



# Training and Development in Power Sector – A Study of Power Sector in Telangana State

<sup>1</sup>Banothu Vanitha, <sup>2</sup>Babu Tejavath

<sup>1</sup>Research Scholar (M.Phil.), <sup>2</sup>Faculty of Human Resource Management

<sup>1</sup>Department of Public Administration & HRM, Kakatiya University, Warangal, Cell: 7995034472

<sup>2</sup>University Arts & Science College, Subedari, Hanamkonda

## Abstract

Trained manpower is required at every stage due to rapid advancement of technology. The technical knowledge acquired from engineering colleges, polytechnics, industrial training institutes and technical institutes needs to be supplemented with applied engineering and managerial skills. These skills are to be regularly updated to cope with the ever progressing and rapidly advancing technologies being introduced in the power sector where the speed of obsolescence often overtakes the pace of acquisition of a particular skill. Due to introduction of more sophisticated technology and automation, the man/ MW ratio is declining. This indicates the increasing importance of each individual, which in turn makes manpower quality criteria more demanding. India's energy sector has been growing rapidly and today is the ninth largest economy in the world, driven by a real GDP growth of 8.7% in the last five years. Also, India is one of the largest power generating countries in the world with an installed capacity in excess of 253 GW growing at a CAGR of over 10% in the last five years. Thus the immense potential for growth in the Indian power sector is apparent when we compare per capita consumption of electricity in India with that of developed nations i.e., only about 684 kilowatt hours (kWh) per capita, compared with over 7000 kWh per capita in industrialized nations such as Germany, France, Japan etc. This study will address the human resource challenges currently faced by power sector and lays out the strategies which ultimately lead to the development of this sector and provide better quality service to the consumers as per the stipulation contained in the Electricity Act, 2003.

Keywords: Manpower, Power Sector Reforms, Technology, Training, Skills.

## INTRODUCTION

In the world of training and development, impact measuring program is a frequent discussion topic. Everyone seems to be searching for the perfect measurement system to increase organizational capabilities, performance and link them with the business strategy. Human resource practitioners, organization development consultants, training managers, and senior managers realize that any training and development activities should eventually show a positive return and improve the bottom line. Hence, the training and development has an important role in the human resource management. It is generally agreed that human beings began amassing knowledge at the beginning of the stone-age. As they invented tools, weapons, clothing, shelter and language, the need for training became an essential ingredient in the march of civilization.

However, our ancestors stumbled upon or invented the various facets of civilization, which are very little significance, they transmitted the knowledge and skills acquired by them from generation to generation. This was done through various methods. Through these methods, the development process called training came into operation. Before industrial revolution the methods of training in agriculture, trade and business, crafts were not very formal. The techniques were learnt from father to son gradually through practice. The experienced persons were highly recognized in these fields.

## HISTORICAL GROWTH OF TRAINING AND DEVELOPMENT

The twentieth century saw dramatic changes within the world of work, and the twenty-first appears to have continued the theme of change. Organizations have evolved in terms of purpose, size, structure, management philosophy and relationships with the outside world. Technological advances have revolutionized all work methods, and for many organizations the operational horizon has moved from a small geographical area to literally the world; for government, 'being competitive' is now a global (as opposed to a selective international) requirement. Everything has speeded up, including the pace of change itself.

Three fundamental (and to some extent contrasting) ideas have grown in importance over the last 20 years or so. The first is that the continuously changing environment demands lifelong learning on the part of all - even governments are aware that this is a key to future prosperity, and are attempting to promote it widely. The second is that real-life experience itself offers significant learning opportunities, and that experiences can be designed to stimulate learning - hence more emphasis on the learner than the trainer. The third is that the government should create and encourage national vocational schools to improve occupational competence, and they should be recognized by the award of national vocational qualifications (NCL, 2002).

After industrial revolution, machines were used in various fields and formal training process came into operation. In the beginning phase of industrial revolution the machine system of production was confined to industrial sector. Gradually highly developed techniques were applied in the fields like agriculture, fishing, forestry, etc. The importance of training in the industrial sector is explained in the theory of "Scientific management" given by Taylor (1967). His theory explained about the importance of training for high productivity, low accident rate, low wastage and maximize profit. He emphasized on the need for special training of the production line workers for a specific job. The substitution of machine power for people power, required more specialized hands. Adam Smith and Taylor (1967) wrote on the importance of specialization for increasing efficiency. Babbage (Wikipedia) in his work "On the economy of machinery and manufacturers" listed six reasons for making jobs as specialized as possible and all these reasons imprinted the essence of training. Babbage (1997) has given more emphasis on specialized training than general training. To support his argument he says that specialized training requires less time and less wastage of material.

