a training program. During this registration, accurately all indirect costs such as employees' time, facilities, material, class, etc shouldn't forget. Usually using all costs term, means determining the cost of training program include all direct and indirect costs.

4- Return on investment formula

There are two formulas to calculate return on investment. The first is the cost- benefit ratio (BCR) and the second is return on investment formula (ROI). To calculate BCR, all benefits from training programs should divide by its costs.

Total benefits /Program costs = BCR

Also to calculate ROI, subtract total costs of the program from total benefits to gain net benefit. Then obtained result is divided by program costs. Finally, multiply the resulting number by 100% to gain return on investment percentage [35,38,47].

$$ROI = \frac{(Total\ benefits - program\ costs)}{program\ costs} * 100$$

8. Conclusions

Investment in human resource training and education is considered as a long term investment, because too much time is needed from investment initiation to take advantage of it. By training humans in societies have certain skills and expertise, and results in improved production capacity and also increase the ability of their manpower. Additionally, investment in training results in higher job level for persons, because of acquired expertise and they benefit from a better living. Therefore all policy makers and planners, programmers of training process, all teachers and training authorities should try to improve training quality and effectiveness. According to importance of the results of training process, maximum usage of human and physical resources and appropriate equipments to formulate the process based on correct planning methods aligned with training needs is necessary. Organizing formulated programs to implement correctly by teachers, is as vital and key measures by training process planners and should conduct in accordance with operational requirements and capabilities. Better perform of designed program is demonstrates the importance of efficiency of human resource. Since training in organizations is expensive, therefore to detect results of a training program its performance appraisal is not enough, but also economically, training programs should formulate in such a way to avoid from excessive costs. Without doubt, it can be said dynamics in this context with evaluation of formulated stages is possible and enable designers to

improve the quality of training process by implementing required evaluations or calculating return on investment in comparison with training's allocated resources in organization based on the monetary values.

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