

## **CHAPTER 3**

### **TRAINING NEEDS ASSESSMENT**

#### **ABSTRACT**

This chapter includes structured literature review on research themes by introducing training needs assessment theory and processes. The chapter elaborates on the training needs assessment (TNA) models. The second part of the chapter identifies the research gaps and training needs assessment model at the DISCOMs under study.

#### **3.1 INTRODUCTION**

Training needs assessment or training needs analysis is the method of determining if training need exists and if it does, what type of training and the duration is required to fill the gap (JICA, 2009). Training needs assessment is one of the most basic and common forms of assessment used by human resource development professionals in the workplace (Gupta, 1999). Assessment ensures that training programs have relevance to the people being trained (Firdousi, 2011). A ‘Needs Assessment’ provides the information that is usually necessary for designing training programs. The basic purpose to conduct the said assessment is to ensure that training programs are developed based on identified needs; and they are relatively easy to implement (Gupta, 1999). The training need exists when there is a gap between what is required of a person to perform competently and what he actual knows (Nischithaa and Rao, 2014). The expectation of knowledge, skills and abilities of officials at different levels is different so there training needs are also different (World Bank, 2006). Training is essential not only to increase productivity but also to motivate and inspire workers by letting them know how important their jobs are and giving them all the information they need to perform those jobs (Anonymous, 1998). Often some problems are perceived as training problems, when they are not. Some situations will indicate training needs. Some may need non-training solutions. For example: financial aspects, institutional strengthening, providing the right tools etc. Some organizational and individual training needs are not as clearly defined as others. Even when training needs appear to be obvious, it is still necessary to choose appropriate methods that will meet them (McClelland,

2002). Training isn't the answer to a problem when it's used to cover up the symptoms (Rosner, 1999). Thus training needs assessment side-steps mistaken analysis of a non-training problem as a training problem.

### 3.2 TRAINING NEEDS ASSESSMENT – THEORY AND PROCESSES

Training Needs Assessment (TNA) is the systematic study of a problem or innovation, incorporating data and opinions from varied sources in order to make effective decisions or recommendations about what should happen next (Rossett, 1987). TNA is a basic function of training and the first building block upon which the planning of training initiatives is facilitated (Nikolić et al. 2011). Table 3.1 represents research findings of the studies undertaken in the past on training needs analysis, including practices and approaches.

**Table 3.1: Review of Training Needs Assessment Theories (1967 – 2012)**

| S. No. | Author         | Year | Dimension(s) and / or Finding(s)   |
|--------|----------------|------|--|
| 1      | Gilbert        | 1967 | Presented four rules for identifying and limiting training needs. Rule 1- the basic definition of training needs; Rule 2 - distinguish between accomplishment and acquirement. Rule 3 - make distinction between knowledge and execution. Rule 4 - economic training priorities must be established since some training needs are more important than others. They used the equation $D = M - I$ (where 'D' stands for Deficiency, 'M' for Mastery and 'I' for Initial Skills) |
| 2      | Mager and Pipe | 1984 | TNA model intended to identify the causes of discrepancies between expected and actual performance; between exemplary and average performers. The model assumes that training need exists only when there is performance.  |
| 3      | Rossett        | 1987 | By using techniques and tools training needs assessment provides information about training purpose.   |

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| 4 | Wright and Geroy | 1992 | TNA should have seven key characteristics: (a) be based mainly on culture and organizational philosophy; (b) be proactive instead of reactive; (c) have a method that permits the distinction between situations that can be addressed through training and those that cannot; (d) allow various organizational actors who are directly or indirectly interested and involved in training ; (e) be based on observable skills rather than a leader, manager or professional perception; (f) consider the varied use of sampling techniques and data analysis; and (g) in the end, have a cost/benefit analysis.  |
| 5 | Goldstein        | 1993 | Person-oriented analysis plays a central role in TNA because it directly provides the content of training needs, and the information provides the performance on the knowledge, ability, and competence or skills required in a job.   |
| 6 | Ibrahim          | 1996 | One method to know whether performance problems can potentially be treated by training is by conducting Trainability Analysis i.e. calculating training risks if a training solution is offered to treat a performance problem. The rationale of conducting the analysis is that it saves practitioner's time and effort by concentrating only on problems that can be solved by training. It also helps to minimize failure of training programs. The analysts need to be well-versed and experienced in the field, and have access to background information regarding a problem. Because, its success depends on the analyst's capability to judge a performance problem. |
| 7 | Chiu et al.      | 1999 | A broad theoretical framework for TNA, focusing on: who are the key initiators of training-needs analysis?, what are the levels of interest in the studies (i.e. organisation, process, group or individual)?, what is the intended outcome of the analysis?, and finally, what methods of analysis are used?  |
| 8 | Mathews et al.   | 2001 | TNA is dominated by senior management decision and supervisors' opinions. The skills inventory is the most widely  |