During World War II crisis approached and as the United States moved into the "defense era," these same men and women were ready to accept the call for service in the defense industry to replace young men drafted into the Armed Forces. They took to welding training, machinist training, and specialized job training of many kinds without fear or undue urging. Then business and industry came face to face with the reality that they had too long ignored. Suddenly the training function of the supervisor became paramount. In fact, management found that without training skills, supervisors were unable to produce adequately for the defense or the war effort. With it, new production records were being established by the aged, the handicapped, and industrially inexperienced women.

In the later part of 1950s, business games were used as a popular method for decision simulation, videotape and television began to be used successfully. By the end of 1960s and in 1970s assessment centers caught the attention as the best way for executive appraisal of performance and potential, and also as a means of training. Programmed instruction was one of the most popular techniques used for training during this period. Organization Development (OD) gained acceptance during the 1960s and became the most talked about training techniques or practice in 1970s. The 80s popularized Quality Circle (QC) movements. In this period emphasis was on quality through training. The 90s saw growth in the use of computers for training, and behavior modeling for management skills training. More emphasis was on career development of employees during this period. Late 1980s and 1990s witnessed rapid growth in Information Technology (IT and Business Process Outsourcing (BPO)). This growth modified training activities. It enlarged training avenues and the ways and means of training. It made training process easier, more systematic and tailor made as per need for improvement in performance as well as building potential of technical and non-technical managers.

As a brief review of terms, training involves an expert working with learners to transfer to them certain areas of knowledge or skills to improve in their current jobs. Development is a broad, ongoing multi-faceted set of activities (training activities among them) to bring someone or an organization up to another threshold of performance, often to perform some job or new role in the future.

**Training** is the formal and systematic modification of behaviour through learning which occurs as a result of education, instruction, development and planned experience.” (Armstrong, 2001: 543)

**Development** is any learning activity, which is directed towards future, needs rather than present needs, and which is concerned more with career growth than immediate performance.

## NATURE OF TRAINING AND DEVELOPMENT:

In simple terms, training and development refer to the imparting of specific skills, abilities and knowledge to an employee. A formal definition of training and development is - it is any attempt to improve current or future employee performance by increasing an employee's ability to perform through learning, usually by changing the employee's attitude or increasing his her skills and knowledge.

## CONCEPT OF TRAINING AND DEVELOPMENT

Before discussing the concept in detail it is pertinent to present the training wheel developed by Frances and Roland Bee (1994) Which is self explanatory:

Throughout our lives learning experiences are a potent source of stimulation. As per Goldstein & Ford (1993) 'training is defined as the systematic acquisition of skills, rules, concepts, or attitudes that result in improved performance in another environment. Therefore, training programs are planned to produce, for example, a more considerate supervisor, a more competent technician in the workplace, or leaders of complex organizations. In some cases, such as on-the-job training, the instructional environment is almost identical to the actual job environment. In other instances, such as a classroom lecture on electronics theory for technicians, the learning environment is further removed from the job situation. However, in both circumstances effective training stems from a learning atmosphere systematically designed to produce changes in the working environment.

Training is an organized activity aimed at imparting information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill (web dictionary).

Training is the acquisition of knowledge, skills, and competencies as result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies. Training has specific goals of improving one's capability, capacity, and performance. It forms the core of apprenticeship and provides the backbone of content at institutes of technology. In addition to the basic training required for a trade, occupation or profession, observers of the labor-market recognize the need to continue training beyond initial qualifications to maintain, upgrade and update skills throughout working life. People within many professions and occupations may refer to this sort of training as professional development (Wikipedia).

