

Training's Effect and Application To Improve Employee Efficiency In Pharmaceutical Industry

Sinem Aydoğdu

Okan University, Institute of Social Sciences, Management and Organization

Abstract

Globalization affects businesses, especially in this rapid changes of the business environment forces organizations to change their operations and structures. To be accomplished in a competition, companies need well trained and well developed employees from front employees to the top level managers in the executive suite. In Pharmaceutical Industry in Turkey, due to the fast and rapid changes and improvements concerning the regulations and procedures of Ministry of Health, guidelines such as GMP (Good Manufacturing Practises), GLP (Good Laboratory Practises), GDP (Good Documentation Practises), employees at work should be trained and updated about the current knowledge to increase the efficiency in the organization. The main purpose of this study is to investigate the effect of training on employee efficiency. Research was carried out with 74 employees from a pharmaceutical company in İstanbul, Turkey. The data was collected due to convenience sampling method. For assesing the collected data, the packaged statistical data analysis tool SPSS 15.0 was used. Initially, all instruments' reliability was tested. To ensure the items' internal consistency, reliability was assessed by Cronbach Alpha and Factor analysis, the hypotheses were tested by One-Way Anova. The results of study support the hypotheses. There is a significant difference between white collar and blue collar employees on the idea of training's efficiency in the area of career development, that of productivity, professional growth and customer satisfaction.

Keywords

Training, Employee Efficiency, Pharmaceutical Industry

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Introduction

Businesses faces important and rapid changes. These fast, rapid changes and improvements happen because of globalization and technological changes. In the business environment, forces the organizations to change their operations and structures. Fast adoption of these changes and contionus renewal of both employees and organizations help

organizations to reach the set goals, to develop themselves and to survive in the competitive market. To be accomplished in a competition, companies need employees who are well-trained and well-adopted in their companies.

In Pharmaceutical Industry, due to the fast changes and improvements concerning the regulations and procedures of Ministry of Health, guidelines such as

GMP (Good Manufacturing Practises), GLP (Good Laboratory Practises), GDP (Good documentation Practises) etc. employees at work should be updated to increase the efficiency of the organization. Otherwise, organizations can not raise their competition power to exist and develop themselves.

A traditional management theory has suggested that to increase the efficiency of our companies we need a division of labour. Adam Smith first suggested this in 1700s arguing that by dividing labour and allowing them to specialise in a specified area, an organization would be able to increase efficiency and therefore prices were lower and competitiveness was gained in the market. This concept was further developed by Frederick Taylor a hundred and fifty years later through his concepts of scientific management. Taylor went one step further by developing principles asserting that work methods were needed to be studied scientifically in order to train and develop each employee actively instead of passively.

Today, organizations should give more importance to training. Physical, social, intellectual, and mental trainings are very essential in facilitating not only the level of efficiency but also the development of personnels in any organizations. A training provides specific knowledge, skills and abilities to employees which are necessary to perform specific activities for specific jobs. Providing those necessary skills make employees improve their qualifications. In other words, by training, employees have the chance to upgrade their efficiency.

This paper builds on the literature on training and employee efficiency and the main purpose of this study is to investigate the effect of training on employee efficiency. It tries to explore whether there is a significant difference between

white collar and blue collar employees on the idea of efficiency and of career development, productivity, professional growth and customer satisfaction.

Literature Review

Training

Physical, social, intellectual, and mental trainings are very essential in facilitating not only the level of efficiency but also the development of personnels in any organizations. Dessler (2003) describes the term of training as ‘the methods used to give employees the skills they need to perform their jobs more effectively. Shortly, it is a learning process that involves the acquisition of skills, knowledge, concepts or attitudes to increase employee performance (Sözer, 2004).

The main objective of training is to improve the qualities of a trainee, to formulate objectives for different needs and ways of achieving it. The training objective is very important because it determines the designed and content of the training programmes. Contents of the training remain the same no matter the type of training involved. It is to increase personnel efficiency, professional growth, smooth and more effective organization’s operations. (Olaniyan & Ojo, 2008).