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|    |                    |      | applied formal technique. Organizations tend to pay more attention to customers and work groups when defining training needs.  |
| 9  | Goldstein and Ford | 2002 | TNA significantly influence training effect and the quality of training courses. In terms of training needs, one should discover which places need training and why is training needed (focusing on organizations), who needs to be trained (focusing on employees), and which training content is needed in the organization (focusing on tasks). |
| 10 | Tracey             | 2004 | TNA involves the study of ways of designing and developing instructional and informational programs and materials.   |
| 11 | Chang et al        | 2012 | It is necessary to construct TNA dimensions to conduct systematic needs analyses according to the dimensions. TNA dimensions include, strategy, performance, and competency. These three dimensions relate to McGehee and Thayer's three-fold analysis.  |

As can be seen from table 3.1, there has been a continual work by researchers on exploring different theories on TNA. Subsequent to O-T-P approach suggested by McGehee and Thayer (1961) to analyze training needs, Gilbert (1967) had added four rules for identifying and limiting training needs. A decade later, Mager and Pipe (1984) suggested that TNA intends to identify the causes of discrepancies between expected and actual performance. Goldstein (1993) has stressed the importance of Task-oriented analysis, while Ibrahim (1996) suggested conducting trainability analysis to know whether performance problems can be potentially treated by training. Mathews et al. (2001) have pointed out that TNA is dominated by decisions and opinions of senior manager and supervisor. They also found that organizations pay attention to customers and work groups while defining their training needs. Chang et al. (2012) TNA dimensions included- strategy, performance, and competency. These three dimensions relate to McGehee and Thayer's three-fold analysis. The dimension of strategy indicates the organizational level analysis. The dimension of performance indicates the task level analysis. And the dimension of competency indicates individual level analysis. This suggests that the O-T-P model offered by McGehee and

Thayer in 1961 held valid in 2012 even. TNA processes adopted by the industries and other organized sectors in the past years are studied and presented in Table 3.2

**Table 3.2: Review of Training Needs Assessment Processes (1952 – 2015)**

| S. No. | Author                     | Year | Dimension(s) and / Finding(s)   |
|--------|----------------------------|------|---|
| 1      | Mahler and Monroe          | 1952 | Only about one in ten companies reported systematic approaches to determining training needs. Management requests, observations, and talks with supervisors were the most used techniques to determine training needs.  |
| 2      | Wood                       | 1956 | There is little evidence of the application of research methods for training need determination.  |
| 3      | Bureau of National Affairs | 1962 | 41% of firms questioned used observation and analysis of job performance in determining training needs.   |
| 4      | Bureau of National Affairs | 1969 | Methods of observation and analysis of job performance being used by 49% of the surveyed companies. These studies seem to indicate some movement toward a more scientific, formalized approach to needs analysis.   |
| 5      | Deden-Parker               | 1980 | The three-part analysis, O-T-P model was found to be useful in planning, conducting, and analyzing the needs assessment process in a corporate training context. It provided for integration of management's expressions of felt needs with techniques of behavioral task analysis, and with the need to maintain positive client involvement. The model served as a way of knowing and anticipating 'what comes next' in a complex needs assessment process. |
| 6      | Schneier et al.            | 1988 | There are some administrative costs associated with TNA. If need assessment is done properly, it has the benefits of improving the training programs, improving their efficacy and  |

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|    |                |      | increasing legal defensibility.   |
| 7  | Bacal          | 2004 | Performance gaps can be identified through logical analysis or by collecting information customers and or employees. The difference between where you are and where you need to be is the performance gap.  |
| 8  | Lee and Nelson | 2006 | Training needs assessment includes following functions: a) Gather data on perceived needs. b) Identifying knowledge, skills, and behavior discrepancies. c) Assist human resource department and trainers or instructors in developing relevant curriculum materials. d) Gather information that brings beneficial change to an organization or community. e) Assess organizational needs. f) Promote buy-in by participants. |
| 9  | Sherazi et al. | 2011 | Lack in comprehensiveness of TNA results in a low achievement of training objectivity.  |
| 10 | Atoki          | 2013 | The study adopted interpretivist and subjectivist paradigms; both linked to qualitative research. A qualitative and inductive approach was used to generate in-depth data and information from people responsible for training and from those who have received training.   |
| 11 | Csaszar et al. | 2015 | The methodology applied for the training needs assessment focusses on: a) Identifying major subjects to be addressed in the trainings in response to the target groups' interests and needs. b) Prioritizing training methods according to their acceptance within the target groups.   |