Training is an investment in people who work with the organization and for the organization. Training can do wonders by improving employee knowledge, skills and behavior. It enhances performance, increases productivity and multiplies profits. Today's competitive environment is more intense than ever before. Significant and rapid changes are affecting the business environment. There have been remarkable changes in technology, political boundaries and treaties, population demographics and consumer preferences in the last decade. These changes have lead to turbulent business environment and in this environment to sustain; the organization needs to evolve continuously its strategy, mechanism, structure, system, processes and people. For competitive edge training is most preferred option.

Human resource development in the organizational context is a process by which the employees of an organization are helped, in a continuous, planned way, to:

- Acquire or sharpen capabilities required to perform various functions associated with their present or expected future roles;
- Develop their general capabilities as individuals and discover and exploit their own inner potentials for their own and/or organizational development purposes; and
- Develop an organizational culture in which supervisor-subordinate relationships, team work, and collaboration among sub-units are strong and contribute to the professional well-being, motivation, and pride of employees.

## GUIDELINES FOR TRAINING PROGRAM:

MSEDCL based on identified training needs and prioritization, a training calendar for all training centre are prepared by 15 February after due approval of the Executive Director (HR). The identified needs are prioritized as follows:

Priority I - Essential Short Term

Priority II - Desirable Short Term

Priority III - Essential Long Term

Priority IV - Desirable Long Term

## NATIONAL TRAINING POLICY FOR THE POWER SECTOR OF INDIA

Considering that the need for training has acquired critical importance in the context of the rapid technological changes as well as social transformation taking place in the country in general and power sector in particular, the Government feels that it is necessary to develop a dynamic training policy in consonance with the changing business context to achieve higher productivity and customer satisfaction. Accordingly, a Standing Committee on training was constituted to bring into focus, the need to step up training and human resource development, create an orientation of power sector personnel and stake holders towards the urgency and need for reforms and energy conservation as well as provide a standing joint forum for coordination of training related matters in the power sector.

The committee, held extensive deliberations and consultations and organized a National level seminar attended by the Chief Executive Officers and Heads of HRD of Central, State and Private Power utilities, academic institutions and Central/State Electricity Regulatory Commissions to draw up a comprehensive training policy. Three Zonal meetings were also conducted at Bangalore, Nagpur and Guwahati to present the strategy and action plan before the power generators, distributors and other stakeholders for eliciting their views. The committee devising a training strategy and time bound action plan for its implementation submitted to the Government is annexed. The Government accepts the recommendations of the committee and resolves to adopt the same through the active involvement of all the organizations in the power sector in India. The implementation of the training policy will be monitored by the Standing Committee on Training quarterly.

## REVIEW OF LITERATURE:

“Training corporate managers to adopt a more autonomy-supportive motivating style toward employees: an intervention study” by Patricia L. Hardre and Johnmarshall Reeve (2009) found that management style is treated in a variety of ways across the training and development literature. Yet few studies have tested the training-based malleability of management style in a for-profit, authentic work context. The present research tested whether or not training intervention would help managers adopt a more autonomy-supportive motivating style toward employees and whether or not the employees of these managers would, in turn, show greater autonomous motivation and workplace engagement. Using an intervention-based experimental design, 25 managers from a Fortune 500 company received training consistent with self-determination theory on how to support the autonomy of the 169 employees they supervised.

“The effects of organizational training on organizational commitment” by Cagri Bulut, and Osman Culha (2010), this empirical study investigated the impact of organizational training on employee commitment focusing on employees' emotional and affective responses towards their organization. Organizational training is conceptualized within a multidimensional framework consisting of motivation for training, access to training, benefits from training and support for training. The hypothesis of this study has been built on a resource-based view, social exchange theory and psychological contract theory. Field research was conducted through surveys with 298 participants of four- and five-star hotels operating in Izmir, Turkey. Confirmatory factor analyses were used to analyse the quality of the training scales and multiple regression analyses were conducted to test the hypotheses of the study. The results revealed that all dimensions of training positively affected employee commitment.

“A Study on Training Factors and Its Impact on Training Effectiveness in Kedah State Development Corporation, Kedah, Malaysia” - Dr. Vimala Sanjeevkumar (2011) implies that types of training do not influence the training effectiveness.

Another study conducted by Qasim Saleem and Mehwish Shahid (2011) on the “Degree of influence of training and development on employees behavior” found that the purpose of training and development is pervasive. Training and development also creates a pool of employees and chances for promotion or to replace employees who have left the organization. This study highlights that training and development of an employee, plays an important role and high authorities of these different sectors give feedback that all employees should be given opportunities of training and development that lead to organizational efficiency and growth.