The driving factors of training can be described as compounds of structural characteristics, labor demand dynamics, human resource management practices, workforce features, and firm performances. We observe that training activities emerge positively associated with high-performance practices, innovative labor demand features, workforce skill level, firm size, and are affected by labor flexibility in various directions. (Guidetti and Mazzanti, 2007). In order to develop an effective training program, which is going to be described more specifically

and clearly in "the process of training" part below- there should be a need analysis of both employees and organization. Once the minimum training needs of each employee have determined, the next move is to establish training goals. Goals, as declared on Payroll Manager's Report, need to be specific, clear, precise and measurable. (Payroll Manager's Report, 2007). With the help of need analysis, the targeted problems of workers, departments or organizations can be solved since need analysis is formed on the basis of both performance appraisal of employees and the information received from interviews conducted by their managers about their performance. (Sözer, 2004).

The Importance of Training

The importance of training lies in the fact that the function of human resource management prepares employees to be ready for rapidly changing environments and enlarging organizations (Smith, 1999).

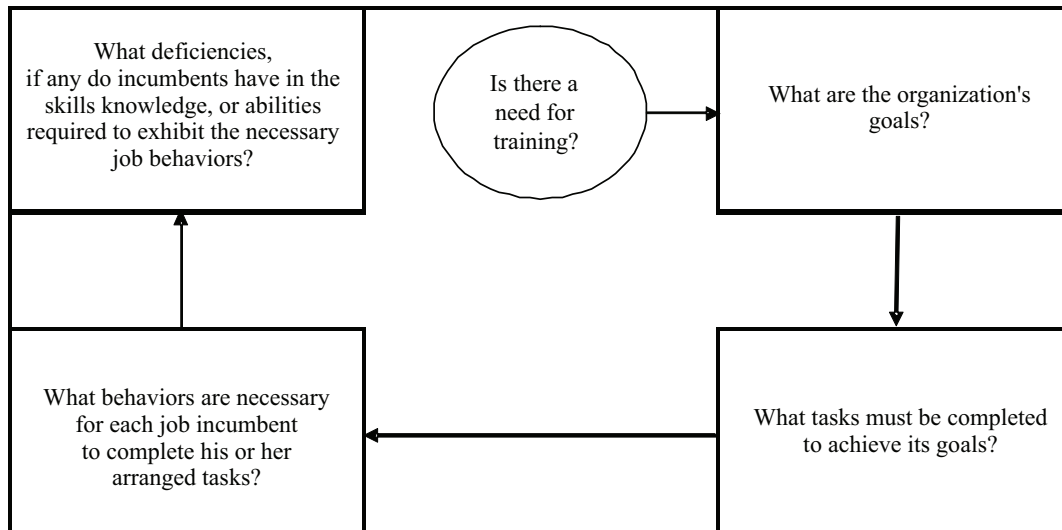
In other words, training is driven by organizational change which includes investments of new technology, implementation of quality assurance programs and new management practices. This fact provides organizations such employees with improved motivation. Having these types of employees is a strategic aim of organizations. This means training constitutes the key factor of an organization in achieving its strategic targets. In addition, it plays a crucial role in defining organizations' efficiency and productivity. As it is said before, training activities help employees to learn all needed behaviors which are related to their work. Moreover, with the help of training, an employee is able to improve his awareness of responsibilities and roles in an organization. By this way, his motivation improves as well. Additionally, the human capital of a company is its main competency

power. Therefore, this capital needs to be improved, refreshed and upgraded with the help of training activities. To sum up, in a strategic perspective, training is the platform of organizational transformation, the mechanism of both individual and organizational renewal and the instrument of global information (Bingöl, 2010).

Determining Training Needs

Determining training needs typically involves generating answers to several questions which demonstrate the close link between employment planning and determining training needs. Based on our determination of organization's needs, the work to be done, and the skills necessary to complete this work, our training programs should follow naturally. Once we identify where deficiencies lie, we have a grasp of the extent and nature of our training needs. The leading questions in Table 1 suggest the kinds of signals that can warn a manager when training will be necessary. The most obvious ones relate directly to productivity. Indications that job performance is declining may include production decreases, lower quality, more accidents, and higher scrap or rejection rates. Any of these outcomes might suggest that worker's skills need to be fine-tuned. We are assuming that the employee's performance decline is in no way related to lack of effort. Managers, too, must also recognize that a constantly evolving workplace may require training. Changes imposed on employees as a result of job redesign or a technological breakthrough also require training.

Once it has been determined that training is necessary, training goals must be established. Management should explicitly state its desired results for each employee. It is not adequate to say we want change in employee's knowledge, skills, attitudes, or behaviors; we must clarify what is to change and by how much. These goals

Figure 1: Determining training needs.

should be tangible, verifiable, timely, and measurable. They should be clear to both the supervisor and the employee. (De Cenzo, & Robbins (2010).