Mahler and Monroe (1952) reported that only about one in ten companies reported systematic approaches to determining training needs. On the same line Wood in 1956 through his study found that there is little evidence of the application of research methods for training need determination. Bureau of National Affairs in 1969 came up with similar findings, that only half of the surveyed companies were found using observation method and analysis of job performance for identifying training needs. Deden-Parker (1980) suggested a three-part analysis

model for integration of management's expressions of felt needs with techniques of behavioral task analysis. They also stressed on client involvement. Study of Sherazi et al (2011) revealed that the results of the training program are poor when organizations only focus on conducting the personal analysis before starting training programs. The above studies confirmed that organizations do not prefer to conduct TNA as they consider it as an additional cost on company (Schneier et al ,1988). Thus, there is a need to identify the benefits of training needs assessment (Table 3.3) in order to understand the present scenario on implementation of TNA in the training process. As Atoki (2013) and Csaszar et al. (2015) argued to adopt and conduct systematic training needs assessment for its benefits even if it involves additional cost to the company.

**Table 3.3: Review of Training Needs Assessment Benefits (1988 - 2012)**

| S. No. | Author            | Year | Dimension(s) and / Finding(s)  |
|--------|-------------------|------|--|
| 1      | Warshauer         | 1988 | A good TNA provides the following benefits: (1) Increasing the commitment of the management to enable participants to participate in training and development continuously, (2) Increasing the visibility of training functions, (3) Elaborating critical organizational issues, (4) Making the best use of limited organizational resources, (5) Providing training courses and training design ideas, (6) Making training become strategies, (7) providing employees with knowledge and skills for performing their duties, (8) Helping an organization find the goal of performance, and (9) Improving employee relations and morale. |
| 2      | Gilly and Egglund | 1989 | A well-executed needs assessment also increases credibility and support for the design of the subsequent training program amongst the participants. There is also psychological merit of doing needs assessment as the process involves employees and management both.   |
| 3      | Gupta             | 1999 | Some reasons and benefits of performing a needs assessment are:<br>a) Determine if the disbursement of money for the training is   |

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|    |            |      | worth the return on investment. b) Determine who and how many will benefit from the training. c) Determine if the training will be used in the workplace. d) Specific expectations and goals will be set for behavior and performance improvements. e) Greater chance of achieving desired results. f) Less chance of frustration that comes with using the wrong solution, and failing to meet the desired achievements. |
| 4  | Elbadri    | 2001 | TNA as the first stage in the training cycle, minimizes errors possibly made in the training programs.  |
| 5  | Grant      | 2002 | Results of a needs assessment can be used in a lot of areas. If documented it can help in; curriculum planning, diagnosing individual problems, assess trainee learning, demonstrate accountability, individual feedback on task and safety in operations.  |
| 6  | Tobey      | 2005 | It establishes the basis for back-end evaluation, which shows how needs assessment prepares the stage for evaluation.   |
| 7  | Tao et al. | 2006 | Training resources, similar to other resources within the organisation, are limited, and to use training resources to the paramount benefit, firms need to set an adequate amount of effort in training needs assessment (TNA).   |
| 8  | Sims       | 2006 | Training efforts requires some type of training assessment comparing the benefits of the efforts with the projected costs in order to determine the long-term implications of the program.  |
| 9  | Alagheband | 2007 | It performs required training proportionated with the real needs. Start point and initial step in each training schedule is to specify training needs which have a very important role in suitable designing of training courses and its effectiveness. It can be expressed that in reformation and training process, there is no task except determining needs   |
| 10 | Berger     | 2010 | By systematic analyzing training needs, we can identify solutions to performance problems that will provide the best  |



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|    |                    |      | return on training and development investments.   |
| 11 | Ferdous and Razzak | 2012 | Training needs assessment is the foundation of the entire instructional design process. In addition, needs assessment provides a database to support or justify resource allocation for other human resource functions. |