“Training and Development: A study of Employees’ attitude on Training In Vellore District Cooperative Bank” by Rajendran Karuppanan (2012) reveals that training has an important role to play and it is expected to inculcate positive changes in knowledge, skills and attitudes. Employees Training tries to improve skills so that the employee is better equipped to do his present job or to prepare him for a higher position with increased responsibilities. Training and Development programmes are necessary in any organization for improving the quality of work of the employees at all levels particularly in a world of fast changing technology and environment. This thesis analyses the employees’ attitude toward training programmes conducted in Vellore District Cooperative Bank In India.

## **IMPORTANCE OF TRAINING AND DEVELOPMENT**

It is an accepted fact that besides money, materials and machines, the success of any organization depends upon the quality of its human resource. In the wake of increased competition, opening of the Indian economy, development of global village concept, people have become pivot around which successful organizations rotate. In the light of these, the training and development function in organizations gained momentum and recognized as a tool to help people to grow within the organization and retain them.

Therefore, it is necessary for any organization to have trained and developed executives. Change in strategy, structure, and work processes often leave executives unsure of their roles and related responsibilities. This role ambiguity may be a major obstacle to organizational improvement, innovation and change efforts. For role clarity of executives training can do wonders by improving employee knowledge, skills and behavior; enhancing performance; increasing productivity and booming profits. It also enriches the individual in terms of increasing potential, developing competency and opportunity for career advancement. Training helps both the organization and individual to reach their respective goals.

## **SCOPE OF TRAINING AND DEVELOPMENT**

Training has existed from the inception of human being in different forms in the society. It is a medium to pass different skills from one generation to another. But with change in time, the magnitude of training has undergone sea change. Growth and development in technology has developed variety of methods and techniques in the way of training. These changes have added new dimensions to training and influenced the requirement of training. Training of human resource is carried out at macro and micro level. At macro level training is necessary for generating awareness among people on social issues, educating people and spreading literacy in society for giving people an opportunity to live a better life. Training activities at micro level are oriented towards development of people working in the organization to perform better in their job and develop their competency on the job for growth of the organization. Thus every one takes training in some or other form for survival and sustenance on this planet.

Scope of training has also shifted from technical skill based to knowledge and interpersonal skill covering a wide zone ranging from manufacturing industries to service sector at micro level. The emphasis and awareness on quality of products manufactured and service provided has increased the need for training of all those involved in this process. Growing quality consciousness among customers and competition in market is forcing organizations to have quality employees to give quality products and services.

## OBJECTIVES OF THE STUDY

The main objectives of the present study is to analyse the impact of training and Development Programmes on organizational effectiveness, work environment, culture, employee satisfaction and finally the human productivity and profitability. Hence, the other specific prime objectives to achieve are:

1. To critically analyze the training programs in India.
2. To examine the policy and practices on training and Development in Power Sector.
3. To research out data on training and development programmes of power sector and how the training and development practices has helped in development of the organisation.
4. To evaluate its impact on managerial efficiency and development.
5. To find out the effectiveness of the training imparted to the employees on their job

## METHODOLOGY:

The present study is based on secondary data. The data from the annual reports of the power sector in Telangana, other published reports, official records and documents relating to management training and development programs, libraries of institutes and universities and reports of the committee on public undertaking, public enterprises. The stratified random method will be used to collect responses from the employees.

## POWER DISTRIBUTION SECTOR IN INDIA

India's energy sector has been growing rapidly and today is the ninth largest economy in the world, driven by a real GDP growth of 8.7% in the last five years. Also, India is one of the largest power generating countries in the world with an installed capacity in excess of 253 GW growing at a CAGR of over 10% in the last five years. Thus the immense potential for growth in the Indian power sector is apparent when we compare per capita consumption of electricity in India with that of developed nations i.e., only about 684 kilowatt hours (kWh) per capita, compared with over 7000 kWh per capita in industrialized nations such as Germany, France, Japan etc. The planning commission has estimated the requirement of additional power generation capacity during 12th plan of 119 GW; thus in terms of potential and capacity building, the power sector attract opportunities to the investors.