Training Methods

A training can be initiated for a variety of reasons for an employee or group of employees, e.g.,: When a performance appraisal indicates performance improvement is needed, to "benchmark" the status of improvement so far in a performance improvement effort, and to train a specific topic (see below) (http://managementhelp.org/trng_dev/basics/reasons.htm)

On-the-Job Training Methods

Several methods exist in the literature as the approaches on-the-job training methods, such as:

- **Job Rotation:** has long been considered as a valuable tool to increase employee's motivation. It involves lateral transfers that allow employees to work at different jobs and provides exposure to a variety of tasks. As with any training, HRM should ensure the trainers not only know the job, but also how to train others as well.

- **Apprenticeships:** are frequently used to combine classroom instructions with working alongside a seasoned veteran, coach, or mentor. The combination of hands-on and classroom learning compliments each other. Apprenticeships are frequently used in skill trade or craft jobs such as building trades.
- **Internships:** are opportunities for students in higher education to utilize their instruction and training in a chosen profession as a part of their education. Internships vary from very unstructured to highly structured and may include college credit.

Off-the-Job Training Methods

Approaches in the angle of off-the-job training are also described in this paper, such as :

- **Classroom Lectures:** Many organizations use classroom instructions along with other methods to provide a great deal of information in a limited timeframe. Instructors need to understand the different learning characteristics of adult learners and the variety of instruction

types that create interest in specific technical, interpersonal, or problem solving skills they are teaching.

- **Multimedia Learning:** can demonstrate technical skills not easily presented by other training methods.
- **Simulations:** involve learning a job by actually performing the work (or its stimulation). Simulation methods may include case analyses, experimental exercises, computer simulations, virtual reality, role playing, and group interaction.
- **Vestibule Training:** facilitates learning by using the same equipment that one actually will use on the job but in a stimulated work environment. (DeCenzo, Robbins & Stephen (2010)).

The Role of Training in Improving Employee Efficiency

Training provides specific knowledge, skills and abilities for employees and are necessary to perform specific activities for specific jobs. Providing those necessary skills makes employees improve their qualifications. In other words, by training, employees have the chance to upgrade their efficiency. Furthermore, according to a meta-analysis conducted by Hysong and Quinones (1997), there is a positive relationship between self-efficacy and performance.

Moreover, self-efficacy has also been found to be positively related to subsequent job attendance and ability to cope with job demands. (Frayne & Latham, 1987). With the help of training, employees are able to raise their self-efficacy and their standard performance and reflect their performance increase to the overall performance of the organization. (Swart, Mann, Brown and Price, 2005) Performing an effective training program is the key to increas

employee's efficiency. For instance, a training motivates employees so turnover rate and absenteeism decrease while performance and organizational and also customer relations increase (Özveren, 1990).

According to a study which done by Drahani (2004), 75% of respondents indicated that they were highly satisfied or satisfied with the content and relevance of the training to their individual effectiveness and development; and 85% of the respondents indicated they were highly satisfied or satisfied with the relevance of the training to their professional development.

Bentley describes training as 'an investment for success' in the book called 'the Business of Training' (Bentley, 1991). Despite the fact that training seems like it only operates for corporations' success and investment, it also operates for individual's success and investment. Without employee's investments, no one will be able to gain corporate's success. The CEO of the Motorola Company mentioned the relation of employee and organizational success by saying that '... we use training not just about the success of the company but about success of employees and so the success of total organization. (Howard, 1993) Therefore, investment in employees becomes an essential part of organizational future strategy. (Bentley, 1991) .

According to a research, made by Erdoğan Taşkın, in Turkey, nearly 50% of organizations perform training in order to improve employee's effectiveness and organizational commitment (Taşkın, 2001). The other 50 % of organizations' reasons to perform training are to provide motivation, improve employee skills, raise the culture level of employees, improve the communication skills between employees, make labor force be

professional in their fields and improve employees' knowledge. Moreover, nearly 30% of the organizations declare the topics of their training programs such as productivity, communication, motivation, customer information, customer relations, self development, behavior development, human relations, time management, skill improvement and technological innovations. Furthermore, organizations list the areas on which training improves the employees, such as raising communication, developing employees, developing skills, following innovations, providing self-confidence and self-consciousness, improving human relations, raising performance, providing responsibility, procuring organizational commitment, providing job satisfaction, progressing in career and procuring employee's productivity and efficiency. (Tařkın, 2001) As it can be understood from the results of the research, among these organizations in Turkey, the main aim of training is to supply employee's development and efficiency.