Warshauer (1988), Gilly and Egglund (1989) have concluded that systematic needs assessment increases participants' credibility. Gupta (1999) based on his research, found determining training needs is beneficial for the organization and its people. TNA ensures that investments in training by organizations pay (Elbadri, 2001) as TNA underlines the purposes for taking TNA and areas in which its results can be used (Grant, 2002; Tobey, 2005 and Tao et al. 2006). TNA also facilitates in formulating strategic approach for developing training efforts (Sims 2006). Berger in 2010 also advocated systematic analyzing training needs as Gilly and Egglund did in 1989. Berger's findings that TNA help in identifying solutions to performance problems that will provide the best return on training and development investments is in synchronization with the findings of Elbadri in 2001. Ferdous and Razzak (2012) suggested documentation of training needs content for subsequent trainings and justifying resource allocation for other human resource functions. Thus training needs assessment is all inclusive function.

### 3.3 TRAINING NEEDS ASSESSMENT MODELS

A structured review of literature on various TNA models used in the past years is presented in Table 3.4. The table lists few major studies based on different TNA models and their findings.

**Table 3.4: Review on Training Needs Assessment Models (1961 – 2016)**

| S. No. | Author (s)         | Year | Dimension(s) and / Finding(s)  |
|--------|--------------------|------|--|
| 1      | McGehee and Thayer | 1961 | Suggested a three-fold O-T-P model for training needs assessment. The model included three levels - organizational level, task level and person level. |

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| 2 | Wexley           | 1984 | Research poses three questions that should be answered by competent training needs assessments: Where within the organization can and should training be placed? What should be the content of training in terms of what an employee must learn to perform the job effectively? Who within the organization needs training, and in terms of skills and knowledge, what kind?  |
| 3 | Mager and Pipe   | 1984 | The performance based model focuses on appraising to identify performance gaps.   |
| 4 | Brown            | 1985 | A key informant survey was conducted to determine development needs of childcare staff in Texas juvenile detention facilities. Findings reflect an administrative bias toward juvenile detention training needs. Administrators identified those areas of the juvenile detention care worker job that have the greatest potential for problems or liability. Training needs reflect this problem-oriented approach. Research highlights the differences between administrative and direct care staff perspectives on priority training needs for detention personnel. Administrators appear to be more problem-oriented and they have a greater sensitivity to liability. |
| 5 | Smith et al.     | 1986 | A model is useful because it gives an overview of what is to happen, encourages a systematic and complete process, and highlights aspects requiring more effort. Because of these benefits, we have found a three-stage (Surveillance, Investigation, and Analysis) TNA model to be useful.   |
| 6 | Harless          | 1987 | Performance improvement process (PIP) model, which includes a new process, referred to as front-end analysis. The PIP model presented a basis on which numerous later models have been developed.   |
| 7 | Wright and Geroy | 1992 | Emphasizes the importance of overall organizational strategy, philosophy and culture and embeds these elements in organizational TNA decisions.   |

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| 8  | McClelland               | 1993 | Discussed eleven (11) steps open approach for conducting training needs assessment. 1) Define assessment goals. 2) Determine assessment group. 3) Determine availability of qualified resources to conduct and oversee the project. 4) Gain senior management support for and commitment to the process. 5) Review and select assessment methods and instruments. 6) Determine critical time frames. 7) Schedule and implement. 8) Gather feedback. 9) Analyse feedback. 10) Draw conclusions. 11) Present findings and recommendations. |
| 9  | Goldstein                | 1993 | TNA models have not seen significant changes over the past 40 years, in terms of theory as well as practice.   |
| 10 | Guthrie and Schwoerer    | 1994 | They found that respondents in later career stages reported lower training self-efficacy, lower training utility and less need for management training.  |
| 11 | Gilbert                  | 1996 | Behavior Engineering Model describes a stimulus-response-reinforce relationships among three means of behaviour, i.e., information (stimulus), instrumentation (response), and motivation (reinforce) on two levels. The two levels comprise the environment (the organization) and the individual. The model explains why average performers fall short of standards set by exemplary performers.   |
| 12 | Taylor and O'Driscoll    | 1998 | TNA models can be grouped into two major categories: the organization-task-person analysis (O-T-P) approach and the performance analysis approach.   |
| 13 | Binder                   | 1998 | Six Boxes Model described as "A Descendent of Gilbert's Behavior Engineering Model." It consists of six boxes, which are arranged in two rows of three boxes. The first row examines the environment and the second row examines the individual.   |
| 14 | Holton, Bates and Naquin | 2000 | Traditionally, the 'felt' needs approach has been applied which simply asks employees to list the training they desire. Although these 'felt' training needs might boost morale, it is unlikely that   |