The erstwhile Andhra Pradesh State Electricity Board which came into existence in 1959 was responsible for generation, transmission and distribution of electricity. Under the Electricity Sector Reforms agenda, government of Andhra Pradesh promulgated Andhra Pradesh Electricity Reforms Act, 1998. The erstwhile APSEB was unbundled into one generating company (APGENCO), one transmission company (APTRANSCO) and four distribution companies (APDISCOMs) as part of the reform process.

## MISSION

1. To spearhead accelerated power development by planning and implementing new power projects.
2. To generate adequate and reliable power most economically, efficiently and eco-friendly.
3. To implement renovation and modernisation of all existing units and enhance their performance.

## TELANGANA POWER GENERATION CORPORATION (TSGENCO)

Later, on 2 June 2014, when the state was bifurcated, APGENCO distributed all the assets, liabilities and power stations to both the states and Telangana Power Generation Corporation (TSGENCO) was formed for the newly formed Telangana state and APGENCO remained for Andhra Pradesh in accordance with the Andhra Pradesh Reorganisation Act, 2014. All the plants (thermal, hydel and solar) located in Telangana region were transferred to Telangana Genco on an "as is where is" basis.<sup>[5]</sup>

Telangana State Power Generation Corporation Limited has been incorporated under companies Act, 2013, on 19<sup>th</sup> May 2014 and commenced its operations from 02.06.2014.

"Centre of Excellence for Training and Development" has been established in Paloncha, Bhadradi Kothagudem District, Telangana State on 12-04-2017 to cater the training needs of employees of TSGENCO. The Institute is located near the hilly area in the town and is a green field Institute with all shade giving trees which create a clean, green and serene environment inside the campus to the trainees. The Institute is located in one side of the residential colony of "Kothagudem Thermal Power Station (KTPS )" which is the Complex of total capacity of 1720 MW in TSGENCO. One Super Critical Thermal Power station of capacity 800 MW is located beside the existing complex. There is one more Thermal power Station (BTPS) of capacity 1080 MW which is under construction at Manuguru with in a distance of 60 km from the Institute." •

"This Training Institute has been established in Palvancha on 12.04.2017 to cater the needs of Power Engineers for Technology upgradation and improvement of skills for optimum utilization of Human resources for achieving desired goals of the organization"

## **TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)**

The Northern Power Distribution Company of Telangana Limited (TSNPDCCL) was incorporated under the Companies Act, 1956 as a Public Limited Company on 30-03-2000 with headquarters at Warangal to carryout electricity distribution business as part of the unbundling of erstwhile APSEB. The Company caters to supply of electricity in districts of Mancherial, Nirmal, Kumram Bheem, Kamareddy, Peddapalli, Jagtial, Rajanna, Warangal Urban, Warangal Rural, Mahabubabad, Prof Jayashankar, Jangaon, Bhadradi, Adilabad, Nizamabad, Karimnagar and Khammam Districts. TSNPDCL reaches out to a population of nearly 155.22 lakhs (as per provisional 2011 census) spread across hamlets, villages and towns spanning an area of 66,860 Square Kilometers.

The erstwhile TRANSCO came into existence on 1.02.1999. From Feb 1999 to June 2005, TRANSCO remained as Single buyer in the State purchasing power from various Generators and selling it to DISCOMs in accordance with the terms and conditions of the individual PPAs at Bulk Supply Tariff (BST) rates.

Subsequently, in accordance with the Third Transfer Scheme notified by the then Govt, TRANSCO ceased to do power trading and has retained powers of controlling system operations of Power Transmission.

Trading activities were entrusted to four-distribution companies under 3rd transfer scheme in compliance with Electricity Act 2003 w.e.f. 10-06-2005. As per the 3rd Transfer Scheme notified by the State Government the rights, obligations, agreements and contracts relating to procurement and bulk supply of electricity or trading of electricity, to which the then TRANSCO was originally a party were transferred and vested in four distribution companies respectively in specified ratios as per Electricity Act 2003 w.e.f 09-06-2005.

In order to allow smooth transition, institutional arrangements are kept in place as per G.O.Ms. No. 59 dated 07-06-2005 by forming the (i) Power Coordination Committee (PCC) (ii) Power Trading Committee (PTC) (iii) Balancing & Settlement Committee (BSC) committees.