As mentioned in the previous chapter, an effective training not only gives job related information but also provides behavioral changes. Additionally, training means providing skills and knowledge by which people can perform in the changed situation. (Colin, 1993)

To sum up, having the most suitable employees at your company, especially if the company is in pharmaceutical sector, which is audited often and the regulations and procedures change frequently, is as important to the success of the business as your finances and product. Moreover, human capital needs continuous nurturing. To nurture it, workers need to be well-trained to reach their full potential and performance (Employee Training & Development, Finweek, 2006).

Methodology

Sample

The sample of this study is conducted from a pharmaceutical company in private sector, İstanbul. The sample consists of 74 individuals from different departments of the organization.

Hypotheses

Hypothesis 1: There is a significant difference between white collar and blue collar employees on the idea of training's efficiency in the area of career development.

Hypothesis 2: There is a significant difference between white collar and blue collar employees on the idea of training's efficiency in the area of productivity.

Hypothesis 3: There is a significant difference between white collar and blue collar employees on the idea of training's efficiency in the area of professional growth.

Hypothesis 4: There is a significant difference between white collar and blue collar employees on the idea of training's efficiency in the area of customer satisfaction.

Analysis Method

The statistical procedures used to analyze the collected data are explained in this section. For assessing data, the packaged statistical data analysis tool SPSS 15.0 was used. Initially, all instruments' reliability was tested. To ensure the items' internal consistency, reliability was assessed by Cronbach Alpha and Factor analysis, the hypotheses were tested by One-Way Anova.

Research Findings

According to the Descriptive Statistics, the sample consists of 74 individuals. The sample consists of 12 women (16%) and 62 men (84%). 31 % (23 participants) of the sample is between the ages of 20-30, 51% (38 participants) of the sample is between the ages of 31-40 and 12% (9 participants) of the sample is between the ages of 41- 50, 5% (4 participants) of the sample is higher than 50. 57% (42 participants) is white-collar employee, 43% (32 participants) are blue-collar employee. 9 participants (12%) are primary school graduates, 23 participants (31%) are high school graduates,

32 participants (43%) are university graduates, 10 participants (14%) have a Master's Degree. 17 participants (23%) have a tenure in the organization between 0-5 years, 44 participants (59%) have a tenure in the organization between 6-10 years, 13 participants (18%) have a tenure in the organization more than 10 years.

Reliability Analysis

Reliability analysis was conducted for training. Cronbach α score of the measure is 0.8963. The reliability coefficients, means, standart deviations for each variable were reported in Table 2.

Table 2 Means, Standard Deviations and Reliability Coefficients of Training.

Scale	N	Mean	Std.Dev.	Cronbach α
Training Effectiveness (overall)	74	3,7421	1,1845	0,8963
- Career Development	74	3,6791	1,0974	0,8521
- Area of Productivity	74	4,0973	1,0168	0,8873
- Professional Growth	74	3,5690	1,1683	0,8632
- Customer Satisfaction	74	3,3782	1,1739	0,8792

Factor Analysis

In order to find the structures of training, factor analysis using principal components solution with varimax rotation was conducted. Factors with eigenvalues 1.00 or more were taken into consideration and total variance explained. Kaiser-Meyer-Olkin (KMO) value was found .923 Bartlett Test of Sphericity (.000, Chi-Square: 3715,881, df: .190) showed that the variables were suitable for factor analysis. The factors items loaded under the first factor was named as "career development" having a variance of 45.791%. The second factor was named as "area of productivity" having a variance of 13.876%. The third factor was named as "professional growth" having a variance of 6.659%. The fourth factor was named as "customer satisfaction" having a variance of 5.894%. All of the factors had a total of 72.22%.

One-Way Anova T-Test

The relationship between four factors of training and the position of employees were analyzed through Independent Sample T-Tests, then Scheffe Post Hoc Multiple Comparisons was conducted to establish the direction of differences in perception to the position. The results are shown in Table 3.

According to the results in Table 3, there are significant differences between position and career development ($F= 6.352$, $t= -.944$ and $p= .000 < .05$), position and area of productivity ($F=5.541$, $t= -.879$ and $p= .000 < .05$), position and professional growth ($F= 5.136$, $t= -.945$ and $p= .000 < .05$), position and customer satisfaction ($F= 3.116$, $t= -.769$ and $p= .000 < .05$).