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|    |                              |      | they yield results at the business level because employees may report the training they want and it may differ from the training they really need.  |
| 15 | Yeh                          | 2000 | The framework contains three processes with specific output items signifying each stage. These stages are- competency identification, gap identification and training curriculum preparation.   |
| 16 | Goldstein and Ford           | 2002 | It is the most comprehensive as it adds preliminary steps in the TNA process in addition to the common three levels of analyses.  |
| 17 | European Training Foundation | 2002 | TNA model includes four main stages: Implementation of a gap analysis, Identification of causes of performance problems or performance opportunities, Identification of priorities and importance, and Identification of possible solutions and growth opportunities. |
| 18 | McConnell                    | 2003 | Created an annual review questionnaire that a training department can use as a first step in conducting training needs assessment. It enables the training department to ask department managers several key questions.   |
| 19 | Vaughn                       | 2005 | An Instructional System Design (ISD) model was proposed, with instructions which are comparatively simple.  |
| 20 | Jamil                        | 2006 | Goldstein and Ford's outline of how the two final levels of analysis are to be carried out are not dissimilar to other models of TNA.   |
| 21 | Sankar et al.                | 2006 | The assessment was made through a questionnaire which was first completed by the person concerned and then followed up with a discussion between the consultant, the person and his/her supervisor.   |
| 22 | Olivas                       | 2007 | The six stage model has highlighted: a) Determine the Purpose and Objective of the Needs Assessment; b) Identify the Kinds of Information Needed; c) Design the Data-Gathering Approach; d) Gather Data; e) Analyze and Verify Data; f) Set Training                  |

|    |                            |      |   |
|----|----------------------------|------|---|
|    |                            |      | Priorities.   |
| 23 | Krishnaveni and Sripirabaa | 2008 | Consensus-oriented assessment model is proposed as a valuable tool for evaluating and improving training and development activity.  |
| 24 | Altschuld and Lepicki      | 2010 | Two phase model: The first phase is the diagnostic phase, which is designed to identify inconsistencies in performance and current competence levels; the second phase maps these performance gaps and competencies by prioritizing them according to business requirements.  |
| 25 | Chang                      | 2012 | Three dimensions of TNA were brought up – strategic capabilities’ needs dimension, performance gap needs dimension, and competency gaps’ needs dimension.   |
| 26 | Mufeed and Hamdani         | 2013 | HRD Climate and HRD Mechanisms should be encouraged in both the organizations as it forms a prime element of any organization. The top management should make efforts to identify and utilize the potential of employees.   |
| 27 | Veebel et al.              | 2015 | In identifying the training needs, this model focused on assessing the current knowledge and the training needs in particular areas.  |
| 28 | Abdel-Maksoud and Saknidy  | 2016 | Introduced a systematic approach based on statistical methods to the assessment as opposed to the intuitive approach. The new proposed approach is based on identifying weights instead of “Error weights”. It does not assume any kind of probability distribution of marginal values. The new method is applied on actual data. |

The findings of TNA studies based on different models included in Table 3.4 suggest diverse approaches for training needs determination. The studies compiled above suggest that mainly these models are performance based. They are common on their purpose of benefitting the organization in a systematic and structured approach. For example, performance based model (proposed by Mager and Pipe in 1984 Wexley (1984) has addressed three TNA questions like- Where within the organization should training be placed? What should be the content of

training? and Who needs what kind of training? Brown (1985) has adopted a problem-oriented approach. Whereas Harless (1987) has adopted Performance improvement process (PIP) model, and Wright and Geroy (1992) have emphasized the importance of overall organizational strategy, philosophy and culture. Gilbert (1996) and Binder (1999) too advocated performance analysis model.

The second commonality includes level of analysis presented in different ways by different authors. For example, Smith et al. (1986) developed a three-stage (Surveillance, Investigation, and Analysis) TNA model, Taylor and O'Driscoll (1998), Altschuld and Lepicki (2010) have advocated that TNA is comprised of diagnostic phase and mapping phase.

There have been mainly two theoretical models of TNA, which have been the main sources for the training literature for over five decades. First is the performance based models, second is organization-task-person (O-T-P) Model. Goldstein (1993) believes that TNA models have not seen significant changes over the past 40 years, in terms of theory as well as practice. Leigh et al. (2000) believe that dozens of TNA models exist in the literature for the past three decades and each differs in terms of its level of concentration. Abdel-Maksoud and Saknidv (2016) advocated systematic approach based on statistical methods to the assessment as opposed to the intuitive and behavioral approach.