PCC shall guide, direct and approve the activities undertaken by PTC and BSC from time to time. PCC shall direct TRANSCO and distribution licensees to provide necessary information, requisite support and depute its staff for efficient discharge of its functions. TRANSCO and distribution licensees shall extend all co-operations to PCC in the matter. PTC shall responsible in the matters related to power procurement from all generators, scheduling load relief, if any and issues related to SRLDC at the regional level. It shall also be responsible for inter-state sales. BSC shall be responsible to review energy accounting and billing for inter utility trading of power and ensure settlement of imbalances amongst distribution licensees in accordance with the directives / principles issued by the PCC.

As per State Reorganization Act 2014, the then TRANSCO was divided into TSTRANSCO and APTRANSCO. Accordingly TSTRANSCO along with TSPCC, TSPTC, TSBSC was established as a Company w.e.f. 2-6-2014 for the State of Telangana.

There are about 1,62,61,420 residential, 36,67,883 agricultural, 15,69.043 commercial, 4,38,366 industrial consumers and about 1,29,661 other consumers in TSNPDCL area which fetch an annual revenue of about Rs.50,000 crore. TSNPDCL has a workforce of about 79285 employees. This force is the real asset of the company. The welfare and wellbeing of this asset has been given top priority by the company. As such it has enhanced the scope of training facilities to a great extent. In addition to the existing 4 training centres, TSNPDCL has recently established well equipped 25 small training centres at Circle offices which impart necessary training

to line staff. Thus this research sought to assess the level of significance given to the Human Resources function in order to find importance of training and meaningful solutions in the power sector. This research is focused mainly on the Class I Officers of the TSNPDCL.

## CONCLUSION:

Training and development opportunities must meet the dual aim of satisfying and developing the organisation's growth and meeting the individual's needs. Training programmes should be modified to incorporate the needs of individual disciplines that avail of the training function. It can be argued that training is provided to individuals in an organisation to test and maintain the individual's programming, to ensure cultural norms and expectations of the individual, within the organisation, are still in place and further, that the individual knows their place. It is important for power sector to identify the training needs of employees systematically so as to ensure all round development of the employees. The employee shall possess the right skill, competencies and attitude to perform effectively in their roles. While technical training is seen more in the organization, personality and soft skill development program should be introduced to match with the growing needs of the distribution sector. It is recommended that a periodical training need assessment and well as analysis for evolving an annual need based training intervention agenda should be chalked out for its employees encompassing the following needs viz. Technical training for technical employees / Non-technical employees as per their roles which includes their skill upgradation, personality development, Information Technology and Computer Skills to be conducted.

## REFERENCES:

1. Taylor (1967), 'The principles of scientific management', Published in Norton Library, New York, NY 10110
2. Charles Babbage,(1997) 'Science and Reform: Selected Works of Charles Babbage', Cambridge University Press.
3. Frances and Roland Bee (1994), Training needs analysis and evaluation, Universities Press.
4. Goldstein, I.L. (1993), 'Training in Organizations: Needs assessment', Development and Evaluation (3rd ed.), Pacific Grove, CA: Brooks/Cole.
5. L. Hardre and Johnmarshall Reeve (2009) Training Corporate Managers to Adopt a More Autonomy-Supportive Motivating Style Toward Employees: An Intervention Study, International Journal of Training and Development, Vol. 13, Issue 3, pp. 165-184.
6. Cagri Bulut, and Osman Culha (2010) The effects of organizational training on organizational commitment International Journal of Training and Development Volume 14, Issue 4, pages 309–322, December 2010
7. Dr. Vimala Sanjeevkumar (2011) A Study on Training Factors and Its Impact on Training Effectiveness in Kedah State Development Corporation, Kedah, Malaysia, International Journal of Human Resource Studies ISSN 2162-3058, Vol. 1, No.2.
8. Status of distribution sector in fie country, Introduction to accelerated power development & reform programme, Ministry of Power, 2014-15
9. [http://www.cea.nic.in/reports/hrd/national\\_trg\\_policy.pdf](http://www.cea.nic.in/reports/hrd/national_trg_policy.pdf).
10. <https://www.tsgenco.co.in/files/6161.pdf>.