According to Sceffe Post Hoc Multiple Comparisons Results of career

Table 3: Independent Sample T-Tests Result

Factor	Position	N	Mean	Std.Dev.	F	Sig.	t
Career Development	Blue-collar	32	3,4872	1,87454	6,352	0,000	-.944
	White-collar	42	4,5953	1,67079			
Area of Productivity	Blue-collar	32	3,3056	0,51308	5,541	0,000	-.879
	White-collar	42	3,4797	0,69381			
Professional Growth	Blue-collar	32	3,1134	1,34218	5,136	0,000	-.945
	White-collar	42	3,4892	1,25452			
Customer Satisfaction	Blue-collar	32	3,557	0,99660	3,116	0,000	-.769
	White-collar	42	3,9663	0,97215			

development, there is a significant difference between blue-collar employees (Mean= 3.4872) and white-collar employees (Mean=4.5953 and $p = .005 < .05$), so it can be said that a significant difference between white-collar employees and blue collar employees and the idea of training's efficiency occurs in the area of career development.

According to Scedge Post Hoc Multiple Comparisons Results of area of productivity, there is a significant difference between blue-collar employees (Mean= 3.3056) and white-collar employees (Mean=3.4797 and $p = .000 < .05$), so it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occur in the area of productivity.

According to Scedge Post Hoc Multiple Comparisons Results of professional growth, there is a significant difference between blue-collar employees (Mean= 3.1134) and white-collar employees (Mean=3.4892 and $p = .000 < .05$), so it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of professional growth.

According to Scedge Post Hoc Multiple Comparisons Results of customer

satisfaction, there is a significant difference between blue-collar employees (Mean=3.557) and white-collar employees (Mean=3.9663 and $p = .000 < .05$), so it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of customer satisfaction.

Discussion

This study has concerned with exploring the effects of training on improving employee's efficiencies in pharmaceutical industry. The significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of career development. It is known that job rotation and coaching are managerial training technics. Therefore, they are not generally used for blue-collar employees. Moreover, training technics for improving leadership skills and time management skills are called personal development trainings, which are not generally used for blue-collar employees either. Being deprived of those trainings makes employees think that trainings they took are not able to satisfy their career developments. To sum up, all of those differentiations make blue-collar employees think in a way that training does not help their career improvement

and that they do not have the adequate amount of training.

In regards to the productivity, it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of productivity. White-collar employees and blue-collar employees are different from each other in respect of having trainings that improve their communication, motivation, performance, conflict management, stress management and problem solving skills. Like the trainings for improving leadership and time management skills, technics called communication, motivation, performance, conflict management, stress management and problem solving skills are personal development trainings too. Therefore, these technics do not generally applied to blue-collar employees. In other words, an employee may not able to have an enough productivity when he does not know how to manage stress, problems or conflicts that often happen in workplace. Therefore, in this research it becomes a significant difference between white-collar employees and blue-collar employees in perceiving the efficiency of training in productivity area. The other possible reason of this differentiation may be that employees who are working for managerial positions are more likely to experience personal development trainings rather than basic training technics. Therefore, they become personally developed, which may lead them to have a higher productivity.

Accroding to the results in professional growth, it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of professional growth. White-collar employees and blue-collar employees are different from each other in respect of

performing problem solving training, of increasing self confidence and professional growth because of performing training and of performing adequate amount of training. Problem solving training is another technic of personal development training, which means it is not generally applied to blue-collar workers. Because of not performing personal development training technics, blue-collar employees may feel that they do not have adequate amount of training and not improve their professions as well as their self confidence. Therefore, in this research it becomes a significant difference between white-collar employees and blue-collar employees on perceiving the efficiency of training in professional growth area.

In regards to customer satisfaction, it can be said that a significant difference between white-collar employees and blue-collar employees and the idea of training's efficiency occurs in the area of customer satisfaction. White-collar employees and blue-collar employees are different from each other in respect of related feature sector about having successful communication to customers, taking orders right and helping undecided customers to give orders. Moreover, because of globalization, cruel and strict competition conditions and rapid change, companies take customer needs, opinions and demands into account seriously in order to cope with the difficulties, gain competitive advantage and to be successful in such competitive market. Hence, all of the main philosophy underlying training technics and training subjects provide customer satisfaction.