On the basis of above discussion, the researcher can rationalize which approach out of the two - the performance based training needs assessment model or O-T-P based training needs assessment model - is best fit for determining training needs at power distribution companies in central India.

### **3.3.1 Why O-T-P Model of TNA is used for the present study?**

Organization-task-person (O-T-P) Model was first proposed by McGehee and Thayer's in 1961 model and the performance based model was first proposed by Mager and Pipe in 1984. The performance based model focuses on identifying as to why actual performance falls short of

expected performance (Mager and Pipe, 1984; Rummler, 1987; Rummler and Brache, 1990) or why average performers fall short of standards set by exemplary performers (Gilbert, 1978).

In the year 1998, Taylor et al. had advocated that McGehee and Thayer's organization-task-person (O-T-P) Model should be preferred over the performance based model for the following four reasons:

- i. O-T-P Model focuses on training opportunities for continuously improving performance beyond expected levels or that of exemplar individuals or groups.
- ii. Performance based model assumes that causes of performance discrepancies are either lack of knowledge / skills or work environment variables, but not both, which is often the case (Alkinani, 2013).
- iii. Performance based model fails to distinguish between job behaviour and the organizationally-relevant results of job behavior (Mishra 2011).
- iv. Performance based model fails to specify how information can be collected for analysing the causes of performance problems and determining whether training is needed.

O-T-P Model is considered as the core framework for training needs assessment in academic literature (Holton, Bates, and Naquin, 2000). O-T-P Model provides a comprehensive need analysis and increases the likelihood of aligning training with organisational and individual needs (Cheng and Hung, 2012). Most of the models developed after O-T-P Model were initially based upon O-T-P Model (Taylor and O'Driscoll. 1998). According to Ali (2012), O-T-P Model is preferred as it considers future needs of the organization making it strategically useful to organizational goals. Also, the O-T-P Model is preferred over performance based model as it integrates a macro and micro analysis of training needs, which allows the identification of organizational needs, task or job needs, and the particular needs of the individual or person (Clarke, 2003; Ghulfi 2014).

The researcher can safely vouch to follow O-T-P based training needs assessment model to determine training needs of frontline managers at power distribution companies under present study.

On the basis of the above discussion, the third research theme for literature review is, - Training needs assessment for analysing the post-reform training requirements of frontline managers in power distribution companies.

### **3.4 SUMMARY**

1. As per TNA theory person-oriented analysis plays a central role in TNA because it directly provides the content of training needs, and the information provides the performance requirements necessary for the knowledge, ability and competence or skill of a job.
2. As per TNA processes review, organizations do not prefer to conduct TNA as they consider it as an additional cost on company (Schneier et al ,1988). Thus, there is a need to identify the benefits of training needs assessment, although Atoki (2013) and Csaszar et al. (2015) argued to adopt and conduct systematic training needs assessment for its benefits even if it is additional cost to the company.
3. Review has shown determining training needs is beneficial for the organization and its people. TNA ensures that investments in training by organizations pay (Elbadri, 2001) as TNA underlines the purposes for taking TNA and areas in which its results can be used (Grant, 2002; Tobey, 2005 and Tao et al. 2006). TNA also facilitates in formulating strategic approach for developing training efforts (Sims 2006). Documentation of training needs content for subsequent trainings and justifying resource allocation for other human resource functions gets addressed. Thus, training needs assessment is all inclusive function.
4. There have been mainly two theoretical models of TNA which have been the main sources for the training literature for over five decades. First is the performance based models, and second is organization-task-person (O-T-P) Model.
5. Organization-Task-Person (O-T-P) Model is preferred over the performance based model for the present study owing to following four reasons: i) O-T-P Model focuses on training opportunities for continuously improving performance beyond expected levels or that of



exemplar individuals or groups; ii) Performance based model assumes that causes of performance discrepancies are either lack of knowledge / skills or work environment variables, but not both, which is often the case (Alkinani, 2013); iii) Performance based model fails to distinguish between job behaviour and the organizationally-relevant results of job behaviour (Mishra 2011); iv) Performance based model fails to specify how information can be collected for analysing the causes of performance problems and determining whether training is needed.

6. Third research theme for literature review is, ‘training needs assessment for analysing the post reform training requirements of frontline managers in power distribution companies.’ Chapter 4 presents the structured literature review on three research themes identified in Chapters 1, 2 and 3.