In spite of the fact that productivity and customer satisfaction are inevitable parts of pharmaceutical industry and most of the trainings concern this, there is a significant difference between white-collar and blue-collar employees in respect of those two areas. Moreover, blue-collar employees

working for pharmaceutical industry believe that their companies do not generally make investments about their career developments and professional growth. Additionally, they also believe that they do not have enough amount of training.

Conclusion

According to the results of the study, blue-collar employees are aware of not performing managerial training subjects and technics such as job rotation, coaching, communication training, conflict management training, stress management training, leadership training, teamwork training, time management training, problem solving training and motivation training. Hence, having non-managerial training technics and subjects make them feel in a way that they have inadequate amount of training and scarcity in career development as well as professional growth and productivity.

The present study is expected to contribute to the literature since it provides basis to reveal the effects of training on employees

in pharmaceutical industry. However, there are some limitations of the study that needs to be mentioned. One of the limitations of this study is the sample size. The sample of the study consisted of only one firm from pharmaceutical industry. The research could be carried out in different production or service provider sectors; and it is obvious that the results would be different.

The second limitation of this study is the time. If this study could be performed in wider time period, the results would be different; because of the changes in business environment. Another consideration involves the demographic variables. Results might have been different if percentages of the demographic variables were different.

Notes of Contributor

Sinem Aydoğdu is PhD candidate at Okan University, Institute of Social Sciences, Management and Organization. She is currently working as Chief of Controlling & Reporting di PharmaVision San. ve Tic. A.Ş. in Istanbul, Turkey.

References

- Bentley, T. (1991). *"The Business of Training"*. 1st edition. London: McGraw Hill, p.33
- Colin, T. (1993). *"Strategic Change Management and Training: Adaptive, Adoptive and Innovative Roles"*, Journal of European Industrial Training, Vol.17, No.5, p.26.
- Journal of European Industrial Training, Vol.17, No.5, (June 1993), p.26.
- DeCenzo A David, Robbins P., Stephen, A. (2010). *"Human Resources Management"*, Wiley, 10th Edition., p. 190- 192
- Dessler, G. (2003). *"Human Resource Management"*, 9th edition, New Jersey: Prentice Hall,2003, p.187.
- Drahani, K. (2004). *"Professional Training Programs as Tools for Effective Staff Development: A Case Study"*, Academy of Human Resource Development International Conference (AHRD), pp.1146-1147.
- Dursun, B. (2010). *"İnsan Kaynakları Yönetimi"*, Beta Yayınevi, 7. Baskı p.239- 240
- Employee Training & Development, Finweek, (2006 July), p.44.

- Frayne, Latham G. (1987). "Application of Social Learning Theory to Employee Self-management of Attendance", Journal of Applied Psychology, Vol.72, No.3, p.389.
- Giovanni G., Mazzanti, M. (2007). "Firm-level Training in Local Economic Systems Complementarities in Production and Firm Innovation Strategies", Journal of Socio-Economics, Vol.36, No.6, p.875 http://managementhelp.org/trng_dev/basics/reasons.htm
- Howard, R. (1993). "The Learning Imperative- Managing People for Continuous Innovation" Boston: Harvard Business School Press
- Hysong S. J., Quinones, M. A. (1997). "The Relationship Between Self efficacy and Performance: A Meta-analysis", 12th Annual Conference of the Society for Industrial and Organizational Psychology, St. Louis.
- Olaniyan D.A., Ojo B. L. (2008). "Staff Training and Development: A Vital Tool for Organisational Effectiveness", European Journal of Scientific Research, 2008, p.328
- Özevren, M. (1990). "The Benefit and Cost Analysis of Recruitment and Training", 1st Edition, İstanbul: Bilim Teknik Press, p.82.
- Payroll Manager's Report, (2007). "Establishing Training Goals for You and Your Staff for 2008", Vol.7, No.12, pp.4-5.
- Smith, A. (1999). "International Briefing 4 Training and Development in Australia", International Journal of Training and Development, Vol.3, No. 4, p.308.
- Sözer, S. (2004). "An Evaluation of current Human Resource Management Practices in The Turkish Private Sector", Master Thesis, Middle East Technical University Social Sciences Institute, p.11, p.26.
- Swart, J., Mann, C., Brown, S. and Price, A. (2005). "Human Resource Development Strategy and Tactics", 1st Edition, Oxford: Elsevier, p195.
- Taşkın, E. (2001). "İşletme Yönetiminde eğitim ve Geliştirme", 3rd Edition, İstanbul: Papatya, pp.185, 199,205-